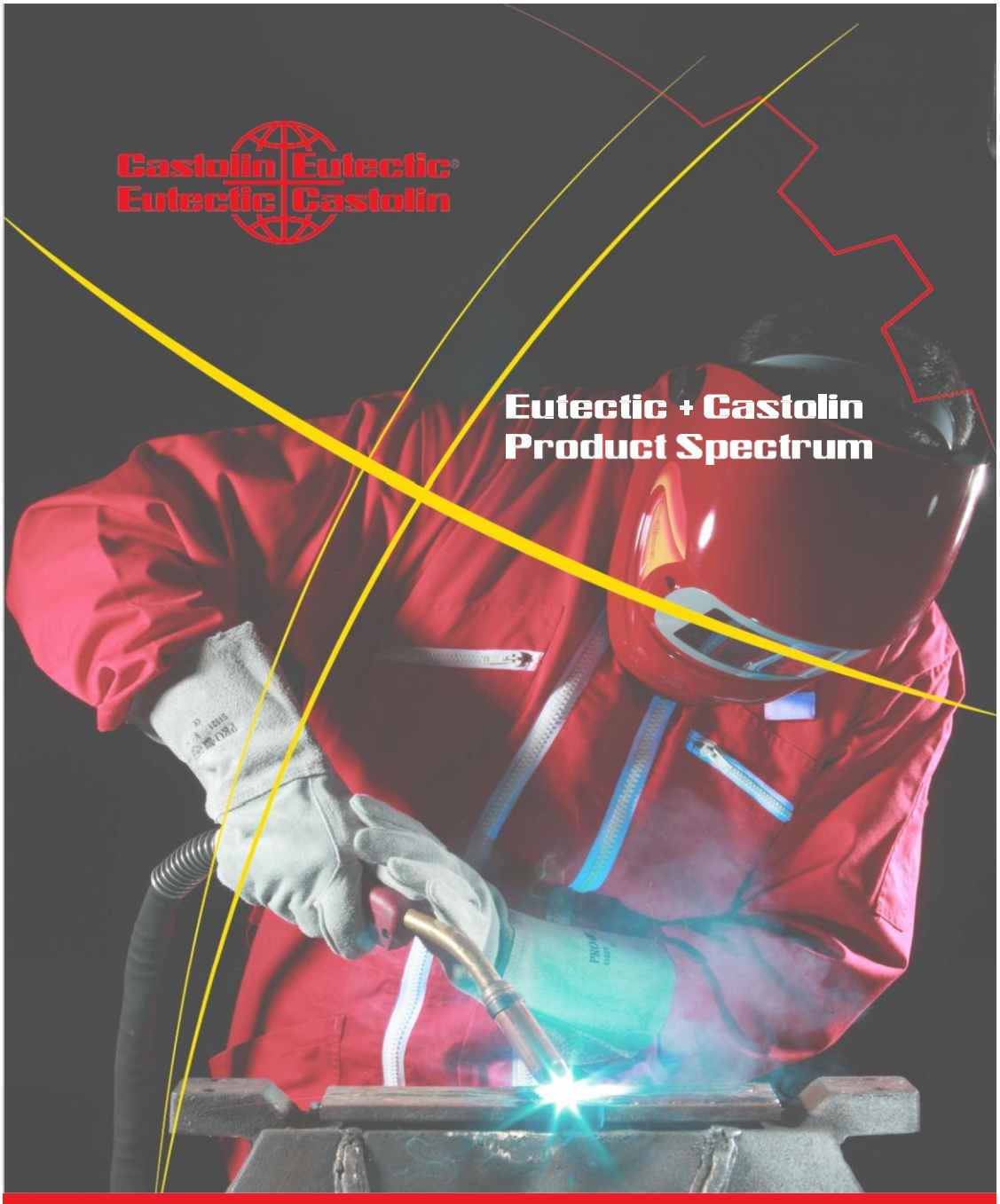

Eutectic + Castolin Product Spectrum

A selection of the most important Castolin products for repair, Maintenance and manufacturing

Pioneering Industrial Sustainability

How to use this Guide

ERNiCrMo-4 Welding Wires, ERNiCrMo-4 Welding Wires Manufacturers, ERNiCrMo-4 Welding Wires Suppliers, ERNiCrMo-4 Welding Wires Stockists, ERNiCrMo-4 Welding Wires Exporters

ERTi-2 MIG & TIG Welding Wire, ERTi-2 MIG & TIG Welding Wire Manufacturers, ERTi-2 MIG & TIG Welding Wire Suppliers, ERTi-2 MIG & TIG Welding Wire Stockists, ERTi-2 MIG & TIG Welding Wire Exporters

This technical guide is a handy reference for selecting and using castolin eutectic product and processes.

A tab along side each page identi es the base metal category or a speci c castolin eutectic process.

For joining and repair application, refer to: the appropriate base metal category- aluminim, copper, cast iron, steel, stainless steel.

For wear resistant protective coatings, refer to:

- TeroCote section for electrodes / rods / wires
- Eutalloy Section for hot thermal spray process producing metallurgically bonded deposits.
- CDS 8000 section for cold thermal spray process coating bonded in the as sprayed condition.
- TeroMatec Section for continuous wire application without the need for shielding gas (TeroMatec wires also available for joining).

For easy process selection, Accompanying each alloy is a process symbol designation:

- Arc
- Wire
- Gas
- CDS 8000
- Eutalloy
- TeroMatec
- CDP

ENiCrFe-2 Welding Electrodes, ENiCrFe-2 Welding Electrodes Manufacturers, ENiCrFe-2 Welding Electrodes Suppliers, ENiCrFe-2 Welding Electrodes Stockists, ENiCrFe-2 Welding Electrodes Exporters

Haynes 25 Welding Electrodes, Haynes 25 Welding Electrodes Manufacturers, Haynes 25 Welding Electrodes Suppliers, Haynes 25 Welding Electrodes Stockists, Haynes 25 Welding Electrodes Exporters

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ERNiCrMo-13 MIG & TIG, ERNiCrMo-13 MIG & TIG Manufacturers, ERNiCrMo-13 MIG & TIG Suppliers, ERNiCrMo-13 MIG & TIG Stockists, ERNiCrMo-13 MIG & TIG Exporters

The Unique Contributions of the Castolin Eutectic + Castolin Institute

The Eutectic + Castolin Institute founded by Dr. Rene Wasserman, is the world›s largest organization dedicated to solving the maintenance and repair welding problems of industry. The Institute is truly the only specialist of international stature that has concentrated on prolonging the service life of machine parts and equipment. Institute scientists and technicians have developed welding processes and techniques that also increase industry productivity and pro tability by the reduction of downtime and spare parts inventories. The unique educational and consultative Permanent Aid and Training services of the Institute have saved industry billions of dollars.

History of Castolin Eutectic

1906 Foundation of Castolin in Lausanne, Switzer-land by Jean-Pierre Wasserman. His stroke of genius : to discover a way of welding cast iron at low temperature. In the following years, this innovation was further developed for all industrial metals including aluminium alloys.

1940 Foundation of Eutectic Welding Alloys Corpo-ration in New York .

1952 Foundation of Castolin France.

1959 Foundation of Eutectic Japan Ltd.

1962 Eutectic operations started in India

1960s International consolidation under Castolin Eutectic.

1970s Creation of training centers for Maintenance & Repair technologies.

1978 Establishment of World Head Quarters in St-Sulpice, Switzerland.

2000 Merger with Messer Cutting & Welding and creation of the MEC Group - Messer Eutectic Castolin.

2005 Part of the Messer World.

2006 100 years.

Together with our sister companies, the Messer Group, can offer customers a very powerful range of products and services. Being Part of the Messer World means :

- Investment of over € 420 million
- More than 6,000 motivated employees
- Over 100 factories to meet customer needs
- Technical sales support in over 120 countries
- 2,000 technical sales people in the field with our customers every day

Castolin Eutectic received the Frost & Sullivan triple awards in recognition of demonstrated excellence in Customer Service Leadership and Product Market Growth Leadership within the European Repair & Maintenance Welding industry. These awards reflect the close collaboration with our customers, and their satisfaction for more than a century

InCredible Costs and ConsequenCes of Wear

Technological advancement in industry today tends to have countervailing effects. Automation multiplies the problem of part and equipment failure by increasing the cost of downtime. With the advent of integrated process industries, consequences of part wear have become monumental. Programmed computers and inspection equipment now replace many worn tools automatically Capital investment in machinery in industries like the petrochemical, and automotive is phenomenal. The value of the output per hour for machines in these industries is also enormous. But, by the same token, every hour of downtime takes a correspondingly high toll. Production managers today are in nitely more wary of "trouble." An hour of downtime in some industries can cost hundreds of thousands of rupees. The old adage about time is money has never been more accurate:

Mean Life Before Failure (MLBF)

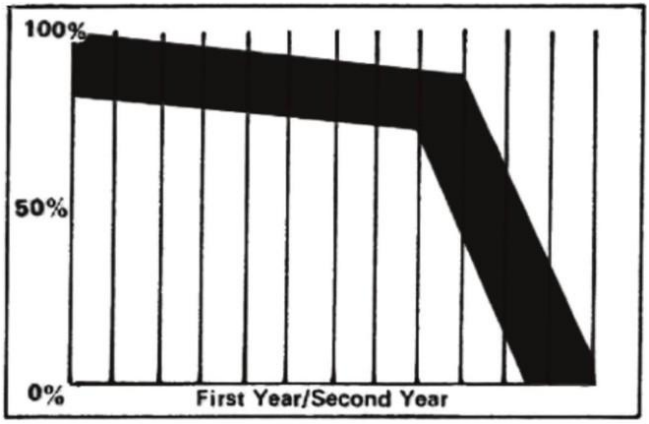
Design engineers, in order to help alleviate the crisis or unexpected part failure, have developed systems which tend to capitulate to wear. Many parts are designated with a Mean Life Before Failure or MLBF. Thus, if a shaft was ascribed an MLBF of one year by the manufacturer,(based on tests and eld experience), then the maintenance supervisor could expect to replace the shaft - or start looking seriously for defects, at about 11 months after installation. However, by accepting the MLBF assigned by the spare parts manufacturer or supplier, the user waives his right to expect improvements in his cost/pro t dynamics

ERNiCu-7 MIG & TIG Welding Wire, ERNiCu-7 MIG & TIG Welding Wire Manufacturers, ERNiCu-7 MIG & TIG Welding Wire Suppliers, ERNiCu-7 MIG & TIG Welding Wire Stockists, ERNiCu-7 MIG & TIG Welding Wire Exporters

ENiFe-Cl Welding Electrodes, ENiFe-Cl Welding Electrodes Manufacturers, ENiFe-Cl Welding Electrodes Suppliers, ENiFe-Cl Welding Electrodes Stockists, ENiFe-Cl Welding Electrodes Exporters

XUPER 646XHD Welding Electrodes, XUPER 646XHD Welding Electrodes Manufacturers, XUPER 646XHD Welding Electrodes Suppliers, XUPER 646XHD Welding Electrodes Stockists, XUPER 646XHD Welding Electrodes Exporters

Dependability of a metal part in too with a Mean Life Batore Fallure of two years.



Increased Inventory Costs

The reliance on spare parts as a method for minimizing serious breakdowns requires a large inventory. Industries geared to the MLBF approach allot inordinate capital investment in non-productive parts, space and labour. Ten or twenty shafts stocked in inventory can represent several thousand rupees in idle capital in storage space, handling costs and hidden costs of rent and insurance, etc. Statistical evidence from studies of typical industries inventories placed the '"hidden costs" of inventories at about 30% of the total purchase price of the spare parts. Many managers are beginning to discover, however, that they do not have to rely or accept the limitations imposed upon them by the concept of MLBF

ERNi-1 MIG & TIG Welding Wire, ERNi-1 MIG & TIG Welding Wire Manufacturers, ERNi-1 MIG & TIG Welding Wire Suppliers, ERNi-1 MIG & TIG Welding Wire Stockists, ERNi-1 MIG & TIG Welding Wire Exporters

ENiCrMo-13 Welding Electrodes, ENiCrMo-13 Welding Electrodes Manufacturers, ENiCrMo-13 Welding Electrodes Suppliers, ENiCrMo-13 Welding Electrodes Stockists, ENiCrMo-13 Welding Electrodes Exporters

XUPER 680CGS Welding Electrodes, XUPER 680CGS Welding Electrodes Manufacturers, XUPER 680CGS Welding Electrodes Suppliers, XUPER 680CGS Welding Electrodes Stockists, XUPER 680CGS Welding Electrodes Exporters

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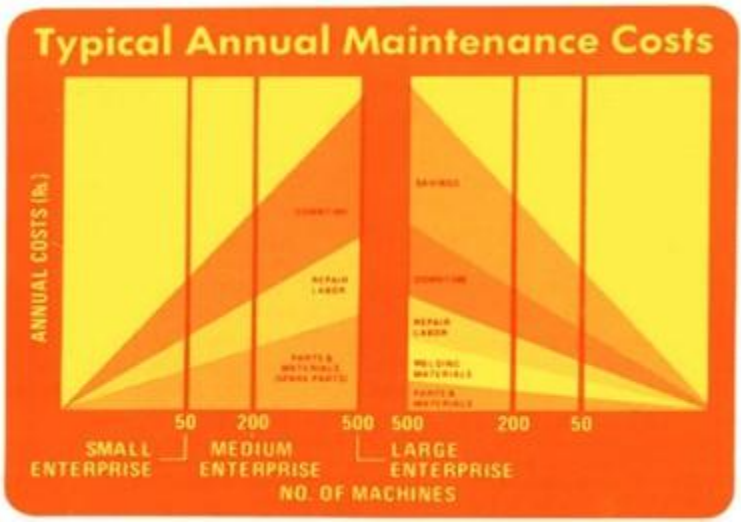
The Exclusive Castolin Eutectic Answer: (LPF)



Every product and process developed and manufactured by the Eutectic + Castolin Group has LPF (Life Prolonging Factor) built into it. These products and processes are called XuperLIFE. E + C Tero Engineers develop programmes of Protective Maintenance to turn wasteful procedures into efficient, economical operations.

ERCuNi MIG & TIG Welding Wire, ERCuNi MIG & TIG Welding Wire Manufacturers, ERCuNi MIG & TIG Welding Wire Suppliers, ERCuNi MIG & TIG Welding Wire Stockists, ERCuNi MIG & TIG Welding Wire Exporters

ENi-Cl Welding Electrodes, ENi-Cl Welding Electrodes Manufacturers, ENi-Cl Welding Electrodes Suppliers, ENi-Cl Welding Electrodes Stockists, ENi-Cl Welding Electrodes Exporters

XUPER 2240 Welding Electrodes, XUPER 2240 Welding Electrodes Manufacturers, XUPER 2240 Welding Electrodes Suppliers, XUPER 2240 Welding Electrodes Stockists, XUPER 2240 Welding Electrodes Exporters

Maintenance and Repair Welding

Why it is different?

Production welding generally is done under optimum conditions. The speci cations are set, the appropriate equipment is provided for, the chemistry of base metals is known, the parameters are readily controlled and/or controllable, and if necessary, prototypes can be made and subjected to destructive tests to con rm physical properties of the welds. In contrast, maintenance and repair welding presents wide disparities compared to production welding. Operating problems involve a host of unknowns, restraints and limitations. Welding alloys have to possess special features to overcome the handicaps of eld welding. Problems relate to pre and post heat, heat of application, base metal distortion and dilution, cracking, bond strength, amperage ranges, weldability and solidi cation rates.

Poor Original Part Design and Excessive loads Contribute to Part Failure.

Maintenance welders have to contend with other factors - such as poor design of parts which failed in service, modi cation of parts in the eld (such as add-ons, reinforcements, etc.) and older equipment subjected to stresses by production demands which exceeded the original requirements.

The Eutectic+Castolin Institute Approach

To Maintenance and Repair Welding Technology Challenged by the differences in eld welding conditions, the Eutectic+Castolin Institute Research Team has developed coatings for stick electrodes and torch rods to overcome the problems posed by limitations of available welding equipment, skill levels, in situ welding, heat input, unknown base metals, contaminants, etc.

Where required, additives such as deoxidizers, degassi ers, nucleants etc., have been incorporated into the coating formulation to provide highest weldability, in terms of wash, fluidity, bead shape, liquidus and solid us.

The AnOptic™/DurOptic™ System

Is a natural outgrowth of the "total approach" methods of investigating the problems associated with maintenance and repair welding. It is a simple, yet ingenious diagnostic procedure which helps eliminate guesswork and chance in the selection of proper consumables for a repair. Briefly, it relies on a two-fold analysis: rst, the AnOptic describes the environmental factors encountered causing wear on a particular part; second, the DurOptic describes the relevant physical properties of the deposited alloy. Use of the AnOptic/DurOptic System provides the welder with a quick, accurate method for selecting the most favorable alloy ... assuring additional service life for the repaired part.

ENiCrMo-3 Welding Electrodes, ENiCrMo-3 Welding Electrodes Manufacturers, ENiCrMo-3 Welding Electrodes Suppliers, ENiCrMo-3 Welding Electrodes Stockists, ENiCrMo-3 Welding Electrodes Exporters

Low Heat Input

Laboratory and eld tests on a wide variety of arc welding electrodes conducted by the Eutectic+Castolin Research Group have revealed that various properties of the weld deposit can be modi ed or controlled by the use of lower or higher amperage values in the range of recommended currents. For simplicity, the higher range is denoted as the "A" range; the lower range is denoted as the "B" range. The use of either range gives distinctly different weld characteristics; and the choice of range should be determined by the circumstances of the application.

NucleO - C™

NucleO - C is the metallurgical modi cation of certain alloys to provide deposited structures with more desirable features for speci c service requirements. Alloys systems affected contain carbides, silicides and borides. Deposit performances are dictated by the greatest percentage of hard constituent in the weld metal, the size of the hard structure and the orientation of the hard wear resistant phase or phases. The inclusion of a composite catalyst in a weld alloy containing hard constituents alters the size, con guration, density and orientation of these wear and abrasion resistant phases.

This patented concept is called NucleO - C. Its use in formulations provides reactions in molten weld metal wherein deoxidation, nucleation, grain re nement and density of hard constituent materials are optimized. This provides a tough, ne-grained matrix alloys containing ideal size and orientation of carbides, silicides and borides.

Micro-structure of conventional hard overlay without NucleO - C. Note typical random carbide orientation.

ChromCarb N6006 deposited under normal conditions, produced this NucleO - C affected structure showing optimum carbide size and orientation.

™NucleO - CGS

By the addition of special high melting elements to electrode formulations, the Eutectic+Castolin Institute® has devised a method of preventing the formation of coarse, columnar grains that result during the normal cooling of a deposited weld metal, in joining applications.

These tightly controlled ne particle elements provide a foundation for more numerous and smaller grain structures.

Maximum Safety Margin (M.S.M.)

The special additives included in each exclusive XuperLIFE product with M.S.M., or Maximum Safety Margin result in low application temperatures, which minimize the danger of warpage, distortion and base metal weakening, (and also) enhance tensile strength or hardness characteristics.

These exclusive qualities assure that each XuperLIFE product provides the maximum strength and safety.

CADB- Computerised Applications Data Bank

The AAP, or Approved Application Procedure, is a comprehensive analysis which is prepared by the TeroEngineer in conjunction with the personnel involved in a weld repair operation. Using the latest computer technology, a Computerized Applications Data Bank was formed, with the central storage banks located in institute facilities in Lausanne, Switzerland and Flushing, New York, with others being added.

AAP›s are not only distributed to institute TeroEngineers as they are published, but a complete le is maintained in computerized form at the Data Banks. For example, should a situation arise at a factory in Italy, on repair of a worn journal, the solution may exist in the data bank based on a sucessful repair having achieved in Japan, or Mexico or United States. In a matter of minutes, the required information on every welding detail and parameter will be available to the maintenance staff of the Indian facility.

Enicrcomo-1 Welding Electrodes, Enicrcomo-1 Welding Electrodes Manufacturers, Enicrcomo-1 Welding Electrodes Suppliers, Enicrcomo-1 Welding Electrodes Stockists, Enicrcomo-1 Welding Electrodes Exporters

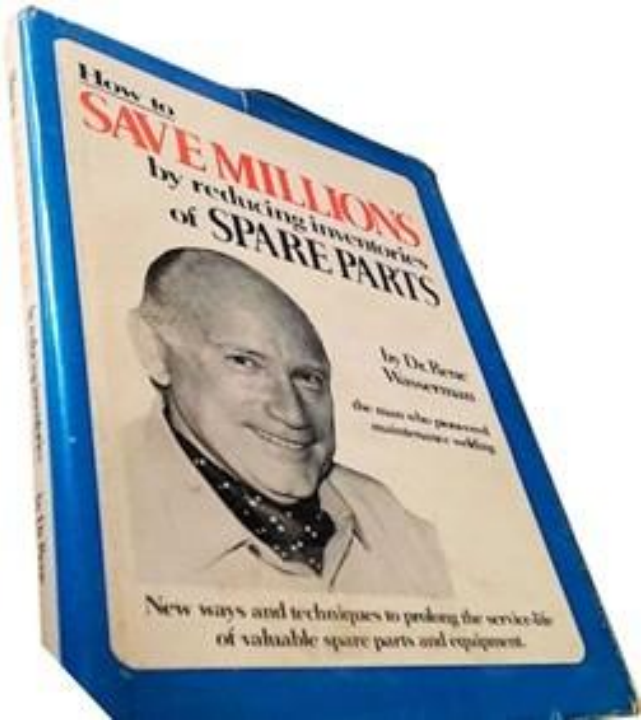
XUPER 660 NH Welding Electrodes, XUPER 660 NH Welding Electrodes Manufacturers, XUPER 660 NH Welding Electrodes Suppliers, XUPER 660 NH Welding Electrodes Stockists, XUPER 660 NH Welding Electrodes Exporters

UTP A 2133MN MIG & TIG Welding Wire, UTP A 2133MN MIG & TIG Welding Wire Manufacturers, UTP A 2133MN MIG & TIG Welding Wire Suppliers, UTP A 2133MN MIG & TIG Welding Wire Stockists, UTP A 2133MN MIG & TIG Welding Wire Exporters

UTP A 2535NB MIG & TIG Welding Wire, UTP A 2535NB MIG & TIG Welding Wire Manufacturers, UTP A 2535NB MIG & TIG Welding Wire Suppliers, UTP A 2535NB MIG & TIG Welding Wire Stockists, UTP A 2535NB MIG & TIG Welding Wire Exporters

How to save Millions ?

The detailed story of the Eutectic+Castolin Institute has been documented by Dr. Rene Wasserman in his book, How to Save Millions by Reducing Inventories of Spare Parts. It is a compendium of effective solutions to thousands of wear problems encountered by every industry, every production day. The book outlines step-bystep maintenance welding methods for lengthening the service life of vital, costly parts for up to 20 times the original part life and reveals proper managerial approaches to welding techniques that can lead to previously unsuspected increases in productivity and pro tability for industrial companies.



ENiCrMo-10 Welding Electrodes, ENiCrMo-10 Welding Electrodes Manufacturers, ENiCrMo-10 Welding Electrodes Suppliers, ENiCrMo-10 Welding Electrodes Stockists, ENiCrMo-10 Welding Electrodes Exporters

Research and Developement - Quality Control

Research and Development Centres are located throughout the world, utilizing the most advanced scienti c measuring and detection devices available to current technology.

Eutectic+Castolin products are manufactured according to standards and speci cations established not only to guarantee compliance with published speci cations but also to provide an extra measure of safety so important to maintenance and repair welding.

THE EUTECTIC+CASTOLIN "TESTED AND RECOMMENDED" SEAL CERTIFIES THAT EACH XUPERLIFE PRODUCT HAS BEEN THROUGHLY TESTED IN THE INSTITUTE'$ LABORATORIES FOR SUPERLATIVE QUALITY AND SUITABILITY FOR ITS RECOMMENDED APPLICATION.

Custom Products to Solve Industry›s Toughest Problems

Custom Alloys are designed and manufactured to provide optimum performance for a speci c application on critical mechanical parts. Eutectic+Castolin metallurgists take a total approach in developing each custom product.

In addition to developing an exclusive formulation with the exact physical properties desired, the metallurgists engineer the alloy to provide maximum performance during deposition and in-service. Custom alloys are manufactured under the most stringent quality control to maintain_ high performance. Custom products are available for arc welding and thermal spraying including the Eutectic+Castolin plasma systems namely, Eutronic GAP and Eutronic Plasma.

Permanent Aid and Training (PAT)

There are Eutectic+Castolin Institute Centres in cities throughout the world, housing the world›s most advanced training facilities as well as the TerExpo - the most impressive exhibition of maintenance-welded parts ever assembled.

Training

In your plant - based on the needs of a particular company the appropriate courses can be programmed to minimize lost time of personnel requiring training.

Courses have been designed for flexibility and can be tailored to conform to schedules from a minimum of a few hours to a maximum of several days.

Unparalleled Knowledge of Industry

Through the efforts of Eutectic+Castolin Institute a series of maintenance Synoptecs have been prepared covering major industries. Included in these Synoptecs are flow charts with vital parts and machine components isolated and analyzed for wear problems and wear/protective solutions. Specially-prepared courses detail weld-procedures for applications commonly associated with the «success or failure» of an industrial operation.

Eutectic+Castolin Institute Seminars

The ultimate training programme -designed for Top Management and engineering personnel -is also available at Institute Facilities. Here seminars are held with experts and specialists in the eld of ProTECtive Maintenance, who conduct "targeted" classes of speci c aspects of any industrial maintenance welding problem, including processes, metals, wear, products, testing, performance, cost analysis, inventories, etc., These courses are designed to effect signi cant savings and improve productivity, efficiency and pro tability.

Production -All In Our Own Facilities

All Eutectic+ Castolin alloys are manufactured under careful and exacting conditions in Eutectic + Castolin's own plants. High speed, automated manufacturing facilities produce a variety of maintenance and production alloys in many sizes.

TeroCoteLab

Provides a Total Welding Service

- Skilled personnel who will analyse your problems.
- Welding reclamation and repair programmes will be carried out at EWAC TCL or on site.
- Components can be returned fully machined to customer speci cations, ready for immediate installation.

ERNiCr-3 MIG & TIG Welding Wire, ERNiCr-3 MIG & TIG Welding Wire Manufacturers, ERNiCr-3 MIG & TIG Welding Wire Suppliers, ERNiCr-3 MIG & TIG Welding Wire Stockists, ERNiCr-3 MIG & TIG Welding Wire Exporters

ENiCrMo-10 Welding Electrodes, ENiCrMo-10 Welding Electrodes Manufacturers, ENiCrMo-10 Welding Electrodes Suppliers, ENiCrMo-10 Welding Electrodes Stockists, ENiCrMo-10 Welding Electrodes Exporters

Chromcarb N6006 Welding Electrodes, Chromcarb N6006 Welding Electrodes Manufacturers, Chromcarb N6006 Welding Electrodes Suppliers, Chromcarb N6006 Welding Electrodes Stockists, Chromcarb N6006 Welding Electrodes Exporters

Metal Preparation

ExoTrode

Universal Metal Preparation Electrode

DESCRIPTION:

ExoTrode is a versatile electrode designed for metal preparation tasks such as chamfering, gouging, cutting, and piercing. Here are the detailed speci cations and applications:

- Exothermic coating concentrates the arc force without overheating.
- Quick strike and re-strike properties.
- Ideal for in-plant or eld use.
- No supplementary gas, compressed air, or special electrode holder required.
- Can be used on all metals and is ideal for difficult-to-reach locations.

Product Details

- Type: Special Electrode
- Application: Chamfering, gouging, cutting, and piercing

PROCEDURE FOR USE

- Chamfering and Gouging: Point the electrode in the direction of travel at an angle of not more than 30° with the plane of the work. Strike an arc and push the electrode along quickly for a shallow chamfer or more slowly for a deeper gouge.
- Cutting: Hold the electrode at a 45° angle and strike an arc. Push and pull to cut.
- Piercing: Hold the electrode vertically and strike an arc.
- **Technical Data**

DIAMETER	AMPERAGE
3.2mm	230-310
4.0mm	280-380
5.0mm	300-500

Current & Polarity: AC / DC (-)

ENiCrFe-3 Welding Electrodes, ENiCrFe-3 Welding Electrodes Manufacturers, ENiCrFe-3 Welding Electrodes Suppliers, ENiCrFe-3 Welding Electrodes Stockists, ENiCrFe-3 Welding Electrodes Exporters

Nucleotec 2222N Welding Electrodes, Nucleotec 2222N Welding Electrodes Manufacturers, Nucleotec 2222N Welding Electrodes Suppliers, Nucleotec 2222N Welding Electrodes Stockists, Nucleotec 2222N Welding Electrodes Exporters

Steels

Xuper 660NH

Manual Metal Arc Electrode With Double Coating For Joining Of Structural Steel

DESCRIPTION:

Special maintenance and repair welding electrode with advanced by pherical coating offering the bene ts of a rutile and of a basic coating. The deposit is smooth and regular. Very stable arc with transfer in ne droplets with low spatters. Good penetration. Adapted to contact welding. Approved for applications between - 40C°and 350C°

Its mechanical properties are higher than most of structural steels.

- Low heat input and low hydrogen electrode that minimizes harmful base metal transformations.
- Exceptional all- position weldability
- Crack-free welding deposits
- Quick freezing easy slag removal
- High energy arc concentration for good penetration even in M&R condition.

PROCEDURE FOR USE

Preparation: Clean the area to be welded. Adapt the size of the electrode and amperage to the size of the part.

Preheating : Depends on the steels Carbon Equivalent and ti workpiece size, thickness and the geometry. Castolin Eutectic recommends:

CE < 0.2 : preheating not essential.

CE 0.2 - 0.4: preheating 100-200°C

CE 0.4 - 0.8 : preheating 200-350°C

Note that 12-14% Mn steels should never be preheated and that the workpiece temperature during welding should be kept below 250°C.

Welding: Employ a near vertical electrode angle and maintain a short arc length. (Avoid too long arc which could result in weld porosity). When re-striking the arc, commence approximately 10-12 mm back from the previous weld crater and progress forward, thus ensuring complete coverage of the crater area. Deposit either as stringer beads or minimum weaving.

Clean each weld bead thoroughly, removing all slag residues prior to commencing subsequent deposits. Do not attempt to use electrodes if suspected of being damp or electrodes with damaged flux coatings. Welding parameters: Welding current: = (+) / ~

Welding positions

PA, PB, PC, PD, PE, PF,according to ISO 6947

TYPICA L APPLICATIONS:

For joining of non or low alloyed steel and high resistance ne grained steels. The typical application are: tack welding. in situ ,workshop or repair welding in machine construction and shipyards. for containers and pressure vessels.

TECHNICAL DATA:

- Tensile Strength: 655 N/mm2 (95,000 psi)
- Yield Strength: 448 N/mm2 (65,000 psi)
- Current & Polarity: AC/DC (+)

DIAMETER	AMPERAGE
2.5mm	70-90
3.2mm	100-130
4.0mm	130-170
5.0mm	200-235

Note: For optimum result use the lowest amperage practical

EuteCTrode 670

A High Alloy Content Electrode For Welding Steels Of Unknown Composition And Dissimilar Steels

DESCRIPTION:

EutecTrode 670 has been specially formulated to meet the critical metallurgical demands when joining stainless and mild steels of unknown composition. Its composition also makes it an ideal candidate product when welding dissimilar steels and when such steels need scaling resistance up to 1800°F.

- Fully Austenitic structure helps retain mechanical properties
- Excellent in Salt-rich environments
- Corrosion Resistance: High resistance to corrosion and spalling
- Temperature Resistance: Effective in environments with high temperatures up to 1800°F

Product Details

- High alloy content electrode, used for welding steels of unknown composition and dissimilar steel

APPLICATIONS:

Use in marine applications such as salt-water discharge pumps, desalination equipment, furnace baskets that work in both carburizing and reducing environments, salt baths used in drawing and tempering operations.

PROCEDURE FOR USE

- Preparation: Clean weld area of scale and/or oxide. Angle prepping normally involves close- butts and infrequently bevel preparations. If needed, a 60° bevel is acceptable. Preheat and inter-pass temperatures will depend on the grade of steel, if known. Unknown grades should be nominally preheated within a -200 300-F range.
- Technique: A short, non-contact technique is recommended for both llet and butt welding. Use a slightly longer arc length for bead- on-plate welding. Deposit stringer beads or 2x to 3x weave beads. Do not weave more than three times the electrode diameter otherwise slag interference will be encountered.
- Post-welding: Parts which have been preheated should be wrapped or covered with heat - retardant material to help with slow cooling.

TECHNICAL DATA:

- Tensile Strength: 655 N/mm2 (95,000 psi)
- Yield Strength: 448 N/mm2 (65,000 psi)
- Current & Polarity: AC/ DC (+)

DIAMETER	AMPERAGE
3.2mm	70-100
4.0mm	110-150

Note: for optimum results use the lowest amperage practical.

EutecTrode 6800 Welding Electrodes in India, EutecTrode 6800 Welding Electrodes Manufacturers in India, EutecTrode 6800 Welding Electrodes Suppliers in India, EutecTrode 6800 Welding Electrodes Stockists in India, EutecTrode 6800 Welding Electrodes Exporters in India

EuteCTrode 680

Specially Formulated High-Alloy Electrode For Welding Dissimilar, Unknown And Problem Steels

DESCRIPTION:

EutecTrode 680 is a high-alloy electrode designed for critical maintenance and repair applications. It is suitable for a wide range of high alloy steel components, providing maximum repair reliability and extended part service life. The electrode is known for its superior crack resistance and high mechanical properties, ensuring an excellent in-service Maximum Safety Margin (MSM).

- Repairs to most high alloy steel components
- Maximum repair reliability
- Extended part service life
- Reduced inventory carrying costs
- Improved capital & equipment management

Product Details

- Manual Metal Arc Electrode, specially formulated for welding dissimilar, unknown, and problem steels

APPLICATIONS

- Repairs to most high alloy steel components
- Jigs, molds, dies, leaf springs
- High-strength repairs to earthmoving, mining, and constructional equipment chassis
- Undercarriage repairs, composite die fabrications, manganese steel components

PROCEDURE FOR USE

Preparation: Clean weld area of scale and/or oxide. Angle prepping normally involves close-butts and infrequently bevel preparations. If needed, a 60° bevel is acceptable. Preheat and inter-pass temperatures will depend on the grade of steel, if known. Unknown grades should be nominally preheated within a -400 500°F range.

Technique: A short, non-contact technique is recommended for both llet and butt- welding. Use a slightly longer arc length for bead-on-plate welding. Deposit stringer beads or 2x to 3x weave beads. Do not weave more than three times the electrode diameter otherwise slag interference will be encountered.

Post Welding: Parts which have been preheated should be wrapped or covered with heat-retardant material to slow cool parts...critical for Tools & Dies

TECHNICAL

- Tensile strength:830 N/mm2 (120,000 psi)
- Yield strength: 545 N/mm2 (79,000 psi)
- Current polarity : AC/DC (+)

DIAMETER	AMPERAGE
2.5mm	55-70
3.2mm	75-95
4.0mm	90-115
4.8mm	135-190

Note: For optimum result use the lowest amperage practical

Xuper 680 CGS

High-Alloy Electrode For Welding Dissimilar, Unknown And Problem Steels

DESCRIPTION:

Xuper 680 CGS is a high-alloy electrode designed for critical maintenance and repair applications. It is suitable for a wide range of high alloy steel components, providing maximum repair reliability and extended part service life. The electrode is known for its superior crack resistance and high mechanical properties, ensuring an excellent in-service Maximum Safety Margin (MSM).

Product Details

- Repairs to most high alloy steel components
- Maximum repair reliability
- Extended part service life
- Reduced inventory carrying costs
- Improved silicon content for grain size control and weldability.
- High-Alloy Electrode for welding dissimilar, unknown, and problem steels

APPLICATIONS

- Repairs to most high alloy steel components
- Jigs, molds, dies, leaf springs
- High-strength repairs to earthmoving, mining, and constructional equipment chassis
- Under carriage repairs, composite die fabrications, manganese steel components

PROCEDURE FOR USE

Preparation: Clean weld area of scale and/or oxide. Angle prepping normally involves close- butts and infrequently bevel preparations. If needed, a 60° bevel is acceptable. Preheat and inter-pass temperatures will depend on the grade of steel, if known. Unknown grades should be nominally preheated within a 400-500°F range.

Technique: A short, non-contact technique is recommended for both llet and butt- welding. Use a slightly longer arc length for bead-on-plate welding. Deposit stringer beads or 2x to 3x weave beads. Do not weave more than three times the electrode diameter otherwise slag interference will be encountered.

Post Welding: Parts which have been preheated should be wrapped or covered with heat-retardant material to slow cool parts...critical for Tools & Dies.

TECHNICAL

- Tensile strength:830 N/mm2 (120,000 psi)
- Yield strength: 545 N/mm2 (79,000 psi)
- Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
1.6mm	25-40
2.0mm	35-50
2.5mm	55-70
3.2mm	75-95
4.0mm	90-115
5.0mm	135-190

Note: For optimum result use the lowest amperage practical

XHD 2222

Manual Metal Arc Electrode For Joining Thick Sections Of Hardenable Steels

DESCRIPTION:XHD 2222 is a high-alloy nickel-based electrode designed for critical maintenance and repair applications. It is suitable for a wide range of high alloy steel components, providing maximum repair reliability and extended part service life. The electrode is known for its superior crack resistance and high mechanical properties, ensuring an excellent in-service Maximum Safety Margin (MSM).

Product Details

- Manual Metal Arc Electrode For joining thick sections of hardenable steels

APPLICATIONS

Protective coatings and/or joining: flame hardening equipment, heat treating trays, pipe flanges, barrels, gate valves, hooks, baskets, gas plants, steel mill roll ends, carbon dioxide equipment, guides, tongs, heat treating racks, and related equipment.

Suitable for use on all steel alloys, nickel alloys, and for joining combinations of dissimilar alloys.

PROCEDURE FOR USE

Preparation: Remove fatigued or damaged metal, and grind the surface. For joining, or the repair of cracks in heavy-section parts, make a

«U» groove chamfer with ExoTrode.

Preheating: For the joining or overlaying of high nickel alloys, preheating is not normally required. Preheating will be required for air hardening, higher carbon, and low alloy steels. Particular care should be taken when joining ferritic steels to nickel alloys to avoid overheating the nickel side.

Welding Technique: For heavily-constrained sections, start with a buttering layer on both faces of the chamfer to reduce the effects of dilution by the base metal. Where there is a high risk of producing hardened structures in the base metal, weld the rst pass with 2.5 mm electrodes. Fill the chamfer with 3.2 mm or 4 mm diameter electrodes, according to the size of the job, and hammer peen to relieve contraction stresses.

TECHNICAL DATA

Tensile strength : 650 N/mm2(95000 psi) Yield strength : 398 N/mm2 (58000 psi)

Elongation: 35%

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
2.5mm	80-120
3.2mm	100-160
4.0mm	130-200
5.0mm	200-250

Note: For optimum result use the lowest amperage practical

EutecTrode 6666 Welding Electrodes, EutecTrode 6666 Welding Electrodes Manufacturers, EutecTrode 6666 Welding Electrodes Suppliers, EutecTrode 6666 Welding Electrodes Stockists, EutecTrode 6666 Welding Electrodes Exporters

Xuper NuCleoTeC 2222

Manual Metal Arc Electrode For Joining Thick Sections Of Hardenable Steels

DESCRIPTION: xuper NucleoTec 2222 is a low heat input electrode with a proprietary basic flux-coating formulation and a high purity, fully alloyed core wire. It is designed speci cally for joining thick sections of hard enable steels with lower preheat procedures and Maximum Safety Margin. The electrode provides a fully authenticate solid-solution nickel-chromium-manganese-iron alloy deposit, which offers reliable, radiographic quality deposits with outstanding mechanical, metallurgical, physical, and chemical properties.

Product Details

- Manual Metal Arc Electrode for joining thick sections of hardenable steels

APPLICATIONS

Cement kiln rings, rollers, and shells Ball mill crusher trunnions and casings Forging, extrusion, and metal working machines Liquid gas vessels or equipment. Chemical and petroleum installations. Heat exchangers and steam power transition joints

PROCEDURE FOR USE:

Preparation: Ensure that areas to be joined are free from contaminants, oxides, defects etc, especially with high nickel alloys, where nal decreasing operations may pe necessant Adopt standard joint design depending upon type, size, service requirements or dissimilar combination of alloys.

Preheating : For the joining or overlaying of high nickel alloys preheating is not normally required. Preheating will be required however for air hardening, higher carbon and low alloy steels Particular care should be taken when joining ferrite steels to nickel alloys when preneung & required, that the nickel side is not allowed to overheat. For carbon and alloy steels the preheat temperature will depend upon type, size and carbon equivalent of the base material. Welding Technique**:** Select lowest amperage as possible and employ an electrode angle between 70-80 to the direction of travel for down hand joints, and near vertical to the line of joint for vertical up positions, 45° to the line of joint for llet welds. Maintain an are length as short as possible and deposit as stringer beads and avoid weaving wherever possible especially on dissimilar combination Joints). Remove all slag to avoid inclusions between passes followed by a thorough wire brushing using a stainless steel brush.

Joining thick sections of difficult-to-weld steels Alloy steels of unknown speci cation. Nickel bearing steels for sub-zero service and elevated temperatures. Dissimilar joints between stainless and ferrite steels. Nickel alloys of NiCrFe, NiCrMnFe type. Joining deoxidized copper to nickel alloys or steel.

TECHNICAL DATA

Tensile strength : 690 N/mm2 (100,000 psi)

Yield strength :420 N/mm2 (61,000 psi)

Elongation: 45%

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
2.5mm	50-90
3.2mm	70-110
4.0mm	90-140
5.0mm	110-170

Note: For optimum result use the lowest amperage practical

EuteCTrode EC 6821

Electrode For High Strength Joining Of Mn Steel, Low Alloy Steel & Medium Carbon Steel.

Description

High chrome manganese alloy electrode for TeroCote protective coatings and cushion layers on carbon steels, low or high alloy steels, and manganese steels.

- Maximal resistance to impact and pressures.
- Very work-hard enable deposit.
- Excellent AC/DC weldability.
- Machinable with cutting tools.
- Can be contact welded.
- Easy slag removal.
- Excellent crack resistance by absorption of internal stresses.
- Magnetic deposit

Product Details

- CrMn alloy electrode used for buffer layers and manganese steels

APPLICATIONS

- Buckets, book stick, C frame & undercarriage components of earthmoving equipment, Conveyor rollers ,Grading screens, Gyratory crusher cones
- Buffer layers for hard facing

PROCEDURE FOR USE

Preparation: Obtain a good surface by removing worn metal with ExoTrode or by mechanical means.

Preheating: Depends on the steel's Carbon Equivalent and the work piece size, thickness, and geometry.

CE < 0.2 : preheating not essential.

CE 0.2 - 0.4: preheating 100-200°C

CE 0.4 - 0.8 : preheating 200-350°C

Note: 12-14% Mn steels should never be preheated and the work piece temperature during welding should be kept below 250°C.

Welding: Keep a short arc, the electrode slightly sloping, possibility of contact welding. Follow welding procedures exactly.

TECHNICAL DATA

Tensile strength : 58kg /mm^2 (84,000 psi)

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
3.2mm	55-100
4.0mm	85-140
5.0mm	135-185

Note: For optimum result use the lowest amperage practical

Vautid 100 Welding Electrodes, Vautid 100 Welding Electrodes Manufacturers, Vautid 100 Welding Electrodes Suppliers, Vautid 100 Welding Electrodes Stockists, Vautid 100 Welding Electrodes Exporters

Stainless Steel

EuteC - StainTrode D

Manual Metal Arc Electrode For Unknown Grades Of Stainless Steel And Refractory Steels.

DESCRIPTION

Eutec - StainTrode D is a versatile, low heat input manual metal arc electrode designed for maintenance welding of stainless steels, particularly for unknown grades and refractory steels. It is engineered for high-speed welding, minimizing distortion, and providing easy slag removal and moisture resistance.

Product Details

- Immediate striking and re-striking -ideal for tacking applications.
- Resistance to inter granular corrosion -maximum safety margin.
- Re ned grain micro structure - increased performance.
- Insensitive to hydrogen embitterment - increased reliability.
- Resistant to embitterment at cryogenic or furnace temperatures
- Resistant to heat and oxidation up to 1100 C.

APPLICATIONS:

Suitable for assembly and repair of AISI 309 20/25) 310 ,(12/25)), and 314 type refractory steel. Ideal for applications requiring excellent resistance to heat and corrosion like burner pipe, Kiln anchor welding.

PROCEDURE FOR USE

Preparation: Ensure that all areas to be welded are free from oxides, contaminants, etc. Adopt suitable joint preparation for repair and fabrication applications.

Preheating: Preheating is not generally necessary when welding austenitic stainless steels. For overlaying operations on ferritic steels, preheating of the steel section may be necessary depending upon type and size.

Welding procedure: Employ short arc length and near vertical electrode angle. Ensure that each weld pass is thoroughly cleaned and that all slag residues are removed. Thin sections may require tack welding procedure and a welding technique in order to reduce distortion effects. Avoid stray arcing outside the weld preparation.

TECHNICAL DATA

Tensile strength : 630 N/mm2(91,000 psi)

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
2.5mm	45-70
3.2mm	60-100
4.0mm	80-130

Note: For optimum result use the lowest amperage practical

UTP 6170CO MIG & TIG Welding Wire, UTP 6170CO MIG & TIG Welding Wire Manufacturers, UTP 6170CO MIG & TIG Welding Wire Suppliers, UTP 6170CO MIG & TIG Welding Wire Stockists, UTP 6170CO MIG & TIG Welding Wire Exporters

UTP A 3545NB MIG & TIG Welding Wire, UTP A 3545NB MIG & TIG Welding Wire Manufacturers, UTP A 3545NB MIG & TIG Welding Wire Suppliers, UTP A 3545NB MIG & TIG Welding Wire Stockists, UTP A 3545NB MIG & TIG Welding Wire Exporters

EuteC - StainTrode A-Mo-L

Premium stainless steel electrode for maintenance and repair welding of Austenite Stainless steel grades

DESCRIPTION

StainTrode A-Mo-L is a high chromium-nickel electrode formulated with a highly re ned flux coating for all-position welding of stainless steels. Arc control is outstanding and slag is virtually self-releasing. This premium stainless steel electrode is ideal for welding molybdenum- enhanced stainless steels such as AISI 316 ,316L, 317, and 317L. It can also be used on non- molybdenum bearing stainless steels such as AISI 304 ,304 ,302 ,301L and 321. Exhibits enhanced corrosion resistance due to increased levels of molybdenum

Product Details

- Enhanced corrosion and pitting resistance due to increased levels of molybdenum
- Formulated for use on dairy, food and distillery equipment
- Designed for welding molybdenum enhanced stainless steels such as AISI 316, 316L, 317 etc

APPLICATION

- Pasteurizers in Dairy , Chemical Vats, Pulp Digesters in Pulp and Paper mills
- Settling Tanks : Water Treatment/Food Processing
- Plating Baskets : Manufacturer of Metal Products
- Boiler Pumps: Various Industries

PROCEDURE FOR USE

PREPARATION: Clean weld area of scale and/or oxide. Make sure all oily contaminants are removed with a suitable VOC-free cleaner. Angle preparing normally involves close butts and infrequently bevel preparations. If needed, a 60° V bevel is acceptable. Preheating of stainless steels is generally not required.

TECHNIQUE: A short, non-contact technique is recommended for both llet and butt- welding. Use a slightly longer arc-length for bead-on plate welding. Deposit stringer beads or 2 times to 3 times weave beads. Do not weave more than three times the electrode diameter otherwise excessive heat input will cause distortion.

POST-WELDING: Allow parts to cool naturally in ambient condition

Property

Tensile strength: 620 N/mm2 (90,000psi)

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
2.5mm	65-80
3.2mm	85-105
4.0mm	90-140

Note: When using StainTrode A-Mo-L keep to the low end of the amperage range for optimized

EuteC - StainTrode B-L

Low Carbon Stainless Steel Electrode With Excellent Heat And Corrosion Resistance For Joining And Overlay Applications.

DESCRIPTION

Eutec - StainTrode B-L is a versatile manual metal arc electrode, low heat input, all position electrode. High corrosion and heat resistance electrode for manual arc welding 18/8 and 19/9 stainless steel type 301,302, 304, 304L, 305, 306, 308, 308L and 347.

Product Details

All positions electrode. Especially recommended for joining extra low carbon grades to minimize carbide precipitation and eliminate inter granular corrosion, where good corrosion resistance are required. Excellent resistance to heat and scaling.

APPLICATIONS:

Containers, mixers, chemical plant equipments, distillery equipments, food processing equipments and also for protective overlay on steel,

PROCEDURE FOR USE

Clean weld area. Thickness unto 3 mm can be square butt welded. Heavier sections should be beveled to a 60°angle. Tack at short intervals to maintain alignment. Hold electrode at a 15° angle in the direction of travel. Maintain a short arc. Stringer beads are preferable. Clean slag between passes. Use a number of light beads. Use skip or step back technique.

TECHNICAL DATA

Tensile strength : 560 N/mm2(80,000 psi)

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
2.5mm	40-70
3.2mm	70-100
4.0mm	90-140

Note: For optimum result use the lowest amperage practical

ECuNi Welding Electrodes, ECuNi Welding Electrodes Manufacturers, ECuNi Welding Electrodes Suppliers, ECuNi Welding Electrodes Stockists, ECuNi Welding Electrodes Exporters

ERNiCrCoMo-1 MIG & TIG Welding Wire, ERNiCrCoMo-1 MIG & TIG Welding Wire Manufacturers, ERNiCrCoMo-1 MIG & TIG Welding Wire Suppliers, ERNiCrCoMo-1 MIG & TIG Welding Wire Stockists, ERNiCrCoMo-1 MIG & TIG Welding Wire Exporters

EutecTrode 670 Welding Electrodes, EutecTrode 670 Welding Electrodes Manufacturers, EutecTrode 670 Welding Electrodes Suppliers, EutecTrode 670 Welding Electrodes Stockists, EutecTrode 670 Welding Electrodes Exporters

UTP 6222MO MIG & TIG Welding Wire, UTP 6222MO MIG & TIG Welding Wire Manufacturers, UTP 6222MO MIG & TIG Welding Wire Suppliers, UTP 6222MO MIG & TIG Welding Wire Stockists, UTP 6222MO MIG & TIG Welding Wire Exporters

Cast Iron

Xyron 223

Manual Metal Arc Electrode For Machinable Welds On Heavy Section Cast Irons

DESCRIPTION The high nickel content of the core wire ensures a deposit which is easy to le, with a non-fragile transition zone, an absence of hard phases, and a coefficient of expansion similar to that of the base metal which minimizes internal stresses. Containing graphite stabilizing elements and deoxidized agents to optimize arc characteristics. This unique composition gives the 223 electrode a stable arc even at low welding currents.

Despite the low amperage, the transfer of metal in the form of ne droplets, is very fast. Furthermore, the coating composition gives this electrode a very high speci c rate of fusion, i.e.. a high weight in grams of melted metal per ampere per second.

Product Details

- Exceptional high speed weldability, Reduced penetration in the base metal, with low dilution and virtually no oxide inclusions.
- Dense deposit provides high crack resistance, leak-proof joints with good machinability.

APPLICATIONS:

Heavy Section Cast Iron, Can Be Used On Grey Cast iron, SG Cast iron, malleable Cast iron

PROCEDURE FOR USE

Preparation: Ensure that all areas to be welded are free from contaminants, remove casting defects such as sand inclusions and blowholes and damaged or fatigued base material. For the repair of cracks prepare, by gouging suitable «U» or «V» type joint-design, depending on wall thickness, using ExoTrode.

Preheating: For small and intricate castings, preheating between 200° C-300-° C may be necessary. For large and complicated sections, where pre-heating cannot be successfully applied (avoid local preheating) maintain the workpiece at ambient temperatures throughout the repair operation by allowing each weld bead to cool before commencing subsequent welds.

Welding technique: For non-preheated parts, select lowest possible amperage in order to minimize heat input and employ a balanced welding technique. Hold a near vertical electrode angle and maintain a short arc length, deposit stringer beads 3-4 cm in length followed by peening (do not peen thin sec tion components). Maintain the workpiece temperature close to ambient temperature, allow each weld bead to completely cool prior to subsequent welds.

Ensure that each weld pass is completely free from slag, defects, etc. Preheated parts should be cooled at a slow, even rate, down to room temperature.

Procedure A

High amperage welding for massive parts, maximum welding speed.

Procedure B

Low amperage welding for parts which should not be overheated, minimum dilution. Recommended procedure for the majority of applications

TECHNICAL DATA

Tensile strength: 393 N/mm2 (57000 in psi)

Typical hardness : 130-170HB

Current polarity: AC/DC (+

	Procedure A	Procedure B
DIAMETER	AMPERAGE	AMPERAGE
2.5mm	70-90	50-60
3.2mm	100-120	80-90
4.0mm	130-140	90-140

Note: *For optimum result use the lowest amperage practical*

Xyron 224

Manual Metal Arc Electrode For Machinable Welds For Cast Irons

DESCRIPTION

Special electrode offering optimum machinability for all cast irons, flat beads without under-cutting. The first Castolin low ampelectrode for welding grey cast iron with metal transfer by fine droplets, offering optimum machinability. No under-cutting (important for new parts in pre-machined cast iron). No preheating required, enhanced fluidity, easy to remove slag. Ideal for overlaying and for buttering layers as preparation for bronze electrodes.

Product Details

- Excellent deposition characteristics with Very good machinability.
- Good positional welding with low amperage welding current
- Homogeneous deposit structure with low dilution.

APPLICATIONS

Applications include machine tool carriages, bearing supports, crankshaft cases, cable drums, slide ways, chain wheels, cog wheels, bronze or Grey cast iron turbine blades, eroded turbine housings, gaskets, valve seats, electric motor cases and flanges, etc.

PROCEDURE FOR USE

Preparation: Ensure that all areas to be welded are free from contaminants, remove casting defects such as sand inclusions and blowholes and damaged or fatigued base material. For the repair of cracks prepare, by gouging suitable «U» or «V» type joint-design, depending on wall thickness, using ExoTrode.

Preheating: For small and intricate castings, preheating between 200 - 300°C. may be necessary. For large and complicated sections, where preheating cannot be successfully applied (avoid local preheating) maintain the workpiece at ambient temperatures throughout the repair operation by allowing each weld bead to cool before commencing subsequent welds.

Welding technique: For non-preheated parts, select lowest possible amperage in order to minimize heat input and employ a balanced welding technique. Hold a near vertical electrode angle and maintain a short arc length, deposit stringer beads 4-3 cm in length followed by peening (do not peen thin section components). Maintain the workpiece temperature close to ambient temperature, allow each weld bead to completely cool prior to subsequent weld. Ensure that each weld pass is completely free from slag, defects, etc. Preheated parts should be cooled at a slow, even rate down to room temperature.

TECHNICAL DATA

Tensile strength: 475 N/mm2 (69,000 psi)

Typical hardness: 195HB

Current polarity: AC/DC (-)

DIAMETER	AMPERAGE
2.5mm	50-80
3.2mm	70-110
4.0mm	90-130

Note: *For optimum result use the lowest amperage practical*

Xuper 2240

Manual Metal Arc Electrode For Repair And Maintenance Of Contaminated Cast Iron

DESCRIPTION

A high nickel alloy electrode producing low-heat-input deposits which are highly crack resistant and fully machinable. The electrode is designed with an electroplated core wire of controlled thickness to ensure a low electrical resistivity. This avoids overheating of the electrode, and ensures a unique metal transfer characteristic for low dilution and controlled metallurgical structure, with spherical graphite formation for high resistance to weld metal cracking. The special arc characteristics also allow positional welding even on contaminated surfaces. For the fabrication and repair of flake graphite and nodular cast iron where ease of welding, low heat input and high crack resistance are important. Also suitable for joining cast iron to carbon steels and low alloy steels.

Product Details

- Superior positional weldability with Nodular graphite deposit for crack resistance, strength and colour match
- Low heat input, smooth metal transfer
- Absence of electrode overheating
- Special arc characteristics for contaminated surfaces

APPLICATIONS:

Assembly of cast iron to steel, machine bases, lathe beds and ways, pulleys, dies, levers, slow, pump housings, differential housings, gears boxes, engine blocks, turbine housings, to flanges, hydraulic cylinders.

PROCEDURE FOR USE

Preparation: Ensure that all areas to be welded are free from contaminants, remove casting defects such as sand inclusions and blowholes and damaged or fatigued base material. For the repair of cracks prepare, by gouging suitable «U» or « V» type joint- design, depending on wallthickness, using ExoTrode.

Preheating: For small and intricate castings, preheating between 200-300° C may be necessary. For large and complicated sections, where pre-heating cannot be successfully applied (avoid local preheating) maintain the workpiece at ambient temperatures throughout the repair operation by allowing each weld bead to cool before commencing subsequent welds

Welding technique : For non preheated parts, select lowest possible amperage in order to minimise heat input and employ a balanced welding technique. Hold a near vertical electrode angle and maintain a short arc length, deposit stringer beads 4-3 cm in length followed by peening (do not peen thin section components. Maintain the workpiece temperature close to ambient temperature, allow each weld bead to completely cool prior to subsequent welds. Ensure that each weld pass is completely free from slag, defects, etc. Preheated parts should be cooled at a slow, even rate down to room temperature.

Preheated parts should be cooled at a defects, even rate down to room temperature. pump housings, differential housings, gears allow each weld bead to completely cool prior and gear subsequent welds. Ensure that each weld

TECHNICAL DATA

Tensile strength: 346 N/mm2 (50,000 psi)

Typical hardness : 170HB

DIAMETER	AMPERAGE
2.5mm	60-90
3.2mm	90-120
4.0mm	120-150

Note: *For optimum result use the lowest amperage practical*

Xuper 22*33N

Premium Nickel-Iron Electrode For Superior Cast Iron Welding With Highest Tensile Strength

DESCRIPTION

Xuper 2233N is a low-amperage, cored wire, flux-coated electrode for welding the widest range of cast irons as well as for welding cast iron to steel. Deposits are highly crack-resistant with superior machinability. Improved weldability and wash characteristics result in weld beads that are flat, even, and nely rippled. The advanced core wire prevents overheating at rated amperage reducing stub loss while Maintaining weldability. The smooth stable arc has great strike and re-strike characteristics with minimal spatter and fuming.

Product Details

- All position, AC/DC electrode for joining, build-up and overlays
- Durable, crack-resistant welds with great machinability
- High quality core wire reduces overheating and flux breakdown, meaning less stub loss
- Good for nodular and ductile cast irons, sections under restraint and dissimilar joints of cast irons and plain steels can be used on grey, malleable, meehanite, SG, Ni-resist Cast iron

APPLICATIONS

Ideal solution for a variety of cast iron repairs under demanding conditions, joints under severe restraint, dissimilar thickness and pipe welds to flanges. Excellent for repairs to machine bases and frames and oil pumps.

PROCEDURE FOR USE

Preparation: Clean joint and/or parts to be welding thoroughly. Terminate crack growth by drilling ¼" holes at the leading points. Preheat casting to 400°F holding for 1 hour per inch of thickness. Prepare joint with ExoTrode®. Joints below 1" should be beveled to a V-pro le; Over 1" can be beveled to either a single or double J-pro le. Allow a root opening of 8/1" for full penetration welds.

Technique: Deposit short runs no longer than - 2in. and moderately peen 2nd and subsequent passes. For long cracks in heavy castings use either a cascade and/or block deposition sequence.

Post Welding: Slow cool after welding using insulating material such as vermiculite or heat-retardant blankets.

TECHNICAL DATA

Tensile strength: 496 N/mm2 (72,000 psi)

Typical hardness : 87-90 HB

Current polarity: AC/DC (-)

DIAMETER	AMPERAGE
2.5mm	95-100
3.2mm	110-130
4.0mm	145-160

Note: For optimum result use the lowest amperage practical

Techrod 112 Welding Electrodes, Techrod 112 Welding Electrodes Manufacturers, Techrod 112 Welding Electrodes Suppliers, Techrod 112 Welding Electrodes Stockists, Techrod 112 Welding Electrodes Exporters

Xuper Xyron 242

Manual Metal Arc Electrode With Superior Machinable For Cast Iron Joining

DESCRIPTION

Castolin 242 is a manual metal arc electrode with a special coating designed for hot welding of grey cast iron, matching the cast iron base metal. According to the heat treatment, the welded deposit can become ferritic or pearlitic-ferritic. Recommended for spheroidal (nodular) graphite cast irons.

Product Details

- Excellent deposition characteristics with Very good machinability.
- Good positional welding with low amperage welding current
- Homogeneous deposit structure with low dilution.

APPLICATIONS

Applications include machine tool carriages, bearing supports, crankshaft cases, cable drums, slideways, chain wheels, cog wheels, bronze or grey cast iron turbine blades, eroded turbine housings, gaskets, valve seats, electric motor cases and flanges, etc.

PROCEDURE FOR USE

Preparation: Ensure all areas to be welded are free from contaminants. Remove casting defects such as sand inclusions and blowholes. For crack repair, prepare by gouging suitable "U" or "V" type joint-design using ExoTrode

Preheating: Mandatory. For small parts, preheat between 300° C and 400°C. For larger parts, preheat at 600°C.

Heat Treatment:

Ferrite Treatment: Annealing at 920°C for 2 hours, reduce temperature to 700°C over 5 hours.

Ferrite-Pearlitic Treatment: Annealing at 880° C- 920°C for 2 hours, reduce temperature to450C°, then reheat at 550°C for 3.5 hours. Cooling: In oven, ensure no temperature differences between areas of the part during cooling.

TECHNICAL DATA

Tensile strength: 360 N/mm2 (52,000 psi)

Typical Hardness : 120 HB

Current polarity: AC/DC (-)

DIAMETER	AMPERAGE
2.5mm	120-160
3.2mm	160-190
4.0mm	200-240

Note: For optimum result use the lowest amperage practical

E308/308H-16 Welding Electrodes, E308/308H-16 Welding Electrodes Manufacturers, E308/308H-16 Welding Electrodes Suppliers, E308/308H-16 Welding Electrodes Stockists, E308/308H-16 Welding Electrodes Exporters

EutecTrode 680 Welding Electrodes, EutecTrode 680 Welding Electrodes Manufacturers, EutecTrode 680 Welding Electrodes Suppliers, EutecTrode 680 Welding Electrodes Stockists, EutecTrode 680 Welding Electrodes Exporters

EuteCTrode EC 2026

Manual Metal Arc Electrode For Crack Resistant Welding Of Cast Iron

DESCRIPTION

High nickel alloy electrode with fast fusion speed ensuring dense, crack resistant, easy to machine deposits on cast iron with comparable hardness and coefficientof expansion which minimises residual stresses.

Product Details

The special ionising flux coating creates a ne spray metal transfer promoting low heat input and reduced dilution effects.

APPLICATIONS

This electrode is recommended for both joining and overlaying applications on grey, nodular graphite, alloy and chilled cast irons, especially when the requirements call for high strength combined with crack resistance. It can also be used for joining steel to cast iron. Machine bases, pump casings, gear housings, die cladding, heavy sections of cast iron, etc.

PROCEDURE FOR USE

Preparation: Ensure that all areas to be welded are free from contaminants, remove casting defects such as sand inclusions and blow holes and damaged or fatigued base material. Prepare for the repair of cracks, by gouging suitable «U» or «V» type joint-design, depending on wall thickness, using ExoTrode.

Preheating: For small and intricate castings, pre- heating between 200° C-300°C may be necessary. For large and complicated sections, where pre-heating cannot be successfully applied (avoid local pre-heating) maintain the workpiece at ambient temperatures throughout the repair operation by allowing each weld bead to cool before commencing subsequent welds

Welding: For non-preheated parts, select the lowest possible amperage in order to minimize heat input and employ a balanced welding technique. Hold a nearly vertical electrode angle and maintain a short arc length, deposit stringer beads 3-4 cm in length followed by peening (do not peen thin section components). Allow each weld bead to cool completely prior to subsequent welds. Ensure that each weld pass is completely free from slag, defects, etc. Preheated parts should be cooled at a slow, even rate, down to room temperature.

TECHNICAL DATA

Tensile strength:350 N/mm2 (51,000 psi)

Typical Hardness : 165 HB

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
2.5mm	50-90
3.2mm	80-120
4.0mm	110-140

Note: For optimum result use the lowest amperage practical

E308/308L-16 Welding Electrodes, E308/308L-16 Welding Electrodes Manufacturers, E308/308L-16 Welding Electrodes Suppliers, E308/308L-16 Welding Electrodes Stockists, E308/308L-16 Welding Electrodes Exporters

EuteCTrode 27

Manual Metal Arc Electrode For Buffering Layer For Problematic / Contaminated Cast Iron

DESCRIPTION

EutecTrode27 is an iron core electrode with a flux coating designed to produce 'arc spray' transfer type. It is excellent for bonding welds on parts highly degraded by oxidation, corrosion and thermal fatigue. It can be used for casting repairs and wearfacing cast iron parts. It removes the S and P excess on cast iron surfaces. The electrode produces a hard and dense iron carbide type deposit with excellent resistance to abrasion, pressure and high temperatures in a single pass.

Product Details

High arc force powers through contaminants to clean and seal metal surfaces. Good for pre-welding preparation on unknown and low-grade cast iron repairs. Non-machinable.

APPLICATIONS:

For bonding layer on old, burnt or poorly weldable cast iron. Another electrode (Castolin 224, Castolin 242, etc.) should be used to nish the joint.

Hard facing on cast iron parts subject to abrasion and frictional wear at high temperature (slides and guides in the steel industry, as well as drawing radii or brakes in the die-making industry).

PROCEDURE FOR USE:

Preparation: Ensure that areas to be welded are free from surface defects, sand and scale. Damaged and fatigued base materials should be removed using ExoTrode

Preheating: Preheating is not generally necessary, it is recommended that components are kept at ambient temperatures, and allowing each pass to cool before commencing subsequent welds.

Welding:Employ a near vertical electrode angle and maintain an arc length as short as possible. Deposit by applying stringer beads ensuring that the depth of deposit is as thin as possible, this is to avoid local overheating and minimize dilution. Limit each weld to between 2-5 cm, (1-"2") and insure that the workpiece is kept as cool as possible throughout the welding operation.

For joining applications and the repair of cracks complete the joint by using Xuper Castolin 224, Castolin 242.

The machinability of EutecTrode 27 is poor and therefore may, only be effectively prepared by grinding.

TECHNICAL DATA

Typical Hardness : 54 HRC

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
2.5mm	50-80
3.2mm	60-120
4.0mm	90-130

Note: For optimum result use the lowest amperage practical

E309/309H-16 Welding Electrodes, E309/309H-16 Welding Electrodes Manufacturers, E309/309H-16 Welding Electrodes Suppliers, E309/309H-16 Welding Electrodes Stockists, E309/309H-16 Welding Electrodes Exporters

HARD FACING

EuteCTrode 2

Manual Metal Arc Electrode For Protective Coatings Against Impact, Abrasion and Pressure.

DESCRIPTION

The weld deposit of EutecTrode 2 consists of a hard, ne grained structurecontaining Cr, Mn and Mo, producing excellent resistance to abrasion, impact and pressure combinationsuitable for protective overlays on steels including plain carbon steel, carbon-manganese steels and low alloy steels.

Product Details

- Deposits exhibit good cracking resistance
- If deposits are not annealed, machining is only possible by grinding
- The deposit hardness can be further optimized by heat treatment or nitriding
- Easy slag removal
- Deposits are heat treatable

APPLICATIONS

For dragline, bucket teeth, crusher hammers, stamping dies, excavator parts, tractor treads.

PROCEDURE FOR USE

Preparation: Prepare surface areas to be welded by removing all contaminants, oxides etc., also damaged and fatigued base material using ChamferTrode04. It is also recommended that sharp corners and edges are prepared to form a radius to minimize dilution effects.

Preheating: Depends on the steel's Carbon Equivalent and the workpiece size, thickness and the geometry. Castolin Eutectic recommends:

CE < 0.2 : preheating not essential.

CE 0.2- 0.4 : preheating

200-100C° CE 0.4- 0.8 : preheating

350-200°C

Note that 12-14% Mn steels should never be preheated and the workpiece temperature during welding should be kept below 250°C

Welding:

Maintain a near vertical electrode angle and employ a short arc length, deposit either as stringerbeads. When welding in the vertical position maintain the electrode at right angles to the base material plane.

Where large depth build-up applications exist use CastoDur N 102. For intermediate layers to austenitic manganese steels use XHD 646.

Parts which have been preheated should be allo we d to co o l s lo wly do wn to ro o m temperature.

TECHNICAL DATA

Typical Hardness :55-62 HRC

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
2.5mm	80-130
3.2mm	100-160
4.0mm	160-190

Note: For optimum result use the lowest amperage practical

EuteCTrode 2B

A Machinable, Impact-Resistant Electrode With High Compressive Strength

DESCRIPTION

EutecTrode 2B is principally formulated to resist severe impact on plain carbon steels, low-alloy steels, and many construction steels. Deposits have high compressive strength that makes them ideal for re-builds involving a cushion layer followed by a harder nal layer.

Product Details

- Excellent cushioning alloy
- Deposits exhibit high compressive strength
- Resists severe impact on plain carbon, low-alloy and construction steels

APPLICATIONS

- Build-up prior to hardfacing
- Slideways
- Wheel Crowns
- Guides and Couplings
- Rope Winches
- Brake Drums

PROCEDURE FOR USE

Preparation Clean weld area of scale and/or oxide. A nominal preheat of 150°F is advised if part is below 40°F or over 1" thick. For higher carbon steels higher preheats will be needed. Check the Reference Section for information regarding speci c preheating levels for speci c steel grades.

Welding Technique

Deposit stringer beads or 2 times to 3 times weave beads. Excessive weaving is not advised as wide beads can cause excessive base metal overheating and degrade the weld deposit wear properties. Back whip craters to reduce crater-cracking tendencies. When de-slagging make sure to thoroughly remove slag at the weld deposit toes.

steels.

Post Welding

Allow parts to slow cool in ambient condition. High carbon steels and air hard enable steels should be covered with a heat-retardant blanket. When machining is needed use tool set-up and speeds typically used with ne-grained pearlitic

TECHNICAL DATA

Typical Hardness : 28-32 HRC

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
2.5mm	90-110
3.2mm	120-180
4.0mm	205-245

Note: For optimum result use the lowest amperage practical

E309/309L-16 Welding Electrodes, E309/309L-16 Welding Electrodes Manufacturers, E309/309L-16 Welding Electrodes Suppliers, E309/309L-16 Welding Electrodes Stockists, E309/309L-16 Welding Electrodes Exporters
Xuper Nucleotec 2222 Welding Electrodes, Xuper Nucleotec 2222 Welding Electrodes Manufacturers, Xuper Nucleotec 2222 Welding Electrodes Suppliers, Xuper Nucleotec 2222 Welding Electrodes Stockists, Xuper Nucleotec 2222 Welding Electrodes Exporters

ToolTeCTiC 6 NHSS

Manual Metal Arc Electrode For Anti-Wear Coatings

DESCRIPTION

Special quench-hardening electrode providing great hot hardness and thermal oxidation resistance. ToolTecTic 6NHSSis a High-Speed Steel electrode for applications requiring hardened surfaces as welded, which can retain a cutting edge. Heat treatment ensures exceptional mechanical properties in the deposit, with remarkable hot hardness and resistance to high temperature oxidation, making this electrode ideally suited for protection of tool and die steel components. It can also be used for fabrication of cutting tools using medium carbon or low-alloy steels.

Product Details

- Increased service life of coated parts.
- Excellent hot hardness and high temperature oxidation resistance.
- High edge retention characteristics.
- Highly crack resistant.
- Welds in all positions.
- Damaged tools can be repaired rapidly.

APPLICATIONS

Stamping, pressing, drawing and cutting tools; machining steels; hot and cold trimming tools; chisels, forging tools; clutch forks, valves, cams, grabs, mixer blades, feed screws.

PROCEDURE FOR USE

Preparation: Clean the weld area of scale and/or oxide and degrease. Dry penetrant test to locate cracks. Prepare the cracks by grinding to generate a “U” pro le. Medium arc. Hold the electrode almost vertical. Preheat slowly according to the grade and heat treated condition of the base material.

XHD 2222 Welding Electrodes, XHD 2222 Welding Electrodes Manufacturers, XHD 2222 Welding Electrodes Suppliers, XHD 2222 Welding Electrodes Stockists, XHD 2222 Welding Electrodes Exporters

TECHNICAL DATA

Typical Hardness : 60-62 HRC

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
2.5mm	55-70
3.2mm	85-125
4.0mm	115-155

Note: For optimum result use the lowest amperage practical

E309/309L-16 Welding Electrodes, E309/309L-16 Welding Electrodes Manufacturers, E309/309L-16 Welding Electrodes Suppliers, E309/309L-16 Welding Electrodes Stockists, E309/309L-16 Welding Electrodes Exporters

SugarTeC MAX 45

CA-CC (+) Special Electrode For Lateral Protection Of Mill Liner Flanges To Increase Extraction And Mill Productivity

Description:

Electrode specially developed for plating, ensuring greater extraction and protection of the mill. EC SugarTec MAX 45 - A new solution to increase mill "grip"!

Product Details

Superior wear resistance - 2 to 3 times more than normal plaster;

- Highest Cr content on the market;
- High abrasion resistance and high hardness structure;
- Greater adherence to the mill - new formulation with elements that activate the electric arc

Base metals: Grey or nodular cast iron or coated liners.

PROCEDURE FOR USE

Application procedure: With the mill operating at its normal speed and without reducing the juice, proceed to apply deposits to the side walls of the friezes. Keep the electrode in contact and inclined 30º in relation to the surface and in the direction of movement of the jacket, and you can also work with the electrode immersed in the juice, if necessary. Welding position Ideal source for plastering:

PowerMax 4000i

400 A @ 60%

310 A @ 100%

TECHNICAL DATA

Typical Hardness : 52-63 HRC

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
4.0mm	100-120
5.0mm	140-200

Note: For optimum result use the lowest amperage practical

E310H Welding Electrodes, E310H Welding Electrodes Manufacturers, E310H Welding Electrodes Suppliers, E310H Welding Electrodes Stockists, E310H Welding Electrodes Exporters

ERNiCrMo-10 MIG & TIG Welding Wire, ERNiCrMo-10 MIG & TIG Welding Wire Manufacturers, ERNiCrMo-10 MIG & TIG Welding Wire Suppliers, ERNiCrMo-10 MIG & TIG Welding Wire Stockists, ERNiCrMo-10 MIG & TIG Welding Wire Exporters

StainTrode D Welding Electrodes, StainTrode D Welding Electrodes Manufacturers, StainTrode D Welding Electrodes Suppliers, StainTrode D Welding Electrodes Stockists, StainTrode D Welding Electrodes Exporters

EuteCTrode 400

A Versatile Electrode With Excellent Resistance To Impact

DESCRIPTION

A ferrous base electrode with additions of Ni, Mn & other elements to improve welding properties. deal Cushion layer before hardfacing on Mn steel, low carbon steel, low alloy steel.

Product Details

- Tough overlay on manganese steel and alloy steel.
- For severe impact, shock and hammering applications.
- Frigid arc coating for lowest possible amperage.
- Work hardens in service.

APPLICATIONS:

Crusher hammer, wobbles, frogs, sprockets, bucket teeth, wear parts, shovel track pads, under carriage components, scraper blades.

PROCEDURE FOR USE

Work hardened: 35-45 HRC Clean weld area. Use Eutec- ExoTrode electrode to remove damaged metal. Do not preheat manganese steels. Maintain a short to medium arc length. On Mn steel keep bead length 75-100 mm at a time. Inter-pass temperature should 0 be maintained below 150°C for Mn steel by following back-step technique . Skip welding is recommended on large parts. Peening while hot reduces residual stresses. Cool slowly.

ERNiCrMo-3 MIG & TIG Welding Wire, ERNiCrMo-3 MIG & TIG Welding Wire Manufacturers, ERNiCrMo-3 MIG & TIG Welding Wire Suppliers, ERNiCrMo-3 MIG & TIG Welding Wire Stockists, ERNiCrMo-3 MIG & TIG Welding Wire Exporters

TECHNICAL DATA

Typical Hardness

As deposited: 85-95 HRB

Work hardened: 35-45 HRC

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
3.2mm	90-130
4.0mm	120-160
5.0mm	150-210

Note: For optimum result use the lowest amperage practical

E312-16 Welding Electrodes, E312-16 Welding Electrodes Manufacturers, E312-16 Welding Electrodes Suppliers, E312-16 Welding Electrodes Stockists, E312-16 Welding Electrodes Exporters

EutecTrode EC 33300 Welding Electrodes, EutecTrode EC 33300 Welding Electrodes Manufacturers, EutecTrode EC 33300 Welding Electrodes Suppliers, EutecTrode EC 33300 Welding Electrodes Stockists, EutecTrode EC 33300 Welding Electrodes Exporters

XHD 646

Manual Metal Arc Electrode For Intermediate Layers And Rebuilding

DESCRIPTION

High efficiency, austenitic manual electrode for intermediate layers and rebuilding 13 % manganese steel, alloyed steels and hardenable steels.

Product Details

- Very high resistance to impact
- Easy slag removal
- High work-hardening rate
- Machinable with tungsten carbide tip tool
- Corrosion resistance
- Smooth even appearance
- High metal recovery 150%

APPLICATIONS

Electrode for E+C TeroCote anti -wear protective coating of drive gears, lower guides and rollers of caterpillar tractors, conveyor rollers, rails and rail points, bearing plates, grading screens, gyratory crusher cones, drills, cylinder crushers, etc.

PROCEDURE FORUSE

Preparation

Remove all damaged and fatigued metal from areas to be overlaidand remove sharp edges. For large areas and where parts are subjected to high impact, prepare grooves 3 mm to 5 mm wide, approx. 6 mm depth, using ExoTrode

Preheating: Depends on the steel's Carbon Equivalent and the workpiece size, thickness and the geometry. Castolin Eutectic recommends:

CE < 0.2 : preheating not essential.

CE 0.2- 0.4: preheating 100-200°C

CE 0.4- 0.8: preheating 200-350°C.

Note that 12-14% Mn steels should never be preheated and that the workpiece temperature during welding should be kept below 250°C.

TECHNICAL DATA

Tensile strength: Min 550 N/mm2 (80,000 psi)

Typical Hardness

As deposited: 90-100 HRB

Work hardened: 37-42 HRC

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
3.2mm	90-170
4.0mm	120-240
5.0mm	180-240

Note: For optimum result use the lowest amperage practical

EuteCTrode 700

Manual Metal Arc Electrode For Combined Abrasion, Moderate Impact And Metal-Metal Friction

DESCRIPTION

High metal recovery manual electrode (130%) developed for wearfacing against abrasion, moderate impact and metal-metal friction.

Product Details

- Very stable arc.
- Easy removal slag.
- Excellentweldability even at low amperage.
- Resistant against wear under high pressure, impacts and abrasion.
- Smooth deposit to favor gliding of abrasives.
- Very soft fusion.

APPLICATIONS

For applications where resistance to intense abrasion moderate impact and metal-metal friction is required on work parts like for example:

- Buckets of dredges
- Hammers of crushers
- Excavator teeth
- Concrete Walls
- Rotors of pumps
- Chain conveyors
- Wear Plates

PROCEDURE FOR USE

Preparation

For best results, remove contamination, cracks and worn metal from weld area. This may be achieved by using ExoTrode.

Preheating: Temperature depends on steel Carbon Equivalent (CE), work piece dimensions, the thickness and geometry. Castolin Eutectic suggests:

CE < 0.2 : preheating not essential.
CE 0.2- 0.4: preheating 100-200°C
CE 0.4- 0.8: preheating 200-350°C

TECHNICAL DATA

Work hardened: 58-65 HRC

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
3.2mm	90-120
4.0mm	130-160
5.0mm	150-190

Note: For optimum result use the lowest amperage practical

UTP 6225 AL MIG & TIG Welding Wire, UTP 6225 AL MIG & TIG Welding Wire Manufacturers, UTP 6225 AL MIG & TIG Welding Wire Suppliers, UTP 6225 AL MIG & TIG Welding Wire Stockists, UTP 6225 AL MIG & TIG Welding Wire Exporters

ChromCarb N 6006

Unique Chromium-Carbide Bearing Electrode With Superior Abrasion And Impact Properties

DESCRIPTION

ChromCarb N6006 is an electrode for the overlay and protection of carbon, alloy and manganese steels. A high chromium carbide content makes it especially favorable against coarse particle abrasion, moderate gouging impact and mild corrosion in any number of service conditions.

Product Details

- For use on most carbon, low-alloy and air. manganese steels
- Resistant to coarse particle abrasion with moderate impact
- Provides dense, smooth, easy to clean deposits

APPLICATIONS:

Muller tires ,Anvils, Dredger parts Bucket arms, Pug mill paddles Hot pressing dies and hot hardness dies, etc.

PROCEDURE FOR USE

Preparation: Clean weld area of scale and/or oxide. A nominal preheat of 150°F is advised if part is below 40ºF or over 1" thick. For higher carbon steels higher preheats will be needed. Check the Reference Section for information regarding speci c preheating levels for speci c steel grades.

Note: *Do not preheat Hadfeld manganese steel castings above 400°F as this will cause time-temperature embrittlement.*

Technique: For base metals with high ha rd e nab i l i ty a b uffe r la ye r is hig hly re co mme nde d prio r to a pplic a t i o n of ChromCarb N6006. For Manganese steels, use EutecTrode 40; for air-hardenable steels, use EutecTrode 680 and for cast irons, Xuper 2233N. Only one pass of ChromCarb N6006 should be used on cast irons.

Maintain a medium arc and incline the electrode at a 45° angle in the direction of travel. Excessive weaving (more than 2 times the electrode diameter) is not advised as wide beads can cause excessive base metal overheating and degrade the weld deposit wear properties. Back whip craters to reduce crater-cracking tendencies.

Post-welding: Allow parts to slow cool in still air

High carbon steels and air hardenable steels should be covered with a heat-retardant blanket.

TECHNICAL DATA

Work hardened: 55-60HRC

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
3.2mm	90-130
4.0mm	120-160
5.0mm	150-210

Note: For optimum result use the lowest amperage practical

E316/316H-16 Welding Electrodes, E316/316H-16 Welding Electrodes Manufacturers, E316/316H-16 Welding Electrodes Suppliers, E316/316H-16 Welding Electrodes Stockists, E316/316H-16 Welding Electrodes Exporters

EuteCTrode EC 6610

Repair And Build-Up Of Drop Forging Tools And Damaged Profiles

DESCRIPTION

Build-up on all drop forging tools. Repair of worn out or damaged pro les. Salvage scrapped undersized die-blocks by total re-build with weld metal. Overlaying of complicated pro les requiring combination of high hardness and toughness combined with good machinability such as gear pinion teeth.

Product Details

- Superior deformation resistance at high temperatures.
- Excellent compatibility with die block steels.
- Machinable with tungsten carbide tool.
- All position weldability.

APPLICATIONS:

Drop forging dies, punches, inserts.

PROCEDURE FOR USE

Clean weld area. Remove all cracked or fatigued metal with ExoTrode.

Pre-heat job to 400°450°C and maintain throughout welding. Deposit with short gap, keeping electrode perpendicular to welding direction. Peening of deposits is essential. Chip slag between passes. After completing deposition, air-cool the job to 200°C to develop uniform hardness. Then transfer to a furnace at 550°C-600°C and temper for 12-16 hours. Remove into still air and cool.

TECHNICAL DATA

Work hardened: 35-45HRC

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
3.2mm	90-130
4.0mm	120-160
5.0mm	150-160

Note: For optimum result use the lowest amperage practical

StainTrode A-Mo-L Welding Electrodes in India, StainTrode A-Mo-L Welding Electrodes Manufacturers in India, StainTrode A-Mo-L Welding Electrodes Suppliers in India, StainTrode A-Mo-L Welding Electrodes Stockists in India, StainTrode A-Mo-L Welding Electrodes Exporters in India

E316/316L-16 Welding Electrodes, E316/316L-16 Welding Electrodes Manufacturers, E316/316L-16 Welding Electrodes Suppliers, E316/316L-16 Welding Electrodes Stockists, E316/316L-16 Welding Electrodes Exporters

Tooltectic 6Nhss Mig & Tig Welding Wire, Tooltectic 6Nhss Mig & Tig Welding Wire Manufacturers, Tooltectic 6Nhss Mig & Tig Welding Wire Suppliers, Tooltectic 6Nhss Mig & Tig Welding Wire Stockists, Tooltectic 6Nhss Mig & Tig Welding Wire Exporters

EuteCTrode EC 6611

High Strength Electrode For Joining And Repair Of Cast Steels And Hsla Steels

DESCRIPTION:

Joining, build-up and repair of new, worn-out or cracked steel structures, machinery components and other heavy duty equipment & welding of cast steels, fabrication of micro alloyed and H.S.L.A. steels including automotive applications. Specially suited for repair of forging equipment like columns, sow blocks

Product Details

Non-hygroscopic flux coating. Strong, stable arc.

Self releasing slag.

No temper embrittlement of weld deposit.

APPLICATIONS:

Hammer bases, columns, rams, sow blocks, keyways, kiln shell.

E317L-16 Welding Electrodes, E317L-16 Welding Electrodes Manufacturers, E317L-16 Welding Electrodes Suppliers, E317L-16 Welding Electrodes Stockists, E317L-16 Welding Electrodes Exporters

ERNiFeCr-2 MIG & TIG Welding Wire, ERNiFeCr-2 MIG & TIG Welding Wire Manufacturers, ERNiFeCr-2 MIG & TIG Welding Wire Suppliers, ERNiFeCr-2 MIG & TIG Welding Wire Stockists, ERNiFeCr-2 MIG & TIG Welding Wire Exporters

ERNICRFE-12 Mig & Tig Welding Wire, ERNICRFE-12 Mig & Tig Welding Wire Manufacturers, ERNICRFE-12 Mig & Tig Welding Wire Suppliers, ERNICRFE-12 Mig & Tig Welding Wire Stockists, ERNICRFE-12 Mig & Tig Welding Wire Exporters

PROCEDURE FOR USE

Clean weld area. Remove fatigued or cracked metal. Bevel all edges 60°. For heavy sections, pre-heat 250° - 300° C. Weld with short arc gap and electrode tilted 10° in travel direction. Use 'stringer bead' deposition, chip slag between passes and peen weld beads. After completion, retard cooling by covering with sand, asbestos etc. For large assemblies and for forging equipment, stress relieving at 550°C-600°C for one hour per inch job thickness recommended.

TECHNICAL DATA

Tensile Strength: 660 N/mm2 (96,000 psi).

Hardness - 15-25 HRC

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
3.15mm	90-130
4.00mm	120-160
5.00mm	150-190

Note: For optimum result use the lowest amperage practical

Xyron 224 Welding Electrodes, Xyron 224 Welding Electrodes Manufacturers, Xyron 224 Welding Electrodes Suppliers, Xyron 224 Welding Electrodes Stockists, Xyron 224 Welding Electrodes Exporters

EuteCTrode EC 6622

Joining and Build-up Electrode

DESCRIPTION

EutecTrode EC 6622 is a high-strength electrode specially developed for surfacing and joining of dissimilar steels and low alloy components. It offers excellent protection against corrosion, particularly in sugar and steel industry environments, and provides smooth, machinable welds with high tensile strength.

Product Details

- Excellent resistance to corrosion
- Welds can be machined to a high polish nish
- Low friction surface
- Multi-pass friendly - crack-free even with
- thick build-ups
- Ideal for low to medium carbon steel and low

APPLICATIONS

- Sugar mill rolls -Crusher roll journals
- Bearing areas of shafts
- Dissimilar steel joints

PROCEDURE FOR USE

Preparation: Clean the weld area. Remove fatigued or cracked metal.

Beveling:For thick sections, bevel to 60° V_ groove.

Welding Technique:

- Use short arc with short beads.
- Remove slag between passes.
- Apply staggered welding sequence to prevent overheating.

Build-Up: Suitable for multiple layers without cracking.

TECHNICAL DATA

Tensile Strength 520 N/mm²(75,000 psi)

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
2.50mm	40 – 70
3.20mm	70 – 100
4.00mm	100 – 140

Note: For optimum result use the lowest amperage practical

*Xuper 22*33N Welding Electrodes, Xuper 22*33N Welding Electrodes Manufacturers, Xuper 22*33N Welding Electrodes Suppliers, Xuper 22*33N Welding Electrodes Stockists, Xuper 22*33N Welding Electrodes Exporters*

E320LR-16 Welding Electrodes, E320LR-16 Welding Electrodes Manufacturers, E320LR-16 Welding Electrodes Suppliers, E320LR-16 Welding Electrodes Stockists, E320LR-16 Welding Electrodes Exporters

ERNiFeCr-14 MIG & TIG Welding Wire, ERNiFeCr-14 MIG & TIG Welding Wire Manufacturers, ERNiFeCr-14 MIG & TIG Welding Wire Suppliers, ERNiFeCr-14 MIG & TIG Welding Wire Stockists, ERNiFeCr-14 MIG & TIG Welding Wire Exporters

EuteCDur N 6070

Manual Metal Arc Electrode For Protective Maintenance Coatings

DESCRIPTION

A high efficiency complex carbide alloy electrode containing controlled percentages of hard constituents producing, extremely hard depositsresistant up to 650ºC.

This alloy produces a deposit of ne metallurgical structure by Dispersion Hardening, which gives excellent resistance to abrasion and erosion by both ne and coarse mineral particles, particularly the former, from ambient to elevated temperature. Additionally, its superior oxidation resistance, very effectively hinders the phenomenon of accelerate abrasive wear which often occurs in very high temperature applications. Excellent metal recovery rates are obtained. The arc characteristics are of the «spray type» producing smooth, ripple-free deposits.

Product Details

- Exceptional abrasion resistance
- Extremely hard deposits
- Fine metallurgical structure
- Contains ultra-hard complex carbides
- Very stable arc
- Minimal slag residues
- For use with AC or DC power source

APPLICATIONS

For protecting components against abrasion and erosion, especially where both ne and coarse grain mineral particles are present. Suitable for a wide range of steels including medium carbon steel, low alloy steels and authenticate manganese steels. For extrusion screws, hoppers and chutes, bulldozer blades, scrapers.

PROCEDURE FOR USE

Preparation: Remove all damaged and fatigued base material and where possible remove sharp corners from areas to be welded by using ExoTrode.

Welding: Select lowest possible amperage setting from the recommended range when depositing direct to the base material.

EutecTrode 690Xmay be used as initial or intermediate layers especially on large or heavy build-up applications.

For applications where impact and pressure is present deposit into pre-prepared grooves at a pitch not less than the width of the groove (two layers should be deposited into the grooves).

Maintain an arc length equal to the electrode diameter and a near vertical electrode angle. Limit each deposit length between 100-50 mm and employ a balanced welding technique.

TECHNICAL DATA

Typical Hardness 68-70 HRC

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
3.20mm	135-165
4.00mm	185-215

Note: For optimum result use the lowest amperage practical

Xuper AbrateC 6088

Manual Metal Arc Electrode For Wear Resistant Coatings

DESCRIPTION

Thanks to high density and good distribution of hard DIAMAX particles in a hard nickel-based matrix, the deposit obtained with Xuper AbraTec 6088 is highly resistant to abrasion, erosion and to corrosion at high temperatures.

Product Details

This electrode welds at a low current which results in very little dilution as well as minimal deformation of the base metal including those of stainless steels and nickel alloys.

Optimal wear resistance is reached with a single layer deposit.

APPLICATIONS

Stamping, pressing, drawing and cutting tools; machining steels; hot and cold trimming tools; chisels, forging tools; clutch forks, valves, cams, grabs, mixer blades, feed screws.

PROCEDURE FOR USE

Preparation

Remove all damaged and fatigued weld metal from areas to be welded and remove sharp edges. Where compression or medium impact factors exist deposit into prepared grooves. Prepare grooves 5-3 mm wide, 6 mm in depth using ExoTrode and deposit two passes using Xuper AbraTec 6088.

Preheating

Preheating depends on the steel's Carbon Equivalent and the workpiece size, thickness and the geometry. Castolin Eutectic recommends: CE < 0.2 : preheating not essential.

CE 0.2- 0.4: preheating 100-200°C CE 0.4- 0.8: preheating 200-350°C

Note that 12-14% Mn steels should never be preheated and that the workpiece temperature during welding should be kept below 250°C.

Welding

Maintain a short arc length, and hold a near vertical electrode angle, in the direction of travel. For heavy deposits, intermediate layers using XHD 646 is recommended.

Depending upon thickness and alloy content of the component, slow cooling after welding may be advisable.

TECHNICAL DATA

Typical Hardness

Hardness Ni base matrix : 56 HRC

Hardness Diamax (HV10): up to 2300

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
5.0mm	100-140

Note: For optimum result use the lowest amperage practical

XHD 646 Welding Electrodes, XHD 646 Welding Electrodes Manufacturers, XHD 646 Welding Electrodes Suppliers, XHD 646 Welding Electrodes Stockists, XHD 646 Welding Electrodes Exporters

EuteCTrode XHD 6395N

Nanoalloy® Electrode For Manual Wearfacing Applications

DESCRIPTION

Eutectrode XHD 6395N is based on the science and engineering of Nanotechnology. Weld deposits have a high volume fraction of ultra-hard, complex borocarbides distributed evenly in a unique, semi-amorphous iron alloy matrix. Easy to use and welder-friendly, 6395N offers a higher caliber of abrasion resistance reinforced by a tough, ductile matrix for added impact resistance. 6395N outperforms chromium and complex carbides by up to 6395 !%40N's wear resistance is equal to that of a 35% tungsten carbide alloy at a lower cost.

Product Details

- Unique NanoAlloy structure for unmatched abrasion and erosion resistance
- Produces tough uniform 67 HRC single and double pass weld deposits
- Wears like tungsten carbide at a fraction of the cost
- Outlasts chrome carbide and complex carbide alloys
- Ensures enhanced productivity and cost savings
- Smooth ripple-free weld surface
- High efficiency metal recovery
- Precision grind able deposits
- Stress relieving cracks
- Easy striking and re striking for anti-wear patterns
- Retains high hardness properties at elevated temperatures
- Single pass attains close to maximum hardness
- With stands thermal cycling up to 1200°F (650°C)

APPLICATIONS

Bucket Teeth/ Lips: Mining Crusher Bar: Earth Moving Shredders/Knives:Waste/Recycling Feed Screw: Pulp And Paper Roller Crusher: Iron And Steel Dredging Teeth: Construction

PROCEDURE FOR USE

PREPARATION: Remove all “old” cracked or spalled material down to a sound base. Clean any residual oxides, coatings, spatter or residue. For steels with higher alloy content or which require build-up greater than ¼” a -2pass buffer layerofEutectrode680isstrongly recommended.

EutecTrode 6395N is not recommended for applications beyond a 2 pass maximum. For best results apply EutecTrode XHD 6395N with as little heat as possible, allowing parts to cool between layers.

Eutectrode XHD 6395N Should Not Be Used On Manganese/ Had eld Steels As It Will Not Bond!

TECHNICAL DATA

Typical Hardness as deposited :67-70 HRC

Current Polarity: AC/DC (+)

DIAMETER	AMPERAGE
3.2mm	120-150
4.0mm	150-175

Note: For optimum result use the lowest amperage practical

XHD 6710 Welding Electrodes, XHD 6710 Welding Electrodes Manufacturers, XHD 6710 Welding Electrodes Suppliers, XHD 6710 Welding Electrodes Stockists, XHD 6710 Welding Electrodes Exporters

EuteCTrode 6450

Manual Metal Arc Electrode For Anti-Wear Coatings

DESCRIPTION

High chrome manganese alloy electrode for TeroCote protective coatings and cushion layers on carbon steels, low or high alloy steels and manganese steels.

Product Details

- Maximal resistance to impact and pressures.
- Very work-hardenable deposit.
- Excellent ac/dc weldability.
- Machinable with cutting tool.
- Can be contact welded.
- Excellent crack resistance by absorption of internal stresses.
- Amagnetic deposit.

APPLICATIONS

Stamping, pressing, drawing and cutting tools; machining steels; hot and cold trimming tools; chisels, forging tools; clutch forks, valves, cams, grabs, mixer blades, feed screws.

PROCEDURE FOR USE

Preparation: Obtain a good surface by removing worn metal with ExoTrode or by mechanical means.

Preheating: Depends on the steel's Carbon Equivalent and the workpiece size, thickness and the geometry. Castolin Eutectic recommends:

CE < 0.2 : preheating not essential.

CE 0.2- 0.4: preheating 100-200°C

CE 0.4- 0.8: preheating 200-350°C

Note that 12-14% Mn steels should never be preheated and that the workpiece temperature during welding should be kept below 250°C

Welding

Keep a short arc, the electrode slightly sloping, possibility of contact welding. Follow welding procedures exactly.

TECHNICAL DATA

Tensile strength: 830 N/mm2 (120,000 psi)

Typical Hardness

As deposited: 20-23 HRC

Work hardened: 37-42 HRC

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
3.2mm	100-160
4.0mm	120-180

Note: For optimum result use the lowest amperage practical

E330-16 Welding Electrodes, E330-16 Welding Electrodes Manufacturers, E330-16 Welding Electrodes Suppliers, E330-16 Welding Electrodes Stockists, E330-16 Welding Electrodes Exporters

ChromCarb N 6006 Welding Electrodes, ChromCarb N 6006 Welding Electrodes Manufacturers, ChromCarb N 6006 Welding Electrodes Suppliers, ChromCarb N 6006 Welding Electrodes Stockists, ChromCarb N 6006 Welding Electrodes Exporters

XHD AbraTeC N*6710

Manual Metal Arc Electrode For Anti-Wear Protective Coatings

DESCRIPTION

High efficiency electrode for TeroCote coatings on alloyed and non-alloyed steels, austenitic steels with 12-14% manganese.Deposit with a high content of hard constituents of Nucleo-C elements, resistant to intense abrasion under pressure and moderate impact.

Product Details

- High resistance to wear from combined abrasion, pressure and impact
- High deposition speed
- Very thick single pass deposits
- Very high weld yield (250%)
- Minimal dilution with the base metal
- Virtually slag free
- Non-hygroscopic coating
- Easy striking and restriking

APPLICATIONS

Main applications For dragline buckets.

Other applications

For protective, antiwearcoatings of scraper blades and mixers, sludge pumps, hammers and crushers, conveyor chains, teeth, edges of buckets, etc.

PROCEDURE FOR USE

Preparation: Remove all damaged and fatigued metal from areas to be over layed, and remove sharp edges where compression or medium impact factors exist. Deposit into prepared grooves. Prepare grooves 3 mm to 5 mm wide, 6 mm depth, using ExoTrode, and deposit two passes using XHD 6710.

Preheating: Depends on the steel's Carbon Equivalent and the workpiece size, thickness and the geometry. Castolin Eutectic recommends: CE < 0.2 : preheating not essential.

CE 0.2- 0.4: preheating 100-200°C

CE 0.4- 0.8: preheating 200-350°C

Note that 12-14% Mn steels should never be preheated and that the workpiece temperature during welding should be kept below 250°C.

Welding

Maintain medium arc with electrode nearly vertical. Deposit «stringer» beads. To complete each bead travel back over the deposit by about 10 mm to II craters before breaking the arc. As the intrinsic properties of the deposit are obtained in the rst pass, one pass will be adequate for most applications. Should a thicker overlay be required, build up to required dimensions with XHD 646 nishing with EutecTrode6710XHD.

TECHNICAL DATA

Typical Hardness : 63-69 HRC

Current polarity: AC/DC (-)

DIAMETER	AMPERAGE
3.2mm	100-170
4.0mm	140-220
5.0mm	160 - 240

Note: For optimum result use the lowest amperage practical

XHD AbraTeC N*6715

Manual Metal Arc Electrode For Anti-Wear Protective Coatings At High Temperatures

DESCRIPTION

High efficiency welds containing a maximum percentage of hard constituents with Nucleo- C elements which offer excellent resistance to high temperature abrasion and ero12-14% gas media. Suitable for overlaying a wide range of steels including low alloy steel and 12-14% austenitic manganese steels.

An alloy of complex carbides producing excellent abrasion resistance up to 650.C. Deposition speeds are high and arc striking is made with comparative ease, ideal for wear pattern formations. Deposits are extremely smooth with little or no ripple formation, ideal where resistance to ne mineral particles is required. No slag residues due to the complete consumption of core wire and flux coating.

Product Details

- Non-hygroscopic coating
- Positional weldability
- High metal recovery (%230)
- Low dilution with base metal
- Easy slag removal.
- Ease of arc striking and restriking
- High deposition speeds
- Very thick single pass deposit
- No slag residues
- alloy steel components

APPLICATIONS:

Main applications

For sinter plant ventilators.

Other applications

Crusher bars, agglomeration fans, blast furnace hoppers and bells, mixer screws and heads in the ceramics industry.

PROCEDURE FOR USE

Preparation: Remove all damaged and fatigued weld metal from areas to be welded and remove sharp edges. Where compression or medium impact factors exist deposit into prepared grooves. Prepare grooves 3-5 mm wide, 6 mm in depth using ExoTrode and deposit two passes using XHD 6715.

Preheating: Preheating depends on the steel's Carbon Equivalent and the workpiece size, thickness and the geometry. Castolin Eutectic recommends:

CE < 0.2 : preheating not essential.

CE 0.2- 0.4: preheating 100-200°C

CE 0.4- 0.8: preheating 200-350°C

Note that 12-14% Mn steels should never be preheated and that the workpiece temperature during welding should be kept below 250°C.

Cladding and Intermediate layers. For 12-14% austenitic manganese steels apply an intermediate layer using EutecTrode 646XHD.

Welding

Maintain a short arc length, and hold a near vertical electrode angle, in the direction of travel. To complete each weld bead -travel back over the deposit approximately 10 mm and lengthen the arc. For heavy deposits, intermediate layers using EutecTrode 646XHDisrecommended.

Depending upon thickness and alloy content of the component, slow cooling after welding may be advisable.

TECHNICAL DATA

Typical Hardness 62-68 HRC

Current polarity: AC/DC (-)

DIAMETER	AMPERAGE
3.2mm	100-170
4.0mm	140-220
5.0mm	160 - 240

Note: For optimum result use the lowest amperage practical

EuteCTrode 6717

A Unique Titanium Carbide Alloy System For Wear-Facing Against Severe Impact & Abrasion

DESCRIPTION

Unique martensitic Ti-C alloy designed for surfacing of carbon steel and manganese steel components, subjected to high impact combined with severe pressure and abrasion.

Product Details

- Finely and evenly dispersed titanium carbides in martensitic matrix.
- Crack-free multilayer deposit.
- Consistency in hardness irrespective of number of layers, Ideal for thick, multi-pass, protective coatings.
- High resistance to impact, pressure & abrasion.

APPLICATIONS:

Clinker breaker hammers, blow bars, roller press rolls, cane knives, shovel buckets, shredders, augers, scraper blades, tamping tools etc.

PROCEDURE TO USE

Remove all damaged and fatigued metal and clean the weld area. Maintain short to medium arc length. Use stringer beads to deposit.

TECHNICAL DATA

Typical Hardness 55-59 HRC

Current polarity: AC/DC (-)

DIAMETER	AMPERAGE
3.2mm	75-100
4.0mm	100-140
5.0mm	130-170

Note: For optimum result use the lowest amperage practical

E347H Welding Electrodes, E347H Welding Electrodes Manufacturers, E347H Welding Electrodes Suppliers, E347H Welding Electrodes Stockists, E347H Welding Electrodes Exporters

ERNiFeCr-1 MIG & TIG Welding Wire, ERNiFeCr-1 MIG & TIG Welding Wire Manufacturers, ERNiFeCr-1 MIG & TIG Welding Wire Suppliers, ERNiFeCr-1 MIG & TIG Welding Wire Stockists, ERNiFeCr-1 MIG & TIG Welding Wire Exporters

XHD ABRATEC 6777 Welding Electrodes, XHD ABRATEC 6777 Welding Electrodes Manufacturers, XHD ABRATEC 6777 Welding Electrodes Suppliers, XHD ABRATEC 6777 Welding Electrodes Stockists, XHD ABRATEC 6777 Welding Electrodes Exporters

XHD AbraTeC N*6777

Special Electrode For Severe Abrasive Wear At Elevated Temperature

DESCRIPTION

An advanced electrode for overlaying of carbon steels & low alloy steels for applications involving abrasion and erosion at elevated temperatures. The weld deposit contains high percentage of refractory carbides, enabling abrasion at elevated temperature..

Product Details

- Carbides of Cr, Mo, Nb, W, V, Fe-Cr-C in eutectic matrix.
- Excellent resistance to wear upto 650 C.
- Easy handling with rapid deposition rate.
- Very high metal recovery.

APPLICATIONS:

Sinter star breakers, tip casting, coke pusher shoes, billet conveyer guide, hot slag conveyers, augers and clinker grinders.

Sinter cast rollers and table buttoning.

PROCEDURE TO USE:

Remove all damaged and fatigued weld metal and clean weld area. Maintaining short to medium arc length, deposit stringer and weaved beads. For medium carbon steels, preheat upto 250°C. Use EutecTrode 2B as cushion alloy if more build-up is required.

TECHNICAL DATA

Typical Hardness 65-68 HRC

Current polarity: AC/DC (-)

DIAMETER	AMPERAGE
3.2mm	100-140
4.0mm	140-160
5.0mm	150-180

Note: For optimum result use the lowest amperage practical

E385-16 Welding Electrodes, E385-16 Welding Electrodes Manufacturers, E385-16 Welding Electrodes Suppliers, E385-16 Welding Electrodes Stockists, E385-16 Welding Electrodes Exporters

EutecDur N 9060 Welding Electrodes in India, EutecDur N 9060 Welding Electrodes Manufacturers in India, EutecDur N 9060 Welding Electrodes Suppliers in India, EutecDur N 9060 Welding Electrodes Stockists in India, EutecDur N 9060 Welding Electrodes Exporters in India

ERNi-CI MIG & TIG Welding Wire, ERNi-CI MIG & TIG Welding Wire Manufacturers, ERNi-CI MIG & TIG Welding Wire Suppliers, ERNi-CI MIG & TIG Welding Wire Stockists, ERNi-CI MIG & TIG Welding Wire Exporters

EuteCTrode 6800

Manual Metal Arc Electrode For Anti-Wear Protective Coatings At High Temperatures

DESCRIPTION

EutecTrode6800 is a special nickel alloy containing Cr, Mo, W giving excellent thermal properties for service in a wide range of high temperature environments and corrosion resistance against oxidizing acids, mixed acids, salts, etc.

A high alloyed electrode for cladding where corrosion and/or abrasion and heat resistance combined with impact is required, on a wide range of base materials including high nickel and chromium molybdenum steels.

Product Details

- Non-hygroscopic coating
- Positional weldability
- High metal recovery (%230)
- Low dilution with base metal
- Ease of arc striking and restriking
- High deposition speeds
- Very thick single pass deposit
- No slag residues

APPLICATIONS:

Main applications

For sinter plant ventilators.

Other applications

Crusher bars, agglomeration fans, blast furnace hoppers and bells, mixer screws and heads in the ceramics industry.

PROCEDURE FOR USE

Preparation: Remove all damaged and fatigued weld metal from areas to be welded and remove sharp edges. Where compression or medium impact factors exist deposit into prepared grooves. Prepare grooves 3-5 mm wide, 6 mmin depth using ExoTrode and deposit two passes using XHD 6715.

Preheating: Preheating depends on the steel's Carbon Equivalent and the workpiece size, thickness and the geometry. Castolin Eutectic recommends:

CE < 0.2 : preheating not essential.
CE 0.2- 0.4: preheating 100-200°C
CE 0.4- 0.8: preheating 200-350°C

Note that 12-14% Mn steels should never be preheated and that the workpiece temperature during welding should be kept below 250°C.

Cladding and Intermediate layers For 12-14% austenitic manganese steels apply an intermediate layer using EutecTrode 646XHD.

Welding

Maintain a short arc length, and hold a near vertical electrode angle, in the direction of travel. To complete each weld bead -travel back over the deposit approximately 10 mm and lengthen the arc. For heavy deposits, intermediate layers using EutecTrode 646XHDisrecommended.

Depending upon thickness and alloy content of the component, slow cooling after welding may be advisable.

TECHNICAL DATA

Tensile strength: 780 N/mm2 (113,000 psi)

Typical Hardness As deposited: 25-28 HRC

Work hardened: 40-42 HRC

Current polarity: AC/DC (-)

DIAMETER	AMPERAGE
3.2mm	120-170

Note: For optimum result use the lowest amperage practical

EuteCTrode XHD 6804

Manual Metal Arc Electrode For Coating High And Low Alloy Steels And Tool- Steels

DESCRIPTION

EutecTrode 6804XHDis a unique formulation and, owing to a judicious combination of carefully dosed alloy additives, this electrode offers the following properties:

Product Details

- Exceptional weldability, stable arc, perfect metal transfer
- Easy to use, smooth flow without spatters
- Good appearance with perfectly regular beads
- Solid, dense deposit, free of porosity or microcracks
- No risk of cracking with multiple pass welds
- Maximum hardness after one pass
- Excellent wetting
- Slag readily removed
- Efficiency yield 130%
- Contact heat quickly removed
- Very tough and creep resistant
- Very good resistance to oxidation.
- Retained hardness independent of thermal cycles up to 500°C
- Excellent resistance to metal/metal friction up to 500°C
- Extensive overlays possible without any risk of overheating
- Bonding layer normally not necessary

APPLICATIONS

Principal applications

Draw plates, chucks, plungers for hot-extrusion. Other uses Spinning rotors for glass-wool production. Stamping and trimming dies. Kiln parts. Pump shafts. Industries involved in high temperature metal processing Extrusion of hollow pro les. Metal drawing. Forming. Cropping. Industries involved in cold metal processing Automobiles. Cutting of thin sections. Chemicals. Foundries. Forming. Textiles. Steel. Power stations. Stamping. Petrochemicals. Rolling mills.

PROCEDURE FOR USE

Preparation: Remove worn metal using ExoTrode or prepare by mechanical means to obtain a sound surface.

Preheating: Preheating depends on the steel's Carbon Equivalent and the workpiece size, thickness and the geometry. Castolin Eutectic recommends:

CE < 0.2 : preheating not essential.

CE 0.2- 0.4: preheating 100-200°C

CE 0.4- 0.8: preheating 200-350°C

Welding: Electrode almost vertical, short arc. Before breaking the arc to halt welding, draw back the electrode until the weld crater is lled.

TECHNICAL DATA

Typical Hardness : 48-50 HRC

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
2.5mm	60-80
3.2mm	180-140
4.0mm	120-180

Note: For optimum result use the lowest amperage practical

Xuper XHD 6886

For Joining, Cladding, Disimilar And Galvanized Steels

DESCRIPTION

High-performance alloyed electrode designed for industrial maintenance welding applications. It features a specially formulated flux coating and alloy core wire, resulting in a deposit with a grain-re ned, binary-phased microstructure that maintains mechanical properties despite variable dilution effects.

Product Details

- Superior tensile strength and high crack resistance Compatible with most types of steels.
- All positional capability and DC/AC performance to prevent magnetic arc blow effects.
- Electrode flux coating resists overheating, allowing for easy contact weldability
- Produces clean, uniform weld beads with minimal spatter

APPLICATIONS

Maximum safety margin repairs of cracks in castings, machine housings, frames, chassis, springs, etc.

Joining dissimilar or unknown grades of steel Machinable build-up and overlays to resist wear by friction, impact, or pressure on gears, shafts, bearings, etc.

Cushion layer for E+C TeroCote alloys

can be used to join extendion piecis to electric polls, signal post, support and xtures to protect against corrosion in the open air.

PROCEDURE FOR USE

Preparation: According to the thickness of the part, chamfer in a «V», «U» or an «X» to 80-90° angle with ExoTrode or grind. Remove all sharp corners and cracks.

Preheating:

CE < 0.2: preheating not essential

CE 0.2 - 0.4: preheating 100-200°C

CE 0.4 - 0.8: preheating 200-350°C

Do not preheat austenitic-manganese steels; keep them cool.

Welding: Maintain a medium arc length with the electrode held near vertical to the direction of travel. Weaving should be limited to 2 x electrode diameter. Electrode contact welding can be used in the flat position and in llet joints. retardant material to help with slow cooling.

TECHNICAL DATA

Tensile strength: 803 N/mm2 (116,000 psi)

Typical Hardness

As deposited: 24-26 HRC

Work hardened: 35-37 HRC

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
2.0mm	75-90
2.5mm	90-120
3.2mm	120-170
4.0mm	150-240

Note: For optimum result use the lowest amperage practical

EuteCTrode 7008

Tubular Hardfacing Electrode Combats Severe Abrasion and light Impact

DESCRIPTION

EutecTrode EC 7008 is a high-performance tubular electrode developed to resist severe abrasion and light impact. It is specially designed for high deposition rates and maximum metal recovery, making it ideal for repair and protection of components exposed to wear.

Product Details

- High metal recovery with very good deposition efficiency
- Excellent resistance to abrasion and mild impact
- Can be used up to 250°C operating temperature
- Uniform distribution of hard chromium carbides in a tough materialistic matrix
- Achieves full performance in just one layer
- Designed for high force applications at low temperatures
- Tubular construction for higher current density

APPLICATIONS

- Coal burner nozzles and tips
- Crusher hammers and housings
- Scraper blades
- Bucket teeth and lips
- ID fan blades
- Grizzly bars

PROCEDURE FOR USE:

Surface Preparation: Clean the base material thoroughly. Remove any worn or fatigued metal.

Preheating: Preheat if required depending on base material.

Welding Technique:

Maintain 40% overlap between weld passes when hardfacing a surface.

Avoid overheating the base metal.

Fine stress relief cracks may appear – this is normal in hardfacing.

Post-Weld Finish: Grind the weld surface for a smoother nish if needed.

TECHNICAL DATA

Typical Hardness :55 – 62 HRC

(after 2 layers)

Carbide Hardness: 1100 - 1200

Hv Carbide Content: Medium

Current Polarity: DC (+/-)

DIAMETER	AMPERAGE
6.3mm	100 – 130
8.0mm	150 – 200

Note: For optimum result use the lowest amperage practical

E410-16 Welding Electrodes, E410-16 Welding Electrodes Manufacturers, E410-16 Welding Electrodes Suppliers, E410-16 Welding Electrodes Stockists, E410-16 Welding Electrodes Exporters ER-316/316L MIG & TIG Welding Wire, ER-316/316L MIG & TIG Welding Wire Manufacturers, ER-316/316L MIG & TIG Welding Wire Suppliers, ER-316/316L MIG & TIG Welding Wire Stockists, ER-316/316L MIG & TIG Welding Wire Exporte

EuteCTrode 7020

All-Position, Tubular Hardfacing Electrode Combats Severe Abrasion and Medium ImpactDESCRIPTION

EutecTrode 7020 is a highly alloyed composition suitable for severe abrasion with medium impact and maintains deposit hardness up to 1000°F (538°C). This all-position, tubular electrode has a high deposition rate for increased efficiency, productivity, coverage and usability. When used at low amperage, dilution is minimized and the key wear resistant properties are maintained. EutecTrode 7020 possesses built-in moisture resistance.

Product Details

- Designed for maximum efficiency and productivity
- Maintains high temperature hardness to 1000°F (538°C)
- Slag-free weld deposits
- Low operating current and low heat input

APPLICATIONS

- Pug Mill Augers: Raw material Processing
- Muller Tires: Iron and Steel Works
- Dozer Teeth: Various
- Sheepsfoot Tampers: Construction
- Cage Crushers: Fertilizer Industry
- Asphalt Mixer Paddles: Civil Eng./ Construction
- Fan Blades :Various

PROCEDURE FOR USE:

PREPARATION: Clean weld area of scale and/or oxide. A nominal preheat of 150°F (65.5°C) is advised if the part is below 40°F (4°C) or over 1" thick. For higher carbon steels higher preheats will be needed.

Note: Do not preheat Hadfeld manganese steel castings above 400˚F (204˚C) as this will cause time-temperature embrittlement.

ER316LSi MIG & TIG Welding Wire, ER316LSi MIG & TIG Welding Wire Manufacturers, ER316LSi MIG & TIG Welding Wire Suppliers, ER316LSi MIG & TIG Welding Wire Stockists, ER316LSi MIG & TIG Welding Wire Exporters

TECHNIQUE: Maintain a medium-to-short arc and incline the electrode at a 45° angle in the direction of travel. Excessive weaving (more than 2x the elec- trode diameter) is not advised as wide beads can cause excessive base metal overheating and de- grade the weld deposit wear properties. Back whip craters to reduce crater-cracking tendencies.

Do not deposit more than two layers.

POST WELDING: Allow parts to slow cool in still air. High carbon steels and air hardenable steels should be covered with a heat-retardant blanket.

TECHNICAL DATA

Typical Hardness :55 - 60 HRC

Carbide Hardness: 1100 - 1200 VPN (M7C3)

Carbide Content: Medium

Current Polarity: AC/DC (+/-)

DIAMETER	AMPERAGE
6.4mm	85-135
9.5mm	130-190
12.7mm	200-430

Note: For optimum result use the lowest amperage practical

EuteCtrode 7030

All-Position, Tubular Hardfacing Electrode Combats Fine Partical Abrasion, 2-Body Abrasion And Light Impact

DESCRIPTION

EutecTrode 7030 is speci cally formulated to resist ne particle erosion, -2body abrasion and light impact while maintaining deposit hardness up to 1000°F (538°C). This all-position, tubular electrode has a high deposition rate for increased efficiency, productivity, coverage and usability. When used at low amperage, dilution is minimized and the key wear resistant properties are maintained. EutecTrode 7030 possesses built-in moisture resistance.

Product Details

- Designed for maximum efficiency and productivity
- Maintains high temperature hardness to 1000°F (538°C)
- Slag-free weld deposits
- Low operating current and low heat input

APPLICATIONS

- Ripper Shanks: Quarrying
- Impeller Bars : Mining / Quarrying
- Stripper Bars : Quarrying
- Grizzly Bars: Cement Works
- Drag Chain Links : Mining
- Cement Chutes : Cement Works
- Clinker Belt Links : Cement Works
- Skip Car Lips : Deep Mining
- Discharge Chutes : Cement /Quarrying
- Cone Crusher Rolls: Quarrying
- Fan Blades : Various

PROCEDURE FOR USE: PREPARATION:

Clean weld area of scale and/or oxide. A nominal preheat of 150°F (65.5°C) is advised if the part is below 40°F (4°C) or over 1“ thick. For higher carbon steels higher preheats will be needed. Note: Do not preheat Had eld manganese steel castings above 400°F (204°C) as this will cause time-tem- perature embrittlement.

TECHNIQUE: Maintain a medium-to-short arc and incline the electrode at a 45° angle in the direc- tion of travel. Excessive weaving (more than 2x the electrode diameter) is not advised as wide beads can cause excessive base metal overheating and degrade the weld deposit wear properties. Back whip craters to reduce crater-cracking tendencies. Do not deposit more than two layers.

POST WELDING: Allow parts to slow cool in still air. High carbon steels and air hardenable steels should be covered with a heat-retardant blanket.

TECHNICAL DATA

Typical Hardness :55 - 60 HRC

Carbide Hardness: 1100 - 1200 VPN (M7C3)

Carbide Content: Medium to high

Current Polarity: AC/DC (+/-)

DIAMETER	AMPERAGE
6.4mm	85-135
9.5mm	130-190
12.7mm	200-430

Note: For optimum result use the lowest amperage practical

EuteCTrode 7040

All-Position, Tubular Hardfacing Electrode Combats Severe Abrasion And High Temperature Erosion And Medium Impact

DESCRIPTION

EutecTrode 7040 is formulated to resist severe abrasion and high temperature erosion up to 1500°F (815.5°C). This all position, tubular electrode has a high deposition rate for increased efficiency, productivity, coverage and usability. When used at low amperage, dilution is minimized and the key wear resistant properties are maintained. EutecTrode 7040 possesses built-in moisture resistance.

Product Details

- Designed for maximum efficiency and productivity
- Maintains high temperature hardness to 1500°F (815.5°C)
- Slag-free weld deposits
- Low operating current and low heat input

APPLICATIONS

- Ash Conveyor Links :Various
- Feeder Screws:Various
- Rotor & Impeller Bars: Various
- Dust Collector Fans: Cement Works
- Ash Conveyor Elbows: Various
- Sintering Plant Augers :Iron/Steel Works
- Kiln Flights: Cement Works
- Fan Blades: Various

PROCEDURE FOR USE

PREPARATION: Clean weld area of scale and/ or oxide. A nominal preheat of 150°F (65.5°C) is advised if the part is below 40°F (4°C) or over 1" thick. For higher carbon steels higher preheats will be needed.

Note: Do not heat Had eld manganese steel castings above 400°F (204°C) as this will cause time-temperature embrittlement.

E410NiMo-16 Welding Electrodes, E410NiMo-16 Welding Electrodes Manufacturers, E410NiMo-16 Welding Electrodes Suppliers, E410NiMo-16 Welding Electrodes Stockists, E410NiMo-16 Welding Electrodes Exporters

TECHNIQUE: Maintain a medium-to-short arc and incline the electrode at a 45° angle in the direction of travel. Excessive weaving (more than 2x the electrode diameter) is not advised as wide beads can cause excessive base metal overheating and degrade the weld deposit wear properties. Back whip craters to reduce crater-cracking tendencies. Do not deposit more than two layers.

POST WELDING: Allow parts to slow cool in still air. High carbon steels and air hardenable steels should be covered with a heat-retardant blanket.

TECHNICAL DATA

Typical Hardness : 55 - 60 HRC

Carbide Hardness: 1100 - 1200 VPN (M7C3)

Carbide Content: Medium

Current Polarity: AC/DC (+/-)

DIAMETER	AMPERAGE
6.4mm	85-135
9.5mm	130-190
12.7mm	200-430

Note: For optimum result use the lowest amperage practical

Xuper DrilTeC 8800

Premium Tungsten Carbide Rod With High Abrasion Resistance

DESCRIPTION

Xuper DrilTec 8800 is a torch alloy manufactured under rigorous conditions which prevent loss of de-oxidizers and Diamax particle erosion. The alloy formulation consists of hard Diamax particles dispersed throughout a copper-base alloy that forms the matrix. 8800 alloys also include the most advanced, ATMOSIN containing XFC flux coatings for maximum de0oxidizing and cleansing action during deposition. Improved weldability permits bonding at a temperature well below the critical temperatures of ferrous metals. Recommended for use on steels and cast iron.

APPLICATIONS

- Augers: Reamers
- Bucket Teeth: Pilots
- Burning Shoes: Junk Bits
- Composite Drills : Earth Moving Equipment
- Cutters: Rotary Cutting Bits
- Drills : Rotary Cutters
- Masonry Drills: Rotary Cutting Shoes
- Plowshares:Drill Nuts

PROCEDURE FOR USE Clean and degrease the surface. Use the "pure matrix" end where pre-tinning is required. Use a neutral flame with a large tip size to achieve a broad flame. Heat tinned area to melting temperature, then direct flame onto rod until flux melts and alloy begins to flow out. Continue heating the work slightly ahead of the melting flux and alloy. Rotating the rod assures uniform distribution of Diamax particle. Avoid working in too closely with inner flame cone to avoid overheating.

E630-16 Welding Electrodes in India, E630-16 Welding Electrodes Manufacturers in India, E630-16 Welding Electrodes Suppliers in India, E630-16 Welding Electrodes Stockists in India, E630-16 Welding Electrodes Exporters in India

ER317L MIG & TIG Welding Wire, ER317L MIG & TIG Welding Wire Manufacturers, ER317L MIG & TIG Welding Wire Suppliers, ER317L MIG & TIG Welding Wire Stockists, ER317L MIG & TIG Welding Wire Exporters

TECHNICAL DATA:

Typical Hardness

Hardness (Diamax Particles) : 89 - 91 HRA
Hardness (Matrix):200 HB
Bonding Temperature:: 1400 - 1600°F
(760 - 870°C)

Tensile strength : 680 N/mm2 (98,000 psi)
Yield strength : 430 N/mm2 (62,000 psi)
Elongation : 30%
Typical Hardness : 175 HB

Current Polarity: AC/DC (+)

DIAMETER
1.6mm
3.2mm
5.0mm
6.4mm

EuteCDur N 9060

Manual Metal Arc Electrode For Cobalt Based Wear Resistant Coatings

DESCRIPTION

EutecDur N 9060 shows a coarse microstructure. Because of the much lower content of Chromium, Tungsten and Carbon, the alloy offers a high ductility. EutecDur N 9060 shows that in addition to its qualities in respect of impact, a moderate resistance to pressure and abrasion and excellent resistance to corrosion and heat.

Product Details

- Exceptional resistance to heat giving high hot hardness values
- Good all-round resistance to wear
- Good arc characteristics
- Dense deposit with excellent bead formation

APPLICATIONS

Handling equipment for hot steel, shear lades (hot or cold), dies, steam and chemical valve seats, etc.

PROCEDURE FOR USE

Preparation: Ensure all areas to be welded are free from contaminants and where possible radius all sharp corners and edges.

Preheating: Preheating will depend upon type, size and mass of base material, it is essential that complexed shaped components. high carbon equivalent steels and low alloy steels be preheated, cast Iron components will usually require a thorough even temperature throughout the mass. Slow even heating is strongly recommended in order to reduce both distortion effects and cracking tendencies.

Welding: Hold a near vertical electrode angle and maintain as short an arc length as possible. Deposit as stringer beads ensuring sufficient overlap between each weld in order to minimize weld metal dilution and the risk of slag entrapment, avoid weaving. Ensure that each weld deposit is thoroughly cleaned (use a stainless stool wire brush) free from slag, etc., prior to depositing a further weld. Welds should be made In a continuous manner using the largest diameter of electrode as possible for overlay applications, for building up edge applications use smaller diameter electrodes and ensure that sharp edges and corners have been removed.

When breaking the arc increase the speed of travel in order to reduce the size of the weld crater and clean thoroughly prior to commencing a further deposit.

It is recommended that components which have been welded are cooled slowly down to room temperature, in all cases avoid rapid and Irregular cooling.

TECHNICALDATA

Typical Hardness : 40-42HRC

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
3.2mm	70-120
4.0mm	100-150

Note: For optimum result use the lowest amperage practical

EuteCDur N 9080

Manual Metal Arc Electrode For Anti-Wear Protective Coatings On Hot Working Tools

DESCRIPTION

EutecDur N 9080 is a cobalt-based electrode for use on medium-carbon, hardening and air-hardening, alloy and manganese steels, as well as nickel alloys.

Product Details

- Excellent resistance to thermal cycling.
- Superior resistance to heat and scaling up to 1000.C.
- Good creep resistance, no structural modi cation.
- Low friction coefficient for metal/metal sliding properties.
- Work-hardens up to 60% higher than as welded.
- Ductile deposit resistant to tempering.
- High resistance to chemical corrosion.
- High crack resistance.
- Easily machinable by normal cutting tools.
- Weldable in all positions.

APPLICATIONS:

The numerous properties of EutecDur N 9080 open a large range of possible applications. This electrode should be used particularly where workpieces are submitted to various wear phenomena. It is especially suited for protective coatings on hot working tools like forging and trimming tools, wire drawing dies, shear blades tongs, plungers, etc.

- Application areas where strong resistance to wear and corrosion are needed like, Extrusion screws, press and drawing tools, sealing surfaces and valves seats, slide valves, etc.
- The easy machinability of the deposit is an advantage when rebuilding such workpieces.

PROCEDURE FOR USE

Preparation

Remove any worn metal with ExoTrode. Clean the surfaces.

Intermediate layer (preventive coating)

Depending on the base metal, it is advisable in certain service conditions to deposit an intermediate layer. Use Xuper NucleoTec 2222 or Xuper 686 For manganese steels use XHD646-, and for stainless steels, CastInox D.

- **Build-up**

Build up on medium carbon and air-hardening steels with EutecDur N 6200 or Castolin Xuper 686 on manganese steels with XHD646- and on stainless steels with CastInox D.

Welding

Keep the electrode almost vertical, with a short arc. Procedure B is the most advisable. Remove any slag before proceeding with a second pass.

TECHNICAL DATA

Typical Hardness

As deposited: 32-34 HRC

Work hardened: 48-50 HRC

Temperature : 1000.C.

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
3.2mm	70-120
4.0mm	90-150

Note: For optimum result use the lowest amperage practical

EuteCDur N 9120

Manual Metal Arc Electrode For Cobalt Based Wear Resistant Coatings

DESCRIPTION

EutecDur N 9120 shows a ne grain microstructure. It contains a percentage of Chromium, Tungsten and Carbon which falls between those of the other two alloys. CastoDur N 9120 shows a relative resistance with increased deposit hardness.

Product Details

- Exceptional resistance to heat giving high hot hardness values.
- Good all-round resistance to wear.
- Good arc characteristics.
- Versatility: use with AC or DC (electrode positive or negative).
- Dense deposit with excellent bead formation.

APPLICATIONS

Hot pressing dies and hot hardness dies, etc.

PROCEDURE FOR USE

Preparation: Ensure all areas to be welded are free from contaminants and where possible radius all sharp corners and edges.

Preheating: Preheating will depend upon type, size and mass of base material, it is essential that complexed shaped components. High carbon equivalent steels and low alloy steels be preheated, cast Iron components will usually require a thorough even temperature throughout the mass. Slow even heating is strongly recommended in order to reduce both distortion effects and cracking tendencies.

Welding: Hold a near vertical electrode angle and maintain as short an arc length as possible. Deposit as stringer beads ensuring sufficient overlap between

each weld in order to minimise weld metal dilution and the risk of slag entrapment, avoid weaving. Ensure that each weld deposit is thoroughly cleaned (use a stainless stool wire brush) free from slag, etc., prior to depositing a further weld. Welds should be made In a continuous manner using the largest diameter of electrode as possible for overlay applications, for building up edge Applications use smaller diameter electrodes and ensure that sharp edges and corners have been removed.

When breaking the arc increase the speed of travel in order to reduce the size of the weld crater and clean thoroughly prior to commencing a further deposit.

It is recommended that components which have been welded are cooled slowly down to room temperature, in all cases avoid rapid and Irregular cooling.

TECHNICAL DATA

Typical Hardness 48-52 HRC

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
3.2mm	70-120
4.0mm	100-150

Note: For optimum result use the lowest amperage practical

CaviteC SMA

Manual Metal Arc Electrode Highly Resistant To Cavitation And Corrosion

DESCRIPTION

Specialized, low heat input manual arc electrode for depositing a proprietary alloy system engineered to resist severe cavitation attack and corrosion. Formulation was developed, tested and patented by Hydro-Quebec under the trade name Ireca and exclusively licensed by Eutectic+Castolin for manufacture and distribution under the designation Cavitec. Cavitec represents a new alloy system concept around a high strength cobalt alloyed austenitic stainless steel for combating intense cavitation damage and corrosion often occurring in hydraulic engineering elds such as Francis, Kaplan and pump turbines. Over a decade of practical service trials by Hydro-Quebec, Montreal, Canada, has clearly con rmed the superior performance of Cavitec on hydraulic equipment parts as originally demonstrated by different laboratory tests.

Product Details

The ferrous based Cavitec alloy system uses a precise balance of Cr, Co, Si, Mn, N elementadditions to promote the formation of micro crystalline grains characterizedby low stacking fault energies. This means that energy absorbing mechanisms such as planar slip, grain twinning, and rapid strain hardening are favored within the atomic lattice structure thus effectively dampening the intense shock wave impulses generated by cavitation.

The special basic flux coating facilitates weldability in position to give smooth, regular bead deposits which are easily machined or ground to nal dimensions.

APPLICATIONS

Mainly for preventive and repair coatings on Francis, Kaplan and pump turbines as well as other hydraulic machine parts subject to wear by cavitation in the following industries: Water pumping, irrigation, water treatment plants. Desalination plants and heat exchangers. Thermal power stations, Chemical pump rotors, casings, Valves. Marine, Ship propellers, Paper mills, Sugar mills.

PROCEDURE FOR USE

Preparation: The welding area should be cleaned to remove all traces of contamination by rust, oxides, grease, paint etc. All fatigued or damaged metal, cracks or prior deposits should be removed by grinding or by using ExoTrode 4 to leave rounded edges.

Preheating: Generally, not needed. If used, should be adapted to suit the supplier›s recommendations of the base material, size of work piece and coating thickness requirements.

Machining : Machinable with carbide tipped tools, easily grindable to polish nish and may be plasma cut.

TECHNICAL DATA

Typical Hardness

As deposited: 26-28 HRC

Work hardened: 43-45 HRC

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
2.5mm	80-100
3.2mm	100-140
4.0mm	140-180

Note: For optimum result use the lowest amperage practical

COPPER ALLOYS

Xuper 1851 XHD

Welding Aluminum Bronzes And Dissimilar Metal Joining Of Copper Alloys To Steels And Cast Irons

DESCRIPTION

Xuper 1851 XHD is a copper-based ller rod for the joining and cladding of aluminum bronzes or dissimilar combinations of Aluminum-bronze to some steels and cast irons. Its special formulation inhibits inter-granular stress corrosion known to cause cracking in copper alloys and steels. As cladding it exhibits all the bene ts of Al-bronze itself and a high deposition rate saves time and money in any application where it is used.

- Good crack and corrosion resistance
- Excellent comparative mechanical properties
- High deposition rates

APPLICATION :

- Aluminum Bronze Pump Housings
- Manganese Bronze Impellers
- Ship Propellers
- Turbine Runners
- Press Rams
- Joining Cast Iron to Steel
- Tin Plate Mill Rolls
- Hydraulic Pistons

PROCEDURE FOR USE

cracks or prior deposits should be removed by grinding or by using ExoTrode 4 to leave rounded edges.

Preparation: Remove all contaminants, particularly oil and grease. Lightly grind surfaces to remove super cial oxides.

Prepare cracks to have a 60-75° V-groove. A root opening of -8/1 in. is recommended. If necessary, preheat to remove moisture.Technique: Use either stringer or weave beads with the latter being preferred to minimize slag entrapment. Make sure to thoroughly deslag between passes.

Note: High frequency AC recommended for application thinner than 0.040 or where additional weld puddle cleaning is needed.

Note: Make sure that the inter-pass temperature does not exceed 300°F (148°C)

TECHNICAL DATA

Tensile Strength : 550 N/mm2 (80,000 psi)
Yield strength : 255 N/mm2 (37,000 psi)
Typical Hardness : 200 HB
Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
3.2mm	90-160

Note: For optimum result use the lowest amperage practical

E308H Welding Electrodes in India, E308H Welding Electrodes Manufacturers in India, E308H Welding Electrodes Suppliers in India, E308H Welding Electrodes Stockists in India, E308H Welding Electrodes Exporters in India

ER330 MIG & TIG Welding Wire, ER330 MIG & TIG Welding Wire Manufacturers, ER330 MIG & TIG Welding Wire Suppliers, ER330 MIG & TIG Welding Wire Stockists, ER330 MIG & TIG Welding Wire Exporters

EuteCTrode 1855XHD

Manual Metal Arc Electrode For Coatings And Joining Of Copper Alloys

DESCRIPTION

Very good resistance to cavitation, excellent resistance to marine corrosion, very high tensile strength, high elongation, low friction coefficient, very easily machinable. Aluminium bronze alloys are used to resist corrosion by sea water.EutecTrode1855 XHD allows joining and repairing cast or wrought manganese-nickel-aluminium bronze materials with Maximum Safety Margin. When the precise chemical composition of the base metal is unknown, 1855 XHD can be used as it provides an elongation up to twice that of traditional aluminium bronzes with comparable tensile strength. Greater elongation meansless stress in the areas along the weld bead, less distortion of the part with subsequent less risk of cracking, both for joined assemblies and for very thick overlays.Crack resistance.

APPLICATIONS

Multi-applications

XHD-1855 is ideal for corrosion resistance of coating large surfaces used in the chemical industry. It may be used for assembling complex aluminum bronze alloys, for rebuilding and modifying aluminum bronze parts or for coating parts subject to intense metal to metal friction. Ship propellers, propeller shaft sleeves, rudder components, turbine and pump housings, mixer blades, gear wheels, screw-shaft carrier rings, side plates, valve housings, roller extension segments, valve gates, turbine injector needles, forming matrices, pump turbines, winch components, rotary seals, shaping tools, bearings, heat exchanger plates, rotary valves, gearings.

PROCEDURE FOR USE

Preparation: Ensure that all areas to be welded are free from contaminants, oxides etc. For joining applications use suitable preparation.

Preheating: Preheating is not generally necessary. However when welding large heavy sections, preheating up to 150°C may be required with approximately 200°C maximum interpass temperature. For overlaying steel components, preheating depends upon type, size and mass of base material.

Welding: XHD-1855 has been developed with ease of welding as an important prerequisite. It provides good weldability even with low preheat temperatures. Striking and re-striking the electrode is easy, and thedeposit is almost perfectly smooth and regular.

Employ minimum amperage for each diameter to minimise dilution. Maintain electrode angle near 90.and a short arc. Ensure that all slag traces and defects are removed, followed by thorough wire brushing after each weld pass.

TECHNICAL DATA

Tensile strength : 680 N/mm2 (98,000 psi)

Yield strength : 430 N/mm2 (62,000 psi)

Elongation : 30%

Typical Hardness : 175 HB

Current polarity: AC/DC (+)

DIAMETER	AMPERAGE
3.2mm	60-100

Note: For optimum result use the lowest amperage practical

EutecTrode 7008 Welding Electrodes, EutecTrode 7008 Welding Electrodes Manufacturers, EutecTrode 7008 Welding Electrodes Suppliers, EutecTrode 7008 Welding Electrodes Stockists, EutecTrode 7008 Welding Electrodes Exporters

Xuper 2800 XHD

Manual Metal Arc Electrode For Bronze Welding With Ac

DESCRIPTION

A unique bronze alloy electrode for joining and overlaying parts in bronze, and also for use on a wide variety of ferrous alloys.

This electrode is specially designed for welding with alternating current. Stable arc even using power sources with low open-circuit voltage. Regular metal transfer with a homogeneous deposit. Very good resistance to corrosion by salt water or steam. Thanks to its low friction coefficient, it is ideal for the overlay of surfaces subject to friction, e.g. plain journal bearings. The deposit is very smooth and is easily machinable.

- Excellent weldability and exceptional arc stability with AC
- Very good corrosion resistance to salt water or steam
- Very homogeneous deposit
- Good colour match to bronze
- Deposit easily machinable
- Low friction coefficient

ER347 MIG & TIG Welding Wire, ER347 MIG & TIG Welding Wire Manufacturers, ER347 MIG & TIG Welding Wire Suppliers, ER347 MIG & TIG Welding Wire Stockists, ER347 MIG & TIG Welding Wire Exporters

APPLICATIONS

Pump casings, impellers, plain bearings, marine applications, joining of bronze to steel or cast iron.

PROCEDURE FOR USE

Preparation : Clean the surface to be welded. For joining applications, leave sufficient clearance for full penetration welds. For thicknesses greater than 5 mm, make an 80.»U» chamfer. For thicknesses greater than 10 mm make an «X» preparation.

Preheating: Not normally necessary forthin sections. A preheat of 200-250°C is recommended for copper-base alloys in general, and particularly for thick, heavy sections.

When overlaying steels, the preheat temperature depends upon the nature of the steel and the dimensions of the part to be welded. Maintain medium to short arc and keep electrode almost vertical. Deposit stringer beads or weave moderately.

Select the minimum current possible in order to avoid dilution, particularly when welding ferrous metals.

TECHNICAL DATA

Tensile strength: 300 N/mm2(43,000 psi)
Typical Hardness :70- 80 HRB
Work hardening : 85-95 HRB

Current polarity: DC (+)

DIAMETER	AMPERAGE
3.2mm	80-120
4.0mm	110-150
5.0mm	130-170

Note: For optimum result use the lowest amperage practical

E2209-16 Welding Electrodes, E2209-16 Welding Electrodes Manufacturers, E2209-16 Welding Electrodes Suppliers, E2209-16 Welding Electrodes Stockists, E2209-16 Welding Electrodes Exporters

Aluminium

EuteCtrode 2101E

Low Heat Electrode For Repair & Joining Of Wrought Aluminium Alloys

DESCRIPTION

Compatible with many wrought aluminium alloys. Corrosion resistant for marine and industrial environments. Deposits can be anodised or electroplated.

Applications: Road transport vehicles, truck bodies, panel wings, frames, tankers, buses, railway rolling stock, wagons, marine ttings & most aluminium castings.

Base metals: 2101E is particularly recommended for the following non heat treatable wrought aluminium alloys. Aluminium (Al99 commercially pure) aluminium manganese alloys, aluminium magnesium alloys (up to 3%Mg) aluminium manganese-magnesium alloys.

Procedure for use:

Preparation: Cleanliness of the joint faces is essential for highest quality weld deposits. All traces of oil, grease or paint must be removed using appropriate solvents and only uncontaminated stainless steel wire brushes should be used for cleaning the thin oxide layer prior to welding.

Preheating: High thermal conductivity of aluminium tends to reduce the penetration and increase the lack of fusion or porosity risks due to the rapid solidi cation of the weld pool. Preheating to between 100-300°C is recommended for large and complicated sections, this allows lower amperage settings for positional work.

TeroCote 7888 T Welding Electrodes, TeroCote 7888 T Welding Electrodes Manufacturers, TeroCote 7888 T Welding Electrodes Suppliers, TeroCote 7888 T Welding Electrodes Stockists, TeroCote 7888 T Welding Electrodes Exporters

Welding technique: Strike arc by brushing, rather than tapping the electrode tip on the work piece. Keep the electrode almost vertical, the arc should be maintained as short as possible by pushing the electrode down so that contact with the plate can de felt. The stable arc continues to burn beneath the molten lux and high welding speeds are maintained.

TECHNICAL DATA

Tensile strength: >200 N/mm2(29,000 psi min)

Elongation: 5- 10%

Typical Hardness : 45 HB

Current polarity: DC (+)

DIAMETER	AMPERAGE
2.5mm	50-80
3.2mm	70-100

Note: For optimum result use the lowest amperage practical

E2594-16 Welding Electrodes, E2594-16 Welding Electrodes Manufacturers, E2594-16 Welding Electrodes Suppliers, E2594-16 Welding Electrodes Stockists, E2594-16 Welding Electrodes Exporters

ERNiCrMo-8 MIG & TIG Welding Wire, ERNiCrMo-8 MIG & TIG Welding Wire Manufacturers, ERNiCrMo-8 MIG & TIG Welding Wire Suppliers, ERNiCrMo-8 MIG & TIG Welding Wire Stockists, ERNiCrMo-8 MIG & TIG Welding Wire Exporters

Brazing

EuteCtrod 157

Tin-Silver Brazing Rod For Stainless Steels, Brass, Bronze And Nickel Alloys

DESCRIPTION

EutecRod 157 rod soldering alloy is particularly suitable for stainless steel assemblies, brass and bronze components, nickel alloys, and most carbon steels when used with Eutectic Flux 157. Deposits are corrosion resistant and do not tarnish in service.

*All-purpose Cadmium-free, Lead-free solder

*Best balance of mechanical properties with low- temperature application

*Good corrosion resistance and electrical conductivity

*Excellent color match to stainless steels

APPLICATIONS:

For soldering dairy utensils, food- handling equipment, plumbing xtures and potable water containers and piping. Also useful for joining electrical connectors.

ER410 MIG & TIG Welding Wire, ER410 MIG & TIG Welding Wire Manufacturers, ER410 MIG & TIG Welding Wire Suppliers, ER410 MIG & TIG Welding Wire Stockists, ER410 MIG & TIG Welding Wire Exporters

PROCEDURE FOR USE:

Preparation: Clean joint area with RotoClean OS or use a proprietary VOC-free solvent. For best results apply EutecTor 157 Flux to the joint prior to t-up.

Note: *For best results maintain joint clearances between 0.001" and 0.005".*

Technique: Heat insert parts slowly and indirectly to reduce thermal shock to promote uniform flow. When flux begins to bubble, apply solder.

Post-brazing: Thoroughly clean all flux residue with a wire brush and warm water Allow parts to cool naturally. Parts can be quenched to help with flux residue removal. Flux will become corrosive if not removed prior to putting part in service.

E8018-B2 Welding Electrodes, E8018-B2 Welding Electrodes Manufacturers, E8018-B2 Welding Electrodes Suppliers, E8018-B2 Welding Electrodes Stockists, E8018-B2 Welding Electrodes Exporters

TECHNICAL DATA:

Tensile Strength: 105 N/mm2 (15,000 psi)
Thermal Expansion Coef.: 12 x 10-6 in/ F

(20-212°F)

Working Temperature[1]: 430°F (220°C)

Max Brazing Temp: 450°F (230°C)

Elec. Conductivity: 16.5 IACS

Heating Methods: Oxy-fuel torch, induction, resistance heating and furnace soldering

[1] The solidus temperature is the highest temperature at which the part remains solid i.e. the start of melting.

[2] The liquidus temperature is the lowest temperature at which the part is molten i.e. *complete*

ELECTRODE
3.2mm
4.0mm

EuteCRod 190

Low Temperature Aluminum Brazing Rod

DESCRIPTION

EutecRod 190 provides exceptional thin-flowing properties when oxy-fuel brazing sheet, tubing and most wrought forms of aluminum. Excellent color match with smooth, uniform llets. Properties are highly compatible with aluminum grades 3xxx & 4xxx.

- Perfect for high strength joining of aluminum tee and lap joints
- High strength llet and bead joints on sheet, extruded and cast aluminum
- Excellent bridging properties for poor t joints
- Aluminum joining without melting base metal

ER385 MIG & TIG Welding Wire in India, ER385 MIG & TIG Welding Wire Manufacturers in India, ER385 MIG & TIG Welding Wire Suppliers in India, ER385 MIG & TIG Welding Wire Stockists in India, ER385 MIG & TIG Welding Wire Exporters in India

APPLICATIONS:

- Automotive and Bus Bodies
- Light-Gauge Truck Bodies
- Aluminum Housings
- Irrigation Piping
- Farming Implements
- Office Furniture
- Refrigeration Equipment
- Air-Conditioning Equipment

PROCEDURE FOR USE:

Preparation: Clean joint area and lightly abrade using a stainless steel wire brush or wire wool. For best results a slight gap of between .005" and 010" is recommended. No preheat is necessary with thin gauge material. For thicknesses up to 1/8" a nominal broad preheat of 200°F is suggested. EutecTor® 190 flux can be applied to the joint by making a paste with a small amount of water or alcohol

Note: EutecRod 190 requires the use of EutecTor® 190 flux..

E8018-B6 Welding Electrodes, E8018-B6 Welding Electrodes Manufacturers, E8018-B6 Welding Electrodes Suppliers, E8018-B6 Welding Electrodes Stockists, E8018-B6 Welding Electrodes Exporters

Technique: Adjust the oxy-fuel flame so that it is slightly reducing or carburizing. Keep the torch moving rapidly to prevent localized overheating with the inner flame cone 1" to 2" from the joint. When the flux becomes molten apply the brazing alloy at equal points along the joint seam. Cool slowly.

Post-Brazing: Remove flux, scrubbing in hot water and rinse. Note: It is mandatory to remove all traces of flux residues. If these are not removed they will cause corrosion

TECHNICAL DATA:

Tensile Shear Strength:234 N/mm2 (34,000 psi)
Electrical Conductivity IACS: 42%
Solidus Temperature: 1070°F (575°C)
Liquidus Temperature: 1080°F (580°C)
Max. Brazing Temperature: 1120°F (605°C)

Heating Methods: Oxy-fuel, resistance, induction

Color Match Properties: Similar to wrought aluminum (will darken if anodized)

DIAMETER
2.4 mm
3.2mm
4.0mm
4.8mm

EuteCRod 1601

Cadium-Free Silver Brazing Rod

DESCRIPTION

A bare brazing rod requiring preparatory fluxing with XuperBraze 100 or Xuper Braze 100H. Available in 18" lengths in 16/1" diameter. Packaged in 0.5 lb. and 1 lb. packs.

- Cadmium - free bare rod general purpose brazing alloy
- Widely used on joints where greater corrosion resistance is needed
- It exhibits good wetting action and flow
- Useful in bridging gaps where poor joint tups cannot be avoided
- Excellent corrosion resistance
- Joint clearances of .008. - 003 inches recommended for proper capillary action
- Perfect for high strength joining of aluminum tee and lap joints
- High strength llet and bead joints on sheet, extruded and cast aluminum
- Excellent bridging properties for poor t joints
- Aluminum joining without melting base meta

APPLICATIONS:

Suitable for basic tungsten carbide inserts, general tool tipping and stainless food containers and food handling equipment. Used where greater corrosion resistance is required.

PROCEDURE FOR USE

Preparation: The base metal surfaces to be brazed must be clean and free of all dirt, oil, grease and oxides such as rust.

Finishing: All the corrosive flux residue must be removed after brazing. Rinse with water while the parts are still warm, or rinse with hot water

Specification: Generally, the joint strength using 1601 will exceed the strengths of the base metals being joined. Type of joint, design of joint, joint clearances, and brazing procedures will effect the nished joint strength.

Technical Data

Solidus: 1220°F (660°C)

Liquidus: 1435°F (779°C)

Brazing Range: 1435 - 1585°F (779 - 863°C)

Electrical Conductivity: 16.8% IACS

Electrical Resistivity: 10.27 Microhm-cm

The recommended maximum operating temperature of 1601 is up to 400˚F in continued service and up to 600˚F in intermittent

Color, as Brazed: Light Yellow

For Joint Clear: .003 to .008 inches

DIAMETER
1.6mm
2.4mm
3.2mm
4.0mm
4.8mm

EuteCRod 1801

Cadium-Free Silver Brazing Rod, Coil And Strip

DESCRIPTION

EutrcRod 1801 G is an excellent general purpose brazing alloy that is often associated as the ideal replacement for many of the cadmium bearing alloys. 1801 G is suitable for joining ferrous, nonferrous and dissimilar base metals with close joint clearances. Generally, the joint strength using 1801 G will excede the strengths of the base metals being joined. Type of joint, design of joint, joint clearances, and brazing procedures will effect the nished joint strength. 1801 G is available in bare brazing rod, coil or strip requiring preparatory fluxing with XuperBraze® 100.

- A cadmium- free silver brazing alloy ller metal available in bare rod, coil or strip
- An excellent general purpose brazing alloy that is often associated as the ideal replacement for many of the cadmium bearing alloys
- It is suitable for joining ferrous, nonferrous and dissimilar base metals with close joint clearances
- Excellent fluidity for joint clearances of .002 -.006 inches

APPLICATIONS:

- Food and dairy industry
- Electrical industry
- Brass parts / piping
- Aircraft engine coolers

PROCEDURE FOR USE:

Preparation: The base metal surfaces to be brazed must beclean and free of all dirt, oil,grease and oxides such as rust.

Finishing: All the corrosive flux residue must be removed after brazing. Rinse with water while the parts are still warm, or rinse with hot water.

TECHNICAL DATA:

Solidus: 1195°F (646C) Liquidus: 1250°F (676 C)

Brazing Range: 1260°F - 1500°F.(682C - 815 C)

Electrical Conductivity: 19.0 % IACS

Electrical Resistivity: 9.08 Michrohm-cm

AVAILABILITY:

ROD:

Length: 18“

Diameters: 1.6mm, 2.4mm

COIL:

Diameters: 0.30“

STRIP:

Size:0.005“ x 1“, 0.020“x 1.5“

Color, as Brazed: Yellow White

DIAMETER
1.6mm
2.4mm
3.2mm
4.0mm
4.8mm

EuteCrod 1805

Tube To Tube Sheet Joining Torch Brazing Rod For Self-Fluxing Copper-To-Copper Joints

Description

Copper-phosphorus-silver alloy, developed for the capillary joining of copper metal parts

Outstanding Features:

- Low melting brazing alloy.
- Silver-bearing; thin flowing.
- Self fluxing for copper to copper brazing.
- Strong, ductile, leak-proof joints.
- Good corrosion resistance.

Product Details

Name: Castolin 1805

Description: Flux-free capillary joining of copper
Type: Self-Fluxing Brazing Alloys for Copper

Category: Low Temperature Brazing and Soldering Alloys

Applications

Heat exchangers
Air conditioners
Refrigerating systems
Sanitary facilities
Electrotechnical equipment

PROCEDURE FOR USE

Preparation

Clean the joint surfaces and round off any sharp edges.

Degrease the parts if necessary with an appropriate solvent.

Although flux is not necessary for copper parts, it is recommended to improve the quality of the assemblies and act as an indicator for the bonding temperature.

Recommended fluxes: CASTOLIN 800 (powder form), CASTOLIN 808 PF (paste form).

Place the parts in their de nitive position. Adjust the torch to obtain a neutral flame, either oxy-acetylene or oxy-propane.

Heat a broad area of the parts to be joined up to the bonding temperature.

Melt a drop and spread it with a continuous movement of the flame.

The alloy ller metal spreads to the hottest areas of the surfaces to be joined.

Melt the ller metal until the joint has been completely lled

Cleaning

Once the flux has been used, washing with hot water or soaking in cold water will remove the flux residue

Technical Data

Bonding Temperature: 1200°F (650°C)
Solidus Temperature: 1190°F (645°C)
Liquidus Temperature: 1517°F (825°C)
Tensile Strength: 250° N/mm2 (36,000 psi)

ER410NiMo MIG & TIG Welding Wire in India, ER410NiMo MIG & TIG Welding Wire Manufacturers in India, ER410NiMo MIG & TIG Welding Wire Suppliers in India, ER410NiMo MIG & TIG Welding Wire Stockists in India, ER410NiMo MIG & TIG Welding Wire Exporters in India

DIAMETER
1.6mm
3.15mm

E9015-B9 Welding Electrodes, E9015-B9 Welding Electrodes Manufacturers, E9015-B9 Welding Electrodes Suppliers, E9015-B9 Welding Electrodes Stockists, E9015-B9 Welding Electrodes Exporters

Xuper 145 XFC

Flux Coated Brazing Rod For Joining All Type Of Steel, Stainless Steel, Cu Alloy, Cast Iron & Galvanized Steel

Description :

Braze welding alloy with a controlled composition,made from high purity elements, designed to performexcellent quality joints. CASTOLIN 146 XFC is an «ELASTEC» flux-coated rod with a remarkable flexibility, allowing excellent visibility of the molten pool during the joining operation.

Outstanding Features:

- Durable and flexible flux coating.
- Retains corrosion resistance properties after brazing on galvanized surfaces.
- No smoke, fumes; clear visibility of molten pool.
- Superior wettability.
- Can be brazed directly on contaminated surface

Applications:

Exhaust manifold, metal frames, car bodies, piping, flanges, cast iron housing, copper base plumbing and galvanised sheets & tubes

PROCEDURE FOR USE

- Clean the joint surfaces and round off any sharp edges.
- If necessary, degrease with an appropriate solvent.
- If necessary, coat the surfaces to be joined with Castolin 146 or Castolin 18 flux.
- Place the parts in their de nitive position.
- Adjust the welding torch to obtain a neutral flame.Heat locally up to the flux melting point.Melt the end of the rod on the joint.
- Bond the drop to the base metal, melt a new drop
- by moving forward and so on.
- Do not overheat, leave to air cool.

E9018-B3 Welding Electrodes, E9018-B3 Welding Electrodes Manufacturers, E9018-B3 Welding Electrodes Suppliers, E9018-B3 Welding Electrodes Stockists, E9018-B3 Welding Electrodes Exporters

ER420 MIG & TIG Welding Wire in India, ER420 MIG & TIG Welding Wire Manufacturers in India, ER420 MIG & TIG Welding Wire Suppliers in India, ER420 MIG & TIG Welding Wire Stockists in India, ER420 MIG & TIG Welding Wire Exporters in India

Cleaning :

The flux residues can be removed by a mechanical process: emery grinding, sanding, scraping, etc.

Technical Data

Size: 3.15mm, 5.00 mm

Bonding Temperature: 1560F (850 C)

Solidus Temperature: 1190F (645°C)

Liquidus Temperature: 1517F (825°C)

Tensile Strength:448 N/ mm2 (65,000 psi).

DIAMETER
2.5mm
3.15mm

Xuper 16 XFC

Flux Coated, Nickel-Silver, Low Fuming Brazing Rod

DESCRIPTION

Xuper 16 XFC is a nickel-containing flexible flux coated bronze brazing rod. 16 XFC is pre-flux coated with the ocrrect amount of flux so there is no preparatory fluxing required. Xuper 16 XFC is an excellent replacement for high cost silver brazing alloys when higher brazing temperatures are acceptable. 16 XFC is a blue colored flexible flux coated brazing rod. Available in 18" lengths in 8/1" diameter 11 lb. packs and 32/3" diameter 11 lb. packs.

- No prepatory fluxing required
- Excellent replacement for expensive silver brazing alloys
- Easily machinable
- Excellent corrosion resistance
- Joins base metals at lower temperatures than gas or arc welding
- Minimizes thermal stress and distortion with less cracking
- High strength llets

APPLICATIONS

For brazing tungsten carbide, carbon steels, nickel alloys, and cast iron. Building-up overlaying worn parts as gear teeth, bearings and valve seats. Suitable for tubular structures

PROCEDURE FOR USE

Preparation: The base metal surfaces to be brazed must be clean and free of all dirt, oil,grease and oxides such as rust.

Finishing: All the corrosive flux residue must be removed after brazing. Rinse with water while the parts are warm, or rinse with hot water.

ER630 MIG & TIG Welding Wire, ER630 MIG & TIG Welding Wire Manufacturers, ER630 MIG & TIG Welding Wire Suppliers, ER630 MIG & TIG Welding Wire Stockists, ER630 MIG & TIG Welding Wire Exporters

Technical Data

Tensile Strength: 480N/mm2 (70,000 psi)
Elongation, : 25%
Typical hardness: 120 HB
Solidus: 1665°F (907°C)
Liquidus: 1680°F (916°C)

Brazing Range: 1720 - 1800°F (938 - 982°C)

Electrical Conductivity: 5.5% IACS

DIAMETER
2.5mm
3.15mm

Electrical Resistivity: 31.4 Microhm-cm
Color, as Brazed: Blue
For Joint Clearances: .001 to .005 inches

Cobalt Base Alloys ECoCr-A Welding Electrodes, Cobalt Base Alloys ECoCr-A Welding Electrodes Manufacturers, Cobalt Base Alloys ECoCr-A Welding Electrodes Suppliers, Cobalt Base Alloys ECoCr-A Welding Electrodes Stockists, Cobalt Base Alloys ECoCr-A Welding Electrodes Exporters

Xuper 185 XFC

Nickel Enhanced, Copper-Base, Brazing Rod For Tough Re-Builds And Low Frictional Overlays

DESCRIPTION

Xuper 185 XFC is a premium flux-coated brazing rod for appliations involving wear due to frictional compressive forces. The controlled nickel addition improves application toughness and depresses fuming tendencies for welder friendly use.

Xuper 185 was engineered for selective bearing surfaces on cast iron, steel, and some nickel alloys. Xuper 185 exhibits good deepdrawing properties.

- Controlled Nickel content for improved mechanical properties
- Low-fuming rod for Welder friendly use
- Good resistance to grinding wear

APPLICATIONS

- Stamping dies
- Drawing dies
- Bearing surfaces
- Guide arms
- Hydraulic seal areas

PROCEDURE FOR USE

preparation: Lightly roughen highly polished base metals to facilitate quicker bonding. Clean joint area with RotoClean® OS or use a proprietary VOC-free solvent. Align parts and preheat locally to facilitate quicker joint area heat-up. When brazing on cast iron prepare the surface by searing using an oxidizing flame. This will help to remove free graphite from the surface and help with bonding.

Technique: Use a neutral to 1x carburizing flame to prevent oxidation. After preheating deposit the ller metal using a continuous “dropand-melt” technique. Continue until the joint is slightly over lled.

Note: When additional fluxing is called for use EutecTor 16, and for bronzes and chromium-bearing tool steels used EutecTor 16B.

YT-304H MIG & TIG in India, YT-304H MIG & TIG Manufacturers in India, YT-304H MIG & TIG Suppliers in India, YT-304H MIG & TIG Stockists in India, YT-304H MIG & TIG Exporters in India

Post-Brazing: If necessary, parts can be cooled in water to“shock off” the flux residue.

Technical Data

Tensile Strength: 586 N/mm2 (85,000 psi)

Typical hardness:

As-Deposited : 130 HB

Work Hardened : 200 HB

Brazing Temp. Range: 1680 - 1720°F (915 - 940°C)

Heating Methods: Oxy-fuel, induction, air furnace

Supplemental Flux: EutecTor® 16 or 16B* (when brazing bronzes the perferred flux is EutecTor 16B)

DIAMETER
2.5mm
3.15mm

Alutin 51L

Low Temperature, Self-Fluxing, Tin-Silver Soldering Paste

DESCRIPTION

AluTin 51 is supplied as a viscous gel flux. It is designed for the soldering of aluminium and the joining of aluminium with copper, brass or copper-aluminium.

Application : This flux is basically used with the following alloys:

CASTOLIN 1827 and Alutin 51

Aluminium joining: (Si + Mg < up to 2%), or for the dissimilar joining of copper/aluminium

PROCEDURE FOR USE

Preparation :

If necessary, clean the joint surfaces and round off any sharp edges.

- Degrease the parts with an appropriate solvent.
- Coat all the joint parts with AluTin 51 flux.
- Place the parts in their de nitive position.
- Adjust the welding torch to obtain a gentle, slightly carburising flame.
- Indirectly and uniformly heat the parts to be joined, up to the bonding temperature.
- Do not overheat the flux, in order to prevent deterioration and do not apply the flame directly onto the flux.
- Apply the end of the ller alloy rod to the joint. The alloy ller metal spreads to the hottest areas of the surfaces to be joined.
- Melt the ller metal until the joint has been completely lled.

Cobalt Base Alloys ECOCR-B Welding Electrodes, Cobalt Base Alloys ECOCR-B Welding Electrodes Manufacturers, Cobalt Base Alloys ECOCR-B Welding Electrodes Suppliers, Cobalt Base Alloys ECOCR-B Welding Electrodes Stockists, Cobalt Base Alloys ECOCR-B Welding Electrodes Exporters

Instructions for Use:

The AluTin 51 Flux residues are water soluble. They are generally removed by washing in hot water.

***NOTE: AluTin 51 is available in Rod form**

TECHNICAL DATA:

Tensile Strength: 105 N/mm2 (15,000 psi)

Shear Strength: 68 N/mm2 (10,000 psi)

Electrical Conductivity - IACS: 16.5%

Thermal Expansion Coef.: 12 x 10-6 in / F

(20 - 212°F)

Solidus Temperature1: 430°F (220°C)

Liquidus Temperature2: 430°F (220°C)

Maximum Brazing Temp.: 450°F (230°C)

DIAMETER
2.5mm
3.15mm

ERNiFe-CI MIG & TIG Welding Wire, ERNiFe CI MIG & TIG Welding Wire Manufacturers, ERNiFe-CI MIG & TIG Welding Wire Suppliers, ERNiFe-CI MIG & TIG Welding Wire Stockists, ERNiFe-CI MIG & TIG Welding Wire Exporters

StainTin 157 PA

Low Temperature, Self-Fluxing, Tin-Silver Soldering Paste

DESCRIPTION

Eutectic StainTin 157PA is a paste soldering alloy particularly suited to stainless steels, thoroughly compatible with most copper, aluminum and carbon steel alloys. The corrosion resistance of deposits in service ensure they remain bright and tarnish-free for a reliable, clean joint.

- Free-flowing eutectic alloy with good capillary action
- Controlled Viscosity for easy, precise application
- Excellent choice for automated brazing and soldering
- Ideal for 300 Stainless steels in Food, medical and delicate applications

APPLICATIONS

For soldering dairy utensils, food-handling equipment, plumbing xtures, potable water containers and piping. Also useful for joining electrical connects.

PROCEDURE FOR USE

Preparation: Clean joint area with RotoClean® OS or use a proprietary VOC free solvent. Thoroughly mix the 157PA so that the flux and metal particles are well amalgamated and show a smooth consistency. Use a ne brush or spatula to apply the paste.

Note: It is important not to allow any movement while the solder alloy cools and solidifes.

Note: For the best results maintain joint clearances between 0.001" and 0.005".

TECHNIQUE: Heat insert parts slowly and indirectly to reduce thermal shock so as to promote uniform flow.

Note: During the melting phase it is important that the parts being soldered do not move. Observe ffow indications so that all contact surfaces are fully soldered.

POST WELDING: Allow parts to cool naturally. Parts can be quenched to help with flux residue removal.

TECHNICAL DATA:

Tensile Strength: 105 N/mm2 (15,000 psi)

Shear Strength: 68 N/mm2 (10,000 psi)

Electrical Conductivity - IACS: 16.5%

Thermal Expansion Coef.: 12 x 10-6 in / F (20 - 212°F)

Solidus Temperature1: 430°F (220°C)

Liquidus Temperature2: 430°F (220°C)

Maximum Brazing Temp.: 450°F (230°C)

Cobalt Base Alloys ECOCR-C Welding Electrodes, Cobalt Base Alloys ECOCR-C Welding Electrodes Manufacturers, Cobalt Base Alloys ECOCR-C Welding Electrodes Suppliers, Cobalt Base Alloys ECOCR-C Welding Electrodes Stockists, Cobalt Base Alloys ECOCR-C Welding Electrodes Exporters

TeroCote 7888 C

Terocote® 7888 C Has An Excellent Abrasion And Corrosion Resistance

DESCRIPTION

7888 C is a high-performance anti-wear product in the form of a flexible cord, comprising a nickel core wire, covered with an elastic binder containing a mixture of carbides and nickel alloy powder. The latter has a uniquely effective self-fluxing action, which gives 7888 C outstanding wetting properties. As a result, a smooth, even protective coat can be deposited quickly and easily. 7888 C deposits an extremely durable protective coating comprising a dense mass of ultrahard tungsten carbides embedded in a tough nickel-chromium alloy matrix. This structure offers extremely effective protection against erosive and abrasive attack by a wide variety of materials. The matrix composition helps to absorb moderate impact and improves resistance to corrosion, while the angular pro le of the nely crystallised carbides makes ft very difficult to dislocate them from the matrix.

TeroCote 7888 C is a new version in our TeroCote range :

New matrix formulation

Improved fusion quality

Better appearance of the deposit

Product form: dark grey flexible cord.

Deposit appearance: smooth, matt metallic-grey

APPLICATIONS

Anti-abrasion protection

Important: 7888 C is not recommended for high-manganese austenitic steels.

- Oil exploration and extraction: drill bits, stabilisers.
- Brick/cement making: mixer and scraper blades, extrusion
- press screws.
- Mineral processing: conveyor or decanter screws,
- pump rotors and sleeves.
- Iron and steel: guides and scraper blades.
- Agriculture: cutting edges on plough shares. Wear parts in cement...

PROCEDURE FOR USE

DEPOSITION BY OXY/ACETYLENE FLAME:

1. Mechanically clean the area to be coated by grinding or grit blasting.
2. Adjust torch for a neutral to slightly oxidizing flame. Apply a general preheat. 650° - 400°F (204 °-343°C), followed by a concentrated local heating of the area to be coated, 900 - 1000°F (482 - 538°C)
3. Bring the end of the coil into contact with the work piece, at an angle of 35° from the work surface, with the torch nozzle at 60 - 70° pointing in the direction of travel. As the alloy begins to melt, oscillate the torch nozzle from side to side advancing the flame along the alloy, which should be kept in contact with the work surface.Maintain a 3/16" gap between the inner flame coen and the work surface.

TECHNICAL DATA:

Macro hardness :55 HRC

Solidus Temperature1: 1080F (582 C)

Liquidus Temperature2: 1120F (604 C)

Max. Temperature Service: 1290F (700C)

DIAMETER
5.0mm
6.0mm
8.0mm

TeroCote 7888 T

Carbide-Containing Brazing Alloy In Coil Form

DESCRIPTION

TeroCote 7888T is a high performance anti-wear alloy. Produced in a single continuous coil from, 7888 T is a flexible continuous cord, comprised of a nickel core wire covered with an elastic binder which contains a high proportion of angular tungsten carbides and alloy powder. The coil is wound on a cellulosic material spool which can be mounted to facilitate use with automated wire feeder systems. 7888T deposits offer an extremely dense mass of ultrahard carbides (80% by weight) in a tough, durable coating with low sensitivity to cracking due to a nickel enhanced matrix.

The deposit structure of 7888T offers demonstrably superior anti-abrasion properties against a wide variety of mineral matter. This is due not only to the extremely high hardness of the carbides, but also to their angular pro les. Unlike spheroidal shapes, carbides with angular pro les resist being ejected from the matrix as it wears around the carbides.The fluxing properties of both the binder and the alloy powder help control oxidation during deposition.For problems of very aggressive ne particle abrasion, 7888T can be applied in conjuction with a Eutalloy® powder such as 10112.

- Heavy-duty protection against abrasion
- Utilizes angular carbides which remain captured in the matrix during service
- Excellent wetting action for smooth and even deposits

APPLICATIONS

7888T is designed expressly to provide durable protection of large industrial components extending effective service life. It can be applied to a wide variety of ferritic base metals, although not for steels containing high percentages of Manganese (ie. 12 - 14%Mn

IMPORTANT: 7888SH is not recommended for use on high manganese, authenticate steel

- Ripper Teeth= Mining & Earthmoving
- Drill Bits, Stabilizers, = Oil Exploration
- Mixer & Scraper Blades= Brick/Cement making
- Extrusion Press Screws= Mineral Processing
- Conveyor Screws= Iron & Steel
- Decanter Pump Rotors and Sleeves= Agriculture
- Cutting Edges on Plow Shares

PROCEDURE FOR USE

DEPOSITION BY OXY/ACETYLENE FLAME:

1. Mechanically clean the area to be coated by grinding or grit blasting.
2. Adjust torch for a neutral to slightly oxidizing flame. Apply a general preheat. 650 - 400°F (204 343° -C), followed by a concentrated local heating of the area to be coated, 900 - 1000°F (482 - 538°C)
3. Bring the end of the coil into contact with the work piece, at an angle of 35° from the work surface, with the torch nozzle at 60 -70° pointing in the direction of travel.
4. As the alloy begins to melt, oscillate the torch nozzle from side to side advancing the flame along the alloy, which should be kept in contact with the work surface.Maintain a 3/16" gap between the inner flame coen and the work surface.

TECHNICAL DATA:

Typical hardness

Hardness, Matrix:55 HRC

Micro-Hardness, Carbides: K2500

Max. Temperature Service: 1300°F (704°C)

DIAMETER
5.0mm
6.0mm
8.0mm

TeroCote 7888 M

Carbide Composite Coating: Erosion / Abrasion High Quality Deposit.

DESCRIPTION

TeroCote® 7888 M is a composite wire consisting in a nickel base and a flexible coating containing a mixture of tungsten carbides and a nickel-chromium alloy.

The deposit ensures a very high resistance to abrasion wear even in extreme conditions. The formula optimises the deposit appearance as well as the application of the product.

Applications

The metallographic structure of the deposit gives the coating an exceptional erosion and abrasive wear resistance. TeroCote® 7888 M is recommended for extending the service life of numerous parts, for protective maintenance in a wide range of industrial sectors

- Oil: drilling tools.
- Brick & cement manufacture.
- Mixer & scraper blades, extrusion screws.
- Mining sectors: conveyor screws, pump rotors.
- Iron and steel: guides and scraper blades.
- Agriculture: ploughshares.

PROCEDURE FOR USE

Preparation

Remove cracked or damaged material. Clean the welding areas.

Preheat the workpiece broadly or entirely to -300 °350C.

At the beginning of the coating process, locally increase the preheating temperature to -600 °700C.

During further heating to the working temperature, melt the welding consumable. To improve wetting and uniform distribution of tungsten carbides, keep the consumable in contact with the base material.

When gas welding, set a neutral to reducing flame. Allow to cool in still air.

Supercored 308L MIG & TIG in India, Supercored 308L MIG & TIG Manufacturers in India, Supercored 308L MIG & TIG Suppliers in India, Supercored 308L MIG & TIG Stockists in India, Supercored 308L MIG & TIG Exporters in India

Matrix Hardness :40HRC

Tungsten Carbide Hardness : K 2300
Max. Temperature Service: 2012F (1100°C)

DIAMETER
5.0mm
6.0mm
8.0mm

ENiCrMo-14 MIG & TIG Welding Wire, ENiCrMo-14 MIG & TIG Welding Wire Manufacturers, ENiCrMo-14 MIG & TIG Welding Wire Suppliers, ENiCrMo-14 MIG & TIG Welding Wire Stockists, ENiCrMo-14 MIG & TIG Welding Wire Exporters

TECHNICAL DATA:

HARDFACING WIRES

TeroMateC OA 4601

Self-Shielded, Continuous Electrode For Semi-Automatic And Robotic

DESCRIPTION

Special, self-shielded, flux cored alloy wire speci cally developed for outdoor maintenance and repair welding of thick, heavy components where faster weld deposition rates over traditional coated electrodes, are required. Worn or new critical parts may be cost effectively TeroCote protected either manually or fully automatically to extend their useful service life and increase productivity and pro tability. High chromium, hypereutectic cast iron alloy for wear-preventive protective coatings on low or high alloy steels and 14% manganese steels.

- Excellent resistance to grinding abrasion with compression and medium impact
- Ready formation of stress relieving cracks
- Few slag residues to clean
- Deposits are grindable and rust resistant
- Cannot be cut using oxy -fuel processes
- Ideal choice for eld work or on site applications
- No need for costly gas cylinders, regulators or flow meters
- Relatively thick, wide overlays possible in single pass
- No enforced stop -starts increase welding duty cycles
- Superior electrode efficiency due to low flux to metal ratio

APPLICATIONS

For wear preventive protection of parts in the quarry, cement, sand and gravel, dredging, foundry industries : pump impellers, dredge cutters, rolls, crusher pinions and grinders, cement conveyor screws, hydro-pulpers, bucket shovel teeth and edges, dragline parts, chutes, mixer arms, scraper blades, screws, etc.

PROCEDURE FOR USE

Preparation: Remove old welding deposits and worn metal completely with ExoTrode

Preheating

Preheating depends on the steel's Carbon Equivalent, and the workpiece size, thickness and geometry. Castolin Eutectic recommends:

CE < 0.2 : preheat not essential

CE 0.4- 0.2 : preheat 200-100.C

CE 0.8- 0.4 : preheat 350-200.C.

Note that 12-14% Mn steels should never be preheated and the workpiece temperature during welding should be kept below 250˚C.

Cooling after welding: After welding, the workpiece should be left to cool very slowly, away from draughts. It is recommended to cover the parts with vermiculite for protection.

Welding technique: After striking, maintain the wire stick-out around 40 mm with an arc length approx. 7 mm. Longer wire stick-out will further increase deposition rates. For optimum deposit quality, use drag stringer bead or moderate weaving techniques to minimise heat input & overheating risks

Machining

Weld deposits are machinable with standard cutting tools.Soluble oil lubri cation improves machining efficiency.

TECHNICAL DATA

Typical hardness: 60 HRC

Current polarity: DC (+)

Electrode(mm)	Voltage (V)	Current (A)
2.8	26-36	170-350

TeroMateC OA 4666

Self-Shielded, Continuous Electrode For Semi-Automatic And Robotic

DESCRIPTION

Special, self-shielded, flux cored alloy wire speci cally developed for outdoor maintenance and repair welding of thick, heavy components where faster weld deposition rates over traditional coated electrodes, are required. Worn or new critical parts may be cost effectively TeroCote protected either manually or fully automatically to extend their useful service life and increase productivity and pro tability. High chromium, niobium Hypereutectic cast iron alloy depositing complex carbides for wear-protective coating of carbon steels, low or high alloy steels and 14% Mn steels.

- Excellent resistance to severeabrasion erosionwith moderate impact up to 450°C
- Ready formation of stress relieving cracks
- Few slag residues to clean
- Deposits are grindable and rust resistant
- Cannot be cut using oxy -fuel processes
- Ideal choice for eld work or on site applications
- No need for costly gascylinders, regulators or flow meters
- Relatively thick, wide overlays possible in single pass
- No enforced stop -starts increase welding duty cycles
- Superior electrode efficiency due to low flux to metal ratio
- No stub end losses promotes material cost savings
- Variable electrode stick out capability improves control over heat input, dilution, deposition rate, visibility and access in tight spaces.

APPLICATIONS

For wear-preventive protective coating of a wide range of steel components subject to abrasion by mineral particles, sand, rocks, gravel etc. processed in the Quarry, Cement, Earthmoving, Dredging and Drilling industries:
crusher jaws and hammers, mixer blades, pump impellers, mould screws, wear plates, coal screens, excavator bucket teeth, conveyor chutes, sand pumps etc.

PROCEDURE FOR USE

Preparation: Remove old welding deposits and worn metal completely with Exo Trode Preheating depends on the steel's Carbon Equivalent, and the workpiece size, thickness and geometry. Castolin Eutectic recommends.
CE < 0.2 : preheat not essential
CE 0.4- 0.2 : preheat 200-100.C
CE 0.4 -0.8 : preheat 200-350.C.
Note that 12-14% Mn steels should never be preheated and the workpiece temperature during welding should be kept below 250°C.
Cooling after welding: After welding similar base metals, the workpiece should be left to cool very slowly, away from draughts. It is recommended to cover the parts with vermiculite for protection.
Intermediate layer: On 12-14% Mn steels, deposit intermediate layers with TeroMatec 3205 or with the manual electrode EutecTrode 6450. On hardenable and air-hardening steels, deposit intermediate layers with TeroMatec 3302 or XHD646.
Welding technique: After striking, maintain the wire stick-out around 40 mm with an arc length approx. 7 mm. Longer wire stick-out will further increase deposition rates. For optimum deposit quality, use drag stringer bead or moderate weaving techniques to minimise heat input & overheating risks
Machining: Weld deposits are machinable with standard cutting tools. Soluble oil lubri cation improves machining efficiency.

TECHNICAL DATA:

Typical hardness: 65 HRC
Current polarity: DC (+)

Electrode(mm)	Voltage (V)	Current (A)
2.8	26-36	200-440

TeroMateC OA 3205

Self-Shielded, Continuous Electrode For Semi-Automatic And Robotic

DESCRIPTION

Special, self-shielded, flux cored alloy wire speci cally developed for outdoor maintenance and repair welding of thick, heavy components where faster weld deposition rates over traditional coated electrodes, are required. Worn or new critical parts may be cost effectively TeroCote protected either manually or fully automatically to extend their useful service life and increase productivity and pro tability.High chromium manganese austenitic alloy for wear-preventive coating of carbon steels, low or high alloy steels and 14% manganese steels.

- Maximum resistance to heavy impact and compression High resistance to cracking and plastic deformation
- Rapid work hardening characteristics Machinable, rust free deposits.
- Easy slag removal
- Low metal / metal friction coefficient. Maximum service temperature 300°C.
- Ideal choice for eld work or on site applications No need for costly gas cylinders, regulators or flow meters
- Relatively thick, wide overlays possible in singlepass
- No enforced stop -starts increase welding duty cycles
- Superior electrode efficiency due to low flux to metal ratio
- No stub end losses promotes material cost savings
- Variable electrode stick out capability improves control over heat input, dilution, deposition rate, visibility and access in tight spaces

APPLICATIONS

For buttering layers prior to harder overlays and wear-preventive coating of crane rollers, crusher cylinders, shovel buckets, mobile crane rails, rail points, coupling of rolling mill extensions, shovel teeth, etc.

PROCEDURE FOR USE

Preparation: Remove old welding deposits and worn metal completely with ExoTrode .For thick-section butt joints or horizontal llets, use a single or double V preparation

Preheating: Preheating depends on the steel›s Carbon Equivalent, and the workpiece size, thickness and geometry. Castolin Eutectic recommends:

CE < 0.2 : preheat not essential

CE 0.4-0.2 : preheat 200-100.C

CE 0.8-0.4 : preheat 350-200.C.

Note that 12-14% Mn steels should never be preheated and theworkpiece temperature during welding should be kept below 250°C

Welding parameters : Welding current: = (+)

Welding positions :PA, PB, PCaccording to ISO 6947

Welding technique: After striking, maintain the wire stick-out around 40 mm with an arc length approx. 7 mm. Longer wire stick-out will further increase deposition rates. For optimum deposit quality, use drag stringer bead or moderate weaving techniques to minimise heat input & overheating risks

Machining: Weld deposits are machinable with standard cutting tools.

Soluble oil lubri cation improves machining efficiency.

TECHNICAL DATA

Typical hardness As welded :250 BN

After work hardening :390 HB

ElongationA5 (%): 25

Current polarity: DC (+)

Electrode(mm)	Voltage (V)	Current (A)
1.6mm	26-30	100-220
2.8mm	26-30	250-375

TeroMateC OA 3302

Self-Shielded, Continuous Electrode For Semi-Automatic And Robotic

DESCRIPTION

Special, self-shielded, flux cored alloy wire speci cally developed for outdoor maintenance and repair welding of thick, heavy components where faster weld deposition rates over traditional coated electrodes, are required. Worn or new critical parts may be cost effectively TeroCote protected either manually or fully automatically to extend their useful service life and increase productivity and pro tability. Versatile austenitic Cr Ni Mn alloy for intermediate layers and rebuilding before hard surfacing on heat treatable alloy steels and 14% manganese steel,. Also recommended for joining thick section parts in dissimilar steels.

- High resistance to impact, pressure and metal/metal friction.
- High resistance to cracking and plastic deformation.
- Rapid work hardening characteristics
- Ideal for thick, multi-pass, protective coatings
- Thermal cycling and oxidation resistant up to 600ºC
- Non-magnetic, readily machinable deposits
- Machinable, rust free deposits.
- Very good corrosion resistance
- Ideal choice for eld work or on site applications
- Easy slag removal
- No need for costly gas cylinders, regulators or flow meters
- Relatively thick, wide overlays possible in single pass
- No enforced stop -starts increase welding duty cycles
- Superior electrode efficiency due to low flux to metal ratio
- No stub end losses promotes material cost savings
- Variable electrode stick out capability improves control over heat input, dilution, deposition rate, visibility and access in tight spaces.

APPLICATIONS

For multi-pass intermediate layers, anti-wear coatings, and joining thick steel parts of dissimilar composition.

Railway points, curved tramlines, crusher bars and jaws, gyratory crusher cones, hydra-turbines, cylindrical crusher jaws, drive sprockets, rolling mill guides, etc.

PROCEDURE FOR USE

Preparation: Remove old welding deposits and worn metal completely with ExoTrode For thick-section butt joints or horizontal fillets, use a single or double V preparation.

Preheating:Preheating depends on the steel›s Carbon Equivalent, and the workpiece size thickness and geometry. Castolin Eutectic recommends:

CE < 0.2 : preheat not essential

CE 0.4-0.2 :preheat 200-100.C

CE 0.8-0.4 : preheat 350-200.C.

Note that 12-14% Mn steels should never be preheated and the workpiece temperature during welding should be kept below 250°C.

Welding positions: PA, PB according to ISO 6947

Welding technique: After striking, maintain the wire stick-out around 40 mm with an arc lengthflow meters approx. 7 mm. Longer wire stick-out will further increase deposition rates. For optimum deposit quality, use drag stringer bead or moderate weaving techniques to minimize heat input & overheating risks.

Soluble oil lubrification improves machining efficiency.

TECHNICAL DATA

Tensile strength: 600 N\mm2 (87,000 psi)

Yield strength : 400 N\mm2 (58,000 psi)

Typical hardness As welded :190 HB

After work hardening :430 BN

ElongationA5 (%): 40

Current polarity: DC (+)

Electrode(mm)	Voltage (V)	Current (A)
1.6mm	26-30	100-220
2.8mm	26-30	250-375

TeroMateC OA 3952

Self-Shielded Continuous Electrode For Semi-Automatic And Robotic Welding

DESCRIPTION

Special, self-shieldedflux cored alloy wire speci cally developed for outdoor maintenance and repair welding of thick, heavy components where faster weld deposition rates over traditional coated electrodes, are required. Worn or new critical parts may be cost effectively TeroCote protected either manually or fully automatically to extend their useful service life and increase productivity and pro tability. Complex carbidesalloy containing chromium, molybdenum and niobium giving deposits with very high concentration of ultra-hard, primary and eutectic phases to produce maximum resistance to ne, hot particle abrasion and erosion by coke, clinker, cement or sand at elevated temperatures.

- Exceptional resistance to hot abrasion up to650.C.
- Smooth deposits without machining.
- Very hard deposits with one or two layers maximum.
- Automatic formation of stress relief cracks
- Deposits can be grinded and resist rusting.
- Ideal choice for eld work or on site applications
- No need for costly gas cylinders, regulators or flow meters
- Relatively thick, wide overlays possible in single pass
- No enforced stop -starts increase welding duty cycles.
- Variable electrode stick out capability improves control over heat input, dilution, deposition rate, visibility and access in tight spaces.

APPLICATIONS

For use on steel, alloy steel and 12-14% Mn steel parts.

Clinker, sinter crushers. Cement exhaust fan blades.

Blast furnace bells and hoppers.

Hot screens, wear plates, mold extruders

Sinter crushers and fans, hot sieves, screens and bells.

PROCEDURE FOR USE

Preparation: Remove any previous weld deposits or cracked metal with ExoTrode.

Preheating: depends on the steel's Carbon Equivalent, and the workpiece size, thickness and geometry. Castolin Eutectic recommends:

CE < 0.2 : preheat not essential

CE 0.4-0.2 : preheat 200-100.C

CE 0.8-0.4 : preheat 350-200.C.

Note that 12-14% Mn steels should never be preheated and the workpiece temperature during welding should be kept below 250° C.

Intermediate layer: On 12-14% Mn steels, deposit intermediate layers with TeroMatec 3205 or with the manual electrode EutecTrode 6450.

On hardenable and air-hardening steels, deposit intermediate layers with TeroMatec 3302 or XHD646.

Welding parameters: Welding current: = (+)

TECHNICAL DATA

Typical hardness: 65 HRC

Current polarity: DC (+)

Electrode(mm)	Voltage (V)	Current (A)
1.6mm	26-33	100-240
2.8mm	26-36	250-440

TeroMateC OA 4395N

Self-Shielded, Continuous Electrode For Semi-Automatic And Robotic

DESCRIPTION

Special, self-shielded, flux cored alloy wire speci cally developed for outdoor maintenance and repair welding of thick, heavy components where faster weld deposition rates over traditional coated electrodes, are required. Worn or new critical parts may be cost effectively TeroCote protected either manually or fully automatically to extend their useful service life and increase productivity and pro tability. High chromium, hypereutectic cast iron alloy for wear-preventive protective coatings on low or high alloy steels and 14% manganese steels.

- Excellent resistance to grinding abrasion with compression and medium impact
- Ready formation of stress relieving cracks
- Few slag residues to clean
- Deposits are grindable and rust resistant
- Cannot be cut using oxy -fuel processes
- Ideal choice for eld work or on site applications
- No need for costly gas cylinders, regulators or flow meters
- Relatively thick, wide overlays possible in single pass
- No enforced stop -starts increase welding duty cycles
- Superior electrode efficiency due to low flux to metal ratio
- No stub end losses promotes material cost savings
- Variable electrode stick out capability improves control over heat input, dilution, deposition rate, visibility and access in tight spaces.
- No stub end losses promotes material cost savings
- Variable electrode stick out capability improves control over heat input, dilution, deposition rate, visibility and access in tight spaces

APPLICATIONS

For wear preventive protection of parts in the quarry, cement, sand and gravel, dredging, foundry industries : pump impellers, dredge cutters, rolls, crusher pinions and grinders, cement conveyor screws, hydro-pulpers, bucket shovel teeth and edges, dragline parts, chutes, mixer arms, scraper blades, screws, etc.

PROCEDURE FOR USE

Preparation: Remove old welding deposits and worn metal completely with ExoTrode.

Preheating : Preheatin g depends on the steel's Carbon Equivalent, and the workpiece size, thickness and geometry. Castolin Eutectic recommends:

CE < 0.2 : preheat not essential
CE 0.4- 0.2 : preheat 200-100.C
CE 0.8- 0.4 : preheat 350-200.C.

Note that 12-14% Mn steels should never be preheated and the workpiece temperature during welding should be kept below 250^{0}C.

Cooling after welding: After welding, the workpiece should be left to cool very slowly, away from draughts. It is recommended to cover the parts with vermiculite for protection.

Welding parameters Welding current: = (+)

Welding positions: PA according to ISO 6947

Welding technique: After striking, maintain the wire stick-out around 40 mm with an arc length approx. 7 mm. Longer wire stick-out will further increase deposition rates. For optimum deposit quality, use drag stringer bead or moderate weaving techniques to minimise heat input & overheating risks

Machining : Weld deposits are machinable with standard cutting tools. Soluble oil lubri cation improves machining efficiency

TECHNICAL DATA

Typical hardness:60 HRC

Current polarity: DC (+)

Electrode(mm)	Voltage (V)	Current (A)
1.6mm	26-33	120-240
2.8mm	26-36	170-350

EnDOteC. DO*351

Seamless, Gas Shielded Continuous Electrode For Semi-Automatic And Robotic Welding Applications

DESCRIPTION

Seamless, gas shielded, metal cored alloy wire, ideal for batch manufacturing or maintenance and repair applications where highest integrity welding, efficiency and productivity are re-quired.

High alloy Cr-Si-C steel for wear protective coatings. The air hardening deposit offers excellent resistance to wear caused by impact, adhesion (metal-metal friction) and abrasion. The forgeable deposit can be heat-treated or nitrided and with-stands thermal shock.

- Low heat input for low dilution.
- Maximizedweld metal recovery.
- Exceptional positional weldability.
- Regular bead pro le, virtually spatter free.
- Versatile usage over wide parameter range.
- Faster deposition rate for reduced labour costs

APPLICATIONS

Designed speci cally to provide protective coating against wear caused by impact, adhesion (metal-metal friction) and abrasion in industries such as:

Mines and quarries Drill heads, breaker plates, crusher drums, conveyor and drag-line buckets.

Civil engineering Gravel pumps, rails, crusher hammers, bucket ripper teeth, vehicle tracks, soil compactors.

]Urban and industrial waste disposal Grilles and frames of rotary sleeves, crushers, hydraulic compactors.

PROCEDURE FOR USE

Welding Equipment: EnDOtec c o n t i n u o u s conventional, constant voltage power sources. Models with programmable, pulsed arc, metal transfer modes offer optimal performance. Castolin Eutectic recommends using wire drive systems tted with 4 knurled feed-rollers as well as polyamide liners.

Preparation: Remove old welding deposits and worn metal completely with ExoTrode Preheating: Preheating depends on the steel's Carbon Equivalent, and the workpiece size, thickness and geometry. Castolin Eutectic recommends:

CE < 0.2 : preheat not essential

CE 0.2 -0.4 : preheat 100-200.C

CE 0.4 -0.8 : preheat 200-350.C

Note that 12-14% Mn steels should never be preheated and the workpiece temperature during welding should be kept below250.C. Intermediate layer .Deposit a buttering layer of EnDOtec DO*02 on austenitic manganese steels and EnDOtec DO*310 or DO*257 on mild and high strengthsteels.

Welding technique

For single or multipass, downhand coating applications. Push the electrode at an angle of 70-80.to ensure optimal fusion. When required, additional passes should only be executed while the weld is still hot.

Machining The deposit is machinable by grinding. Arc or plasma cutting equipment may also be used.

TECHNICALDATA

Typical hardness : 58 HRC

Current polarity: DC (+)

Shielding gases

Recommended gas:82% Ar-18% CO2 [EN ISO 14175M21]

Alternative gases:97,5% Ar, 2,5%CO2 [EN ISO 14175M12]

Flow rate(l/min):14-18

Electrode(mm)	Voltage (V)	Current (A)
1.2mm	12-36	50-320
1.6mm	16-38	60-420

EnDOteC. DO 4[8]

Gas Shielded Continuous Electrode For Anti-Wear Coatings

DESCRIPTION

Exclusive, Chrome & Nickel free gas shielded, metal cored alloy wire, ideal for maintenance and repair applications or batch manufacturing where highest integrity welding, efficiency and productivity are required.

The slag-free deposit features a high density of hard, cast tungsten carbide particles evenly distributed in a ferrous alloy matrix which is further reinforced with very ne precipitates formed by recrystallisation. This gives exceptional resistance to abrasive-erosive particles combined with moderate impact at ambient temperatures. Deposits may exhibit some stress relief cracks.

- Low heat input for low dilution.
- Maximised weld metal recovery.
- Exceptional positional weldability.
- Regular bead pro le, virtually spatter free.
- Versatile usage over wide parameter range.
- Faster deposition rate for reduced labour costs

APPLICATIONS

Designed speci cally for antiwear protective coatings on carbon steelsandalloy steels. Typical industries include mining, quarries, drilling, tunneling, public works.Extrusion press parts, transport screws, mixer blades, paddles, conveyors, scraper blades, cylinder crushers, pump rotors and bodies, etc.

PROCEDURE FOR USE

Welding Equipment: En DOtec continuous electrodes are compatible with most conventional, constant voltage power sources. Models with programmable, pulsed arc, metal transfer modes offer optimal performance. Castolin Eutectic recommends using wire drive systems tted with 4 knurled feed-rollers as well as polyamide liners.

Preparation: Remove old welding deposits and worn metal completely with ExoTrode

Preheating: Preheating depends on the steel's Carbon Equivalent, and the workpiece size, thickness and geometry. Castolin Eutectic recommends:

CE < 0.2 : preheat not essential

CE 0.2 -0.4 : preheat 100-200.C

CE 0.4 -0.8 : preheat 200-350.C.

Note that 12-14% Mn steels should never be preheated and the workpiece temperature during welding should be kept below 250°C.

Buttering layer

Deposit a buttering layer of EnDOtec DO*02 on austenitic manganese steels, and EnDOtec DO*28S on hardening steels.

Welding technique

For single pass, downhand coating applications, pull the torchat an angle of 70-80.to ensure optimal fusion. If required, a maximum second pass should only be executed while the weld is still hot.

Machining

The deposit is machinable by grinding. Arc or plasma cutting equipment may also be used.

TECHNICAL DATA

Typical hardness: 57 -60 HRC

Micro hardness of carbides(HV): 2300

Current polarity: DC (+)

Shielding gases

Electrode(mm)	Voltage (V)	Current (A)
1.6mm	17-22	70-180

EnDOteC. DO*11

Gas Shielded Continuous Electrode For Semi -Automatic And Robotic Welding

DESCRIPTION

Exclusive,Chrome-freegas shielded, metal cored alloy wire, ideal for maintenance and repair applications or batch manufacturing where highest integrity welding, efficiency and productivity are required.

The slag-free deposit features a high density of hard, “as cast”Tungsten Carbide particles evenly distributed in a nickel alloy matrix which is further reinforced with very ne precipitates formed byrecrystallisation. This gives exceptional resistance to abrasive-erosive particles with moderate impact and is speci cally for service in hot or corrosive environments.

Deposits are crack resistant which prevents ingress and contamination by organic matter or bacterial growth.

- Low heat input for low dilution
- Exceptional positional weldability
- Versatile usage over wide parameter range
- Maximizedweld metal recovery
- Regular bead pro le, virtually spatter free
- Faster deposition rate for reduced labour costs

APPLICATIONS

Designed for antiwear protective coatings on carbon steels, alloy steels, stainless steels and nickel alloys. Typical industries include agricultural, food, beverage, organic oils, pulp and paper, chemical processing. Oil pressing parts, transport screws, cellulose mixing blade spaddles, conveyors, bone mill hammers etc.

PROCEDURE FOR USE

Welding Equipment: EnDOtec continuous electrodes are compatible with most conventional, constant voltage power sources. Models with programmable, pulsed arc, metal transfer modes offer optimal performance. Castolin Eutectic recommends using wire drive systems tted with 4 knurled feed-rollers as well as polyamide liners.

Preparation

Remove old welding deposits and worn metal completely with ExoTrode

Preheating: Preheating depends on the steel's Carbon Equivalent, and the workpiece size, thickness and geometry. Castolin Eutectic recommends:

CE < 0.2 : preheat not essential

CE 0.2 -0.4 : preheat 100-200.C

CE 0.4 -0.8 : preheat 200-350.C.

Note that 12-14% Mn steels should never be preheated and the workpiece temperature during welding should be kept below 250°C.

Buttering layer

Deposit a buttering layer of EnDOtec DO*02 on austenitic manganese steels, and EnDOtec DO*500S on hardening steels.

Welding technique

For single pass, downhand coating applications. Push or pull the electrode at an angle of 70-80.to ensure optimal fusion. If required, a second pass should only be executed while the weld is still hot.

Machining

The deposit is machinable by grinding. Arc or plasma cutting equipment may also be used.

TECHNICAL DATA

Typical hardness: 55 HRC

Micro hardness of carbides (HV) :2400

Current polarity: DC (+)

Shielding gases

Recommended gas:97,5% Ar, 2,5% CO2 [ISO 14175 - M12]

Flow rate (l/min):16

Electrode(mm)	Voltage (V)	Current (A)
1.6mm	18-22	120-140

EnDOteC. DO*390N

Gas Shielded Continuous Electrode For Semi-Automatic And Robotic Welding Applications

DESCRIPTION

Nanoalloy proprietary gas-shielded metal cored wire. It is ideal for both maintenance and repair and production applications where welds of utmost reliability, performance and productivity are required.The slag free deposit has a high concentration of complex borocarbides nely distributed in an iron alloy matrix. The exclusive nanoscale microstructure of this electrode guarantees exceptional performance against wear from severe abrasion and erosion. Bulk hardness properties are retained up to 750ºC.The slightly magnetic and machinable weld deposits exhibit stress relieving micro ssures and smooth surface contours free from ripples.

- Low friction coefficient without lubrication
- Low heat input for minimum dilution, which guarantees best properties of weld layers
- Maximum weld metal recovery coefficient
- Exceptional positional weldability
- Virtually spatter free, regular bead pro les
- Versatile applications over a wide parameter range
- Faster deposition rate for reduced labour costs
- Versatile applications over a wide parameter range
- Faster deposition rate for reduced labour costs

APPLICATIONS

Designed for extremely abrasion and erosion resistant protective coatings of carbon steel, alloy steels and stainless steels.

Typical application industries include: steelworks, cement plants, waste management plants, power plants, foundries, chemical processing plants, mining, petrochemical plants, etc.

Speci c parts: Screw conveyors, furnace chutes, extractor fans, cyclones, conveyors, mixing blades, vanes, scrapers, press screws, sieves, etc.

PROCEDURE FORUSE

Welding Equipment: EnDOtec continuous electrodes are compatible with most conventional constant voltage power sources. Models with programmable pulsed arc metal transfer functions offer optimum performance. E+C recommends the use of wire drive systems tted with 4 knurled rollersas well as polyamide liners.

Preparation: Completely remove all previous weld deposits and worn metal with ExoTrode

Preheating: Preheating depends on the steel's Carbon Equivalent (CE), workpiece size, thickness and geometry. Castolin Eutectic recommends:

CE < 0.2: no preheating required

CE 0.2 -0.4 : preheating between 100-200°C

CE: 0.4 -0.8 : preheating between 200-350ºC

300ºC preheat promotes relatively crack-free welds.

Intermediate coat: Micro ssures are minimized by depositing a base layer of EnDOtec DO*02 for manganese austenitic steels and work hardening steels.

Welding technique : For single or multipass, down hand coating applications. Push the electrode at an angle of 70-80.to ensure optimal fusion. When required, additional passes should only be executed while the weld is still hot.

Machining

The deposit is machinable by grinding. Arc or plasma cutting equipment may also be used.

TECHNICAL DATA

Typical hardness

Hardness (1 layer): ...66-68 HRC

Hardness (2 layers)..67-71 HRC

Current polarity: DC (+)

Shielding gases

Recommended gas: 97.5% Ar, 2.5% CO2 [ISO 14175 M12]

Alternative gases:82% Ar, 18% CO2 [ISO 14175 M21]

Flow (l/min): 18

Electrode(mm)	Voltage (V)	Current (A)
1.6mm	20-34	150-350

EnDOteC. DO 33*

Gas Shielded Continuous Electrode For Semi-Automatic And Robotic Welding Applications

DESCRIPTION

Exclusive, gas shielded, metal cored alloy wire, ideal for maintenance and repair appli- cations or batch manufacturing where highest integrity welding,efficiency and productivity are re- quired.The slag-free deposit features a high density of very hard, complex particles, in a matrix which is reinforced with very ne precipitates formed from additional elements. This gives exceptional resis- tance to ne-particle abrasion and moderate-impact erosion at operating temperatures up to 650.C. Hardness and full quality of deposit obtained with one pass.

A high-performance antidote to abrasion problems which will signi cantly reduce maintenance costs and extendthe life of worn parts. 70% saving in welding time and in ller metal used because 68 HRC hardness is obtained with one pass. Against severe abrasion, EnDOtec DO*33 has a better cost/ wear resistance ratio than conventional chromium castings. Good resistance to severe abrasion at high temperatures, as well as erosion in a gaseous environment.

- Smooth bead improves resistance to erosion.
- Low heat input for low dilution.
- Maximizedweld metal recovery.
- Exceptional positional weldability.
- Regular bead pro le, virtually spatter free.
- Versatile usage over wide parameter range.
- Faster deposition rate for reduced labour costs.

APPLICATIONS

Designed speci cally for antiwear protective coatings in: Public works. Iron and steel mills. Brickworks. Quarries. Ceramics works. Dredgers. Mines and cement works: Extruder/press screw segments and pug mill augers Dust extractors -Hot screens and furnace retorts -Clod crusher hammers -Pump frames -Conveyor chains.

ROCEDURE FOR USE

Welding Equipment: EnDOtec continuous electrodes are compatible with most conventional, constant voltage power sources. Models with programmable, pulsed arc, metal transfer modes offer optimal performance. Castolin Eutectic recommends using wire drive systems tted with 4 knurled feed-rollers as well as polyamide liners.

Preparation: Remove old welding deposits and worn metal completely with ExoTrode.

Preheating : Preheating depends on the steel's Carbon Equivalent, and the workpiece size, thickness and geometry. Castolin Eutectic recommends:

CE < 0.2 : preheat not essential
CE 0.2 -0.4 : preheat 100-200.C
CE 0.4 -0.8 : preheat 200-350.C.

Note that 12-14% Mn steels should never be preheated and the workpiece temperature, during welding should be kept below 250°C. Buttering layer Deposit a buttering layer of EnDOtec DO*02 on austenitic manganese steels, and EnDOtec DO*28S on hardening steels. The use of pulsed arc technology signi cantly improves semi-automatic welding productivity. A synergic program with continuously variable parameters is incorporated in certain Castolin Eutectic equipments which optimizes welding performance over a wide range of deposition rates with minimum heat input and also facilitates positional work. To obtain additional information, contact your Castolin Eutectic application specialist.

Welding technique : For single pass, downhand coating applications, pull the torchan angle of 70-80.to ensure optimal fusion. If required, a maximum second pass should only be executed while the weld is still hot.

Machining: he deposit is machinable by grinding. Arc or plasma cutting equipment may also be used.

TECHNICAL DATA

Typical hardness after welding: 68 HRC
Current polarity: DC (+)
Shielding gases :
Recommended gases:82% Ar, 18% CO2
[EN ISO 14175-M21]
Alternative gases: 97,5% Ar, 2,5% CO2
[EN ISO 14175-M12]
Flow rate (l/min):14-18

Electrode(mm)	Voltage (V)	Current (A)
2.0mm	17-30	70-300
1.6mm	18-40	80-400

EnDOteC DO*04

Gas Shielded, Peripheric Continuous Electrode For Semi-Automatic

DESCRIPTION

Exclusive, gas shielded, metal cored alloy wire ideal for maintenance and repair applications or batch manufacturing where the highest integrity welding, effi ciency and productivity are required. The slag-free deposit is of the martenistic stainless steel type with hardness increased through precipitation (structural hardening). On stainless steels and alloys with high nickel content, structure and hardness depend on dilution. Highly alloyed with controlled additive amounts, this alloy composition offers the following advantages...

- Hardness obtained with rst pass maintained to max working temperature 1020°F (550°C)
- Excellent corrosion and oxidization resistance at temperatures up to 1200°F (650°C)
- Excellent metal-to-metal friction resistance
- Ideal for u se as cladding with no risk of cracking
- Exceptional positional weldabilty
- Good corrosion resistance in high temperature gaseous media: Combustion chambers, diesel engines, valves.
- Low heat input for low dilution
- Good corrosion resistance in saline environment, with cavitation resistance
- No buttering layer necessary when coating heat-resistant steels of CrMo/CrMoV type
- Unique peripheral arc characteristics
- Maximized weld metal recovery
- Regular bead pro le, virtually spatter free
- Wide parameter range Faster deposition rates for reduced labor costs

APPLICATIONS

- Rods for hot extrusion pro les
- Feed rolls
- Sizing mandrels
- Hot working dies
- Clipping beds
- Furnace components
- Valve seats and heads
- Curving tram lines
- Blow out preventers (BOP)

PROCEDURE FOR USE:

Equipment EnDOtec continuous electrodes are compatible with most conventional, constant voltagepowersources. Models with programmable, pulsed arc, metal transfer modes offer optimal performance. Eutectic Corporation recommends using wire drive systems using 4 feed rollers - smooth rollers for 0.045" (1.2mm) diameter and knurled rollers for 1/16" (1.6mm) diameter - as well as polyamide liners.

Preparation: Remove old welding deposits and worn metal completely with ExoTrode.

Preheating: depends on the steel's carbon equivalent and the workpiece size, thickness and geometry. Eutectic recommends...

CE<0.2: Preheat not necessary

CE 0.2-0.4: Preheat 210° - 390°F (100-200°C)

CE 0.4-0.8: Preheat 390° - 660°F (200-350°C)

NOTE that 12-14% Mn steels should never be preheated and the workpiece temperature during welding should be kept below 480°F (250°C).

WELDING TECHNIQUE : For multi-pass, downhand coating push the electrode down the workpiece at an angle of 70/80° to ensure optimum fusion.

TECHNICAL DATA: Typical hardness: 48 HRC

Heat Treatment

Quenching temperature: 1900°F (1040°C)

Stress relief annealing 2x2 hours at 1380°F (750°C)

Current polarity: DC(+) Recommended: 100% Argon

Shielding Gas Alternative: 95% Ar + 5% CO2

Flow (l/min): 16

	Diameter	Voltage	Amperage
Short Arc	1.2mm	15-20	80-200
Transfer Mode	1.6mm	19-27	150-300
Spray Arc	1.2mm	26-28	230-300
Transfer Mode	1.6mm	27.5-33	250-400

EnDOteC. DO*23

Gas Shielded Continuous Electrode For Semi-Automatic And Robotic Welding Applications

DESCRIPTION

Exclusive, gas shielded, metal cored alloy wire, ideal for maintenance and repair applications or batch manufacturing where highest integrity welding,efficiency and productivity are required. Speci cally developed for low heat input semi-automatic joining, rebuilding and anti-wear protective coating of cast iron. It can also be used to join cast iron to steels. The innovative composition, with carbon and manganese added to a ferronickel base, gives a slag-free deposit with exceptionally good mechanical properties. Its nickel-rich matrix, with spheroidal graphite precipitates, offers exceptional crack resistance under high restraint. Thanks to its combination of strength and good elongation properties, cast iron can be joined without use of xtures, rebuilt or coated.Low heat input for low dilution

- Maximized weld metal recovery
- Regular bead pro le virtually spatter free
- Faster deposition rate for reduced labor cost s
- Exceptional positional weldability
- Versatile usage over wide parameter range

APPLICATIONS

For joining and coating highly restrained spheroidal graphite cast iron, grey cast iron and malleable cast iron workpieces, as well as for joining cast iron to steels.

- Frames
- Casings for pumps and valves
- Crushers
- Machine tool beds
- Turbine scaling rings
- Textile industry machines
- Machining errors on castings

Complementary products: XHD 2230: manual electrode

PROCEDURE FOR USE

Welding Equipment: En DOtec continuous electrodes are compatible with most conventional, constant voltage power sources. Models with programmable, pulsed arc, metal transfer modes offer optimal performance.

Castolin Eutectic recommends using wire drive systems tted with 4 knurled feed-rollers as well as polyamide liners.

Preparation: Remove old welding deposits and fatigued metal with ExoTrode. For joining and assembly, bevel edges to a V (45.) or X, especially for parts with a large cross- section. Areas to be coated and the groove faces of joints should be cleaned or ground to remove any contamination or oxidation (scale).

Preheating: This is not usually necessary. With difficult-to-weld base metals and with complex - shaped workpieces, slight preheating to about 200.C will minimize any risk of cracking in the transition zone. The use of pulsed arc technology signi cantly improves semi-automatic welding productivity. A synergic program with continuously variable parameters is incorporated in certain Castolin Eutectic equipments which optimises welding performance over a wide range of deposition rates with minimum heat input and also facilitates positional work. To obtain additional information, contact your Castolin Eutectic application specialist.

Welding technique: For multipass flat/down hand joining, best penetration is obtained by pulling the torch at an angle of 80-70.to the axis of the joint. For llet and or corner welding, the best bead pattern is obtained by pushing the torch at an angle of 70-60.to the axis of the joint.

Machining: Machine using normal cutting tools. Arc or plasma cutting equipment may also be used.

TECHNICAL DATA

Tensile strength: 475 N\ mm2 (68,000 psi
Yield strength : 375 N\ mm2 (54,000 psi)
Typical hardness: 190 BN
Current polarity: DC (+)
Shielding gases : Recommended gas: 82% Ar, 18% CO2 [ISO 14175-M21] Flow rate (l/min): 16

Electrode(mm)	Voltage (V)	Current (A)
1.2mm	19-24	110-280

EnDOteC DO*622 S

Gas Shielded Continuous Electrode For Semi -Automatic And Robotic Welding

DESCRIPTION

Exclusive, gas shielded flux cored nickel base wire, ideal for maintenance and repair applications or batch manufacturing where highest integrity welding, efficiency and productivity are required. Speci cally developed for joining large pieces, subjected to high stresses and made of low alloy steels, high alloy steels, dissimilar steels, non-identi ed steels and nickel alloys.

Also suitable for protective coatings, offering excellent resistance to attack by most kinds of acids and alkalis, even in strong concentrations. Conceived to avoid brittle phases in the dilution zone, even when the base metal is an alloy steel, stainless steel, nickel or copper-based alloy.

- Exceptional resistance to cracking because deposit has a coefficient of thermal expansion very similar to steel.
- No risk of sigma phase formation or embrittlement .
- Deposit is unaffected by heat thermal cycles and stresses induced by high temperatures over long periods of time.
- Basic slag deposit, very easy removal.
- Good resistance to corrosion, oxidation.
- Excellent resistance to thermal shocks.
- Very high impact strength.
- Low heat input for low dilution.
- Maximized weld metal recovery
- Regular bead pro le, virtually spatter free.
- Faster deposition rate for reduced labour costs.

APPLICATIONS

Cement: Kiln bearing rings. Ball mill couplings and clips. Railways: Rail brakes. Civil engineering: Mechanical arms -Chassis -Ripper teeth -Bucket arms

PROCEDURE FORUS

Welding Equipment

EnDOtec continuous electrodes are compatible with most conventional, constant voltage power sources. Models with programmable, pulsed arc, metal transfer modes offer optimal performance. Castolin Eutectic recommends using wire drive systems tted with 4 knurled feed-rollers as well as polyamide liners.

Preparation Remove old welding depositsand worn metal with ExoTrode.

For joining and assembly, bevel edges to a V (45.) or X, especially for parts with a large cross-section.

Preheating This is not usually necessary. For high tensile carbon steels preheating to 200-100.C can be employed.

Welding parameters Welding current: = (+)

The use of pulsed arc technology signi cantly. improves semi-automatic welding productivity. A synergic program with continuously variable parameters is incorporated in certain Castolin Eutectic equipments which optimises welding performance over a wide range of deposition rates with minimum heat input and also facilitates positional work. To obtain additional information, contact your Castolin Eutectic application specialist.

Welding technique

Once the workpieces are securely clamped, apply a buttering layer on the two groove faces to limit dilution with the base metal.Where there is a severe risk of hardening the base metal, make the rst pass at a low amperage, pushing the torch without weaving.Ensure that there are no cracks by carrying out a dye-penetrant test.Finish lling the groove.

Machining

Machine using normal cutting tools. Arc or plasma cutting equipment may also be used.

TECHNICAL DATA

Tensile strength: 610 N\ mm2 (88,000 psi)

Yield strength : 380 N\ mm2 (55,000 psi)

Elongation : 40%

Impact strength AV(J/-196°C): 90

Current polarity: DC (+)

Shielding gases

Recommended gas :Ar%15-25%CO2 [ISO 14175 - M21] Flow rate (l/min):14-18

Electrode(mm)	Voltage (V)	Current (A)
1.2mm	21-31	130-250
1.6mm	22-32	150-300

NanoAlloy 395N

Nanoalloy Flux-Cored Wire For Hardfacing Applications

DESCRIPTION

NanoAlloy 395N leads the newest generation of hardfacing products based on the science and engineering of ultra- ne, submicron grain structures. Weld deposits have a high volume fraction of ultra-hard, complex borocarbides distributed in a matrix uniquely balanced between

liquid and crystalline phases Finely dispersed Nano-particles minimize wear of the underlying matrix by maximizing the complex borocarbides exposed at the wearing surface. 395N outperforms chromium and complex carbides by up to 40%! 395N's wear resistance is equal to that of a 35% tungsten carbide alloy at a lower cost.

- Unique NanoAlloy structure for unmatched abrasion and erosion resistance
- Produces tough uniform 68 HRC weld deposits
- Wears like tungsten carbide at a fraction of the cost
- Outlasts chrome carbide and complex carbide alloys
- Ensures enhanced productivity and cost savings

APPLICATIONS

Designed for extremely abrasion and erosion resistant protective coatings of carbon steel, alloy steels and stainless steels.

Typical application industries include: steelworks, cement plants, waste management plants, power plants, foundries, chemical processing plants, mining, petrochemical plants, etc.

Speci c parts: Screw conveyors, furnace chutes, ex-tractor fans, cyclones, conveyors, mixing blades, vanes, scrapers, press screws, sieves, etc.

PROCEDURE FOR USE:

PREPARATION: Remove all “old” cracked or spalled material down to a sound base. Clean any residual oxides, coatings, spatter or residue. NanoAlloy 395N may be applied up to ½” thick, at least four passes. N a no alloy 3 9 5 n S ho uld N o t Be U s e d O n Manganese/ Had eld Steels As It Will Not Bond!

Welding Technique: After checking that the welding conditions are optimal by testing on scrap metal, position the gun head at a 70-80° angle from the workpeice and use a “pull” technique. For fully automated welding such as hardfacing cylindrical parts, the wire should exit at about a 10° leading angle from top dead center.

Using this technique will assure a smooth and regular weld deposit pro le with the optimum level of fusion. 395N can be used with or without shielding gas protection.

Note: For best results apply NanoAlloy 395N with as little heat as possible, allowing parts to cool between layers.

Finishing: For most applications, other than a super cial grind, nishing is not required. If some leve l of pro ling is ne e d e d , g rind ing is recommended

TECHNICAL DATA

Typical hardness:

Hardness (1 layer): ...66-68 HRC

Hardness (2 layers)..67-71 HRC

Current polarity: DC (+)

Shielding Gases :

Recommended gas: 97.5% Ar, 2.5% CO2

[ISO 14175 M12]

Alternative gases:82% Ar, 18% CO2

[ISO 14175 M21] Flow (l/min): 18

Diameter	Volts	Amps
1.2mm	24	135
1.6mm	24	220

Safe Hard 600

Seamless Gas Shielded, Continuous Electrode For Semi-Automatic And Robotic Welding

DESCRIPTION

Seamless, gas shielded, metal cored alloy wire, ideal for batch manufacturing or maintenance and repair applications where highest integrity welding, efficiency and productivity are re-quired.

Medium alloy steel with high C content, chrome and nickel free, with very ne carbides in small grain size matrix for wear protective coatings. The deposit offers excellent resistance to wear caused by a right balance of impact and abrasion. It keeps the mechanical properties up to 600ºC.

Product Details

- Martensitic-austenitic micro structure
- Low heat input for low dilution.
- Maximized weld metal recovery.
- Exceptional weldability.
- Regular bead pro le.
- Versatile usage over wide parameter range.
- Faster deposition rate for reduced labour costs.
- Weldability in all positions

APPLICATIONS

Designed speci cally to provide protective coating against wear caused by impact, adhesion (metal-metal friction) and abrasion in industries such as:

Mines and quarries

Drill heads, breaker plates, crusher drums, conveyor and drag-line buckets.Civil engineering

Gravel pumps, rails, crusher hammers, bucket ripper teeth, vehicle tracks, soil compactors. Urban and industrial waste disposal

Grilles and frames of rotary sleeves, crushers, hydraulic compactors.

PROCEDURE FOR USE

Welding Equipment : EnDOtec continuous electrodes are compatible with most conventional, constant voltage power sources. Models with programmable, pulsed arc, worn metal completely with ExoTrode Preheating depends on the steel›s Carbon Equivalent, and the workpiece size, thickness and geometry. Castolin Eutectic recommends:

CE < 0.2 : preheat not essential

CE 0.4- 0.2 : preheat 200-100.C

CE 0.8- 0.4 : preheat 350-200.C.

Note that 12-14% Mn steels should never be Intermediate layer preheated and the workpiece temperature during welding should be kept below 2500C.

On12-14% Mn steels, deposit an intermediate layer with EnDOtec DO*02 or with the manual electrode EutecTrode 646XHD.

Welding parameters: Welding current: = (+)

Welding technique: For single or multipass downhand coating applications. Push the electrode at an angle of 80-70.to ensure optimal fusion. When required, additional passes should only be executed while the weld is still hot.

Machining

The deposit is machinable by grinding. Arc or plasma cutting equipment may also be used.

TECHNICAL

Typical hardness: 600HB

Shielding gases

General recommended: 82% Ar, 15-25% CO2

[EN ISO 14175 -M21]

Flow rate L/min: 14-18 CrVIcontent : 0 mg/m3

Current polarity: /DC (+)

Electrode(mm)	Voltage (V)	Current (A)
1.2mm	11-34	40-300
1.6mm	15-38	60-420

Note: For optimum result use the lowest amperage practical

SafeHard 700

Gas Shielded Continuous Electrode For Semi-Automatic And Robotic Welding

DESCRIPTION

Gas shielded, metal cored alloy wire, ideal for batch manufacturing or maintenance and repair applications where highest integrity welding, efficiency and productivity are required.

This exclusive alloy is chrome and nickel free and contains complex carbides of tungsten, molybdenum, vanadium and niobium evenly distributed in a boron hardened matrix. This alloy has exceptional resistance to impact and abrasion and it keeps its mechanical properties until high temperature (57 HRC at 600ºC; 41 HRC at 700ºC).

Product Details

- Martensitic-austenitic micro structure
- Low heat input for low dilution.
- Maximized weld metal recovery.
- Exceptional weldability.
- Regular bead pro le.
- Versatile usage over wide parameter range.
- Faster deposition rate for reduced labour costs.
- Weldability in all positions

APPLICATIONS

Designed speci cally to provide protective coating against wear caused by impact, adhesion (metal-metal friction) and abrasion in industries such as:

Mines and quarries : Drill heads, breaker plates, crusher drums, conveyor and drag-line buckets.

Civil engineering : Gravel pumps, rails, crusher hammers, bucket ripper teeth, vehicle tracks, soil compactors.

Urban and industrial waste disposal : Grilles and frames of rotary sleeves, crushers, hydraulic compactors.

PROCEDURE FOR USE

Welding Equipment : EnDOtec continuous electrodes are compatible with most conventional, constant voltage power sources. Models with programmable, pulsed arc, metal transfer modes offer optimal performance.

Castolin Eutectic recommends using wire drive systems tted with 4 knurled feed-rollers as well as polyamide liners.

Preparation: Remove old welding deposits and worn metal completely with ExoTrode Remove old welding deposits and worn metal completely with ExoTrode

Preheating: depends on the steel›s Carbon Equivalent, and the workpiece size, thickness and geometry. Castolin Eutectic recommends:

CE < 0.2 : preheat not essential

CE 0.4- 0.2 : preheat 200-100.C

CE 0.8- 0.4 : preheat 350-200.C.

Note that 12-14% Mn steels should never be preheated and the workpiece temperature during welding should be kept below 250°C. Intermediate layer On 12-14% Mn steels, deposit an intermediate layer with EnDOtec DO*02 or with the manual electrode EutecTrode 646XHD.

Welding parameters: Welding current: = (+)

Welding technique: For single or multipass, downhand coating applications.Push the electrode at an angle of 80-70.to ensure optimal fusion. When required, additional passes should only be executed while the weld is still hot.

Machining: The deposit is machinable by grinding. Arc or plasma cutting equipment may also be used.

TECHNICAL DATA : Typical hardness: 600HB

Shielding gases : General recommended:

82% Ar, 15-25% CO2 [EN ISO 14175 -M21]

Flow rate(L/min) : 14-18 CrVIcontent : 0 mg/m3

Current polarity: /DC (+)

Electrode(mm)	Voltage (V)	Current (A)
1.2mm	11-34	40-300
1.6mm	15-38	60-420

Note: For optimum result use the lowest amperage practical

JOINING

CASTOMAG 45706

Gas-Shielded, Solid Wire Continuous Electrode For Copper And Silicone Bronze

DESCRIPTION

Special bronze (Cu-Si) MIG wire (3% Si) for assembly and coating of copper and its alloys such as special bronzes Cu-Si and brass (Cu-Zn) base metals to themselves and to automobile industry steel. It has good resistance to corrosion in urban, industrial, and marine environment. Work hardening and ductile deposit. Color close to that of copper.

The addition of silicon acts as deoxider and reduce the thermal conductivity getting an improved weldability.

APPLICATIONS

For joining of copper, copper zinc and copper silicium alloys, for example:2.0220 -CuZn 5, 2.0230 -CuZn 1 0, 2.0240 -CuZn 15, 2.1322 -CuMg 0,4, 2.1323 -CuMg 0,7 and for coatings on copper alloys and ferrous metals.

For welding of forged or cast copper as well as for the manufacturing of refrigerating equipment.

The welding of copper alloys with an oxygen content exceeding 0,02% is not recommended.

Boilers, vessels (also cladding), heat exchangers, distillating and reheating installations in the chemical, sugar and paper industry. For sewage plants. For joining of earthing connection.

PROCEDURE FOR USE

Preparation : Eliminate earlier deposits and worn metal by grinding, or with the manual electrode ExoTrode , until a sound, regular and crack freesurface is obtained. The surfaces of new workpieces must be free from oxidation, grease, paint etc. Round off sharp edges.

Preheating : For low-thickness parts, preheating is not generally required. For ticker parts, we re co mme nd the fo l lo wing pre he a t ing temperatures:

Copper with thickness > 4 mm:300-600°C.

Brass with thickness > 6 mm:250°-300°.C.

Bronze with thickness > 8 mm:200-250°C.

Welding Current: = (+)

Weld with short or spray arc, however use preferably the pulsed-arc technique.

Standards :

AWS A5.7: ERCuSi-A

TECHNICAL DATA

Tensile strength: 350 N/mm2 (psi)
Elongation : 40%
Typical hardness : 80HB
Shielding gas :
Recommended gas: .100% Ar [ISO 14175-I1]

Electrode (mm)	0.8mm	1.0mm	1.2mm
Voltage (V)	13-31	14-31	14-32
Current (A)	40-230	40-280	60-270
Wire Speed m/min	3-18	2-14	1.75-11
Gas 1/min	10	12	14

Note: For optimum result use the lowest amperage practical

Cobalt Base Alloys ECOCR-E Welding Electrodes, Cobalt Base Alloys ECOCR-E Welding Electrodes Manufacturers, Cobalt Base Alloys ECOCR-E Welding Electrodes Suppliers, Cobalt Base Alloys ECOCR-E Welding Electrodes Stockists, Cobalt Base Alloys ECOCR-E Welding Electrodes Exporters

POWDER

EUTALLOY 10011

A Hot Process, Nickel-Based Alloy With Tungsten Carbide Particles

DESCRIPTION

Eutalloy 10011 is a powder designed for anti-wear applications, particularly for ne particle abrasion. The powder produces a coating consisting of a high volume of tungsten carbide particles (80% by weight) embedded within a hard nickel-chromium matrix. The unique characteristics of this composit coating enable it to substantially extend the service life of components, more than twice as effective as any comparable coating material.

Product Details

- Tungsten carbide particles in a hard Ni-based matrix ensures high wear resistance fo r extremely long service life
- Coatings combined with easy to use Eutectic equipment provides versatility in protecting equipment and parts
- Thin, strong and durable deposits lead to maintenance savings.

APPLICATION

Thin Overlay: Recommended (< 2mm}

- Mixer Blades :Cutter Wheels
- Post Hole Augers : Crawler Shoes
- Rock Bits : Muller Blades
- Choppers : Chutes
- Debarker Chains:Liners
- Plowshares : Furrowing Shovels
- Cultivator Blades: Billet Tongs
- Skid Cleats : Grapple Arms
- Catwalks, Stair Treads : Ladder Rungs
- Revolving Platforms : Conveyor Cleats
- Grippers: Guides
- Lift Devices : Feed Devices
- Clamping Devices

PROCEDURE FOR USE

Preparation:

All oxides, dirt, grease, or other contaminants should be removed before application. This can be accomplished by mechanical preparation with a le, cutting tool (without lubrication), clean wire brush, grinding or grit blasting.

Coating Procedure:

Adjust the torch flame so that a neutral or slightly carburizing flame is achieved and preheat the surface to approximately 575F. After depositing a layer of powder, fuse with the torch flame until a glazed appearance is achieved.

Leave the part to cool slowly and away from air currents.

Where possible, place it in vermiculite or cover with a thermal blanket

Finishing:

Grind with a green or black silicon carbide wheel, 24-36 grit for rough work and 60 or ner grit for nishing.

Technical Data

Typical hardness: Hardness(Matrix): 60 HRC

Hardness (Tungsten Carbide): 1900 µHV

Service Temperature: 1200°F (649°C)

EUTALLOY 10112

Hot Process, Multi-Component, Nickel-Based Alloy Powder Containing Carbide Particles

DESCRIPTION

Eutalloy 10112 is a multi-component nickel-based alloy powder blend containing carbide particles. It is a hot process powder designed to be applied and fused using the Eutalloy type thermal spray process. Suitable for use on steels, stainless steels, cast irons and nickel-based alloys that are subject to severe abrasive wear. Coatings are hard and smooth as applied. They resist abrasion, friction, erosion, cavitation, and fretting. The coating will not peel or scale when exposed to elevated temperatures. The carbide particles are sized to provide optimal resistance to both ne and coarse abrasive particles. Coatings can be put in service as deposited or nished by grinding and polishing

Product Details

- Designed for the Spray and Fuse process
- Carbide particles are sized to provide resistance to ne and coarse abrasive particulate
- Excellent for use on steels, stainless steels, cast irons and nickel-based alloys
- Excellent resistance to abrasion, friction, erosion, cavitation and fretting

APPLICATIONS

Thin Overlay: Recommended (< 2mm}

- Auger Points : Coal Pulverizers
- Coveyor Chains : Sand Slinger Cups
- Coal Feed Screws : Post Hole Diggers
- Pug Mill Knives: Debarker Knives
- Mixer Blades: Wear Plates
- Fly Ash Chutes :Drill Bits
- Plow Discs and Harrows

PROCEDURE FOR USE

Preparation:

All oxides, dirt, grease, or other contaminants should be removed before application. This can be accomplished by mechanical preparation with a le, cutting tool (without lubrication), clean wire brush, grinding or grit blasting.

Coating Procedure:

Adjust the torch flame so that a neutral or slightly carburizing flame is achieved and preheat the surface to approximately 575F. After depositing a layer of powder, fuse with the torch flame until a glazed appearance is achieved.

Leave the part to cool slowly and away from air currents.

Where possible, place it in vermiculite or cover with a thermal blanket

Finishing:

Grinding Wheel Type: Aluminum Oxide Grit Size: 120 or ner Concentration

Notes:

1. Before grinding, all edges and ends of coating must be chamfer ground.
2. Frequently dress the grinding wheel face to reduce friction an and heat .

TECHNICAL DATA

Typical hardness

Hardness(Matrix): 60 HRC

Hardness (Tungsten Carbide): 1900 µH

Service Temperature: 1000°F (538°C)

EUTALLOY 10146

Copper Alloy Designed For The Eutalloy Process

DESCRIPTION : Eutalloy 10146 is a copper-tin Eutalloy alloy designed for build-up and joining of copper-base alloys. It provides an excellent combination of machinability and corrosion resistance.

Product Details:

- Excellent machinability
- Very good corrosion resistance
- Low coefficient of friction

APPLICATIONS:

Deposit Thickness: Unlimited

- Shafts
- Gears
- Gauges
- Slideways
- Beds
- Molds
- Keyways

PROCEDURE FOR USE:

Preparation:

All oxides, dirt, grease, or other contaminants should be removed before application. This can be accomplished by mechanical preparation with a le, cutting tool (without lubrication), clean wire brush, grinding or grit blasting.

Coating Instructions:

Adjust the torch flame so that a neutral or slightly carburizing flame is achieved and preheat the surface to approximately 575F. After depositing a layer of powder, fuse with the torch flame until a glazed appearance is achieved.

ER309LSi MIG & TIG Welding Wire, ER309LSi MIG & TIG Welding Wire Manufacturers, ER309LSi MIG & TIG Welding Wire Suppliers, ER309LSi MIG & TIG Welding Wire Stockists, ER309LSi MIG & TIG Welding Wire Exporters

Note:

Spray a thin coat of Eutalloy 10224 to prevent oxidation of the base material.

Leave the part to cool slowly and away from air currents.

Where possible, place it in vermiculite or cover with a thermal blanket.

Finishing: Grinding or maching

TECHNICAL DATA:

Typical hardness: 28 HRB

Maximum Service Temperature: 700°F (371°C)

ER308/308H MIG & TIG Welding Wire, ER308/308H MIG & TIG Welding Wire Manufacturers, ER308/308H MIG & TIG Welding Wire Suppliers, ER308/308H MIG & TIG Welding Wire Stockists, ER308/308H MIG & TIG Welding Wire Exporters

ER308/308L MIG & TIG Welding Wire, ER308/308L MIG & TIG Welding Wire Manufacturers, ER308/308L MIG & TIG Welding Wire Suppliers, ER308/308L MIG & TIG Welding Wire Stockists, ER308/308L MIG & TIG Welding Wire Exporters

Cobalt Base Alloys ECOCR-E Welding Electrodes, Cobalt Base Alloys ECOCR-E Welding Electrodes Manufacturers, Cobalt Base Alloys ECOCR-E Welding Electrodes Suppliers, Cobalt Base Alloys ECOCR-E Welding Electrodes Stockists, Cobalt Base Alloys ECOCR-E Welding Electrodes Exporters

EUTALLOY 10185

Nickel-Based Alloy Designed For The Eutalloy Process

DESCRIPTION

Eutectic 10185 is a nickel-based Eutalloy alloy designed to provide a combination of machinability and resistance to wear and corrosion. Excellent weldability and machinability permits easy contour forming on steels, stainless steel, nickel alloys and cast irons. The Eutalloy process permits precise deposition of 10185 so that thin, tough overlays can be applied and dimensional tolerances maintained.

Product Details:

- Excellent resistance to wear and corrosion
- Excellent weldability and machinability on a wide range of steels and stainless steels
- Thin, tough overlays maintain tight dimensional tolerances

APPLICATIONS

Deposit Thcikness: upto 10 mm

- Bearing Surfaces: Molds
- Crankshaft Journals: Pump Parts
- Dies :Shafts
- Diesel Valves : Tile Dies
- Feed Rolls : Valve Plugs
- Material Pins : Valve Seats
- Glass Mold Plungers

PROCEDURE FOR USE:

Preparation:

All oxides, dirt, grease, or other contaminants should be removed before application. This can be accomplished by mechanical preparation with a le, cutting tool (without lubrication), clean wire brush, grinding or grit blasting.

Coating Procedure:

Adjust the torch flame so that a neutral or slightly carburizing flame is achieved and preheat the surface to approximately 575F. After depositing a layer of powder, fuse with the torch flame until a glazed appearance is achieved.

Leave the part to cool slowly and away from air currents.

Where possible, place it in vermiculite or cover with a thermal blanket.

Finishing:

Grinding Wheel Type: Green Silicon Carbide Grit Size: 75

TECHNICAL DATA:

Typical hardness: 39 HRC

Maximum Service Temperature: 1400°F (760°C)

Hastelloy B-3 Welding Electrodes, Hastelloy B-3 Welding Electrodes Manufacturers, Hastelloy B-3 Welding Electrodes Suppliers, Hastelloy B-3 Welding Electrodes Stockists, Hastelloy B-3 Welding Electrodes Exporters

Alloy 309LMo MIG & TIG, Alloy 309LMo MIG & TIG Manufacturers, Alloy 309LMo MIG & TIG Suppliers, Alloy 309LMo MIG & TIG Stockists, Alloy 309LMo MIG & TIG Exporters

ER308LSi MIG & TIG Welding Wire, ER308LSi MIG & TIG Welding Wire Manufacturers, ER308LSi MIG & TIG Welding Wire Suppliers, ER308LSi MIG & TIG Welding Wire Stockists, ER308LSi MIG & TIG Welding Wire Exporters

EUTALLOY 10224

Nickel-Based Alloy Recommended For Cast Iron Protection And Repair

DESCRIPTION

Eutalloy 10224 (NiTec) is a nickel-based alloy with properties which make it ideal for protective coating, joining and cladding applications on a variety of base metals including steels, cast irons and nickel alloys. The deposit is easy to machine, with standard cutting tools, and has a low coefficient of friction and wear resistance properties which make it ideal for protection against metal-to- metal friction. It is also exceptionally heat resistant. Eutalloy 10224 is manufactured by a process of atomization, designed to ensure both optimum spheroidization and controlled granulometry. This in turn ensures troublefree fusion of the alloy using our SuperJet Eutalloy torch. Eutalloy 10224, applied with a Eutalloy system, produces smooth and uniform quality coatings. This maintenance-engineered coating technology increases the value and reliability of parts treated, with results far superior to conventional repair processes, and savings in costs including those of machining.

Product Details:

- Ideal for protective coating, joining and cladding applications
- The deposit is easy to machine with standard cutting tools
- Exceptionally heat resistant
- Ideal for protection against metal-to-metal friction
- Metal-to-metal friction property: Excellent Corrosionresistance: Verygood Machinability: Excellent, with normal cutting tools

APPLICATIONS:

Deposit Thickness: Unlimited

Recommended for corrosion/wear-resistant coatings on journals and gearwheels, exhaust manifolds, etc., for repair of casting and machining defects and for repair of worn areas of deep-drawing dies.

Hastelloy C-4 Welding Electrodes, Hastelloy C-4 Welding Electrodes Manufacturers, Hastelloy C-4 Welding Electrodes Suppliers, Hastelloy C-4 Welding Electrodes Stockists, Hastelloy C-4 Welding Electrodes Exporters

PROCEDURE FOR USE:

Preparation:

All surfaces to be coated should be thoroughly cleaned, removing all contaminants, oxides and grease. Thin surfaces and edges require no preheating. However, large, heavy and cast iron parts of all thickness should be heated to about 575°F (approx. 302°C) (blue hot).

Coating instructions:

Adjust the torch flame so that a neutral or slightly carburizing flame is achieved and preheat the surface to approximately 575F. After depositing a layer of powder, fuse with the torch flame until a glazed appearance is achieved.

Leave the part to cool slowly and away from air currents.

Where possible, place it in vermiculite or cover with a thermal blanket.

TECHNICAL DATA:

Typical hardness: 90 HRB

Maximum Service Temperature: 1112° (600°C)

EUTALLOY 10680

Nickel-Based Alloy Recommended For Cast Iron Protection And Repair

DESCRIPTION

Eutalloy 10680 is a premium nickel base alloy powder designed to provide easy build-up on cast iron parts and excellent machinability. Machined deposits are bright and porosity free. The hardness of this alloy promotes good edge integrity while not detracting from its machinability. The high compressive strength of this alloy resists deformation at elevated temperatures. Deposits will not scale even at elevated temperatures. The Eutalloy process permits precise deposition with a minimal amount of overspray. Thin, tough overlays can be applied and dimensional tolerances maintained. Eutalloy 10224 is recommended for rectifying both machining and casting defects, as well as for protective coatings against oxidation, with a considerable gain in service life for a number of parts.

Product Details:

- Deposists are easily machinable and porous-free
- Compressive strength resists deformation at high temperatures
- No deposition scaling with increased temperatures
- Precise deposition with minimal overspray

APPLICATIONS:

Deposit Thcikness: Unlimited

General-purpose build-up and dimensional restoration for cast iron and steel parts such as:

- Gears Shafts
- Patterns
- Clutches

EQUIPMENT:

Eutalloy 10680 may be applied by either the Eutalloy B torch or the UltraJet Eutalloy torch using acetylene as the fuel gas.

HAYNES C-22/122 Welding Electrodes, HAYNES C-22/122 Welding Electrodes Manufacturers, HAYNES C-22/122 Welding Electrodes Suppliers, HAYNES C-22/122 Welding Electrodes Stockists, HAYNES C-22/122 Welding Electrodes Exporters

PROCEDURE FOR USE:

Preparation:

All surfaces to be coated should be thoroughly cleaned, removing all contaminants, oxides and grease. Thin surfaces and edges require no preheating. However, large, heavy and cast iron parts of all thickness should be heated to about 575°F (approx. 302°C) (blue hot).

Coating instructions:

Adjust the torch flame so that a neutral or slightly carburizing flame is achieved and preheat the surface to approximately 575F. After depositing a layer of powder, fuse with the torch flame until a glazed appearance is achieved.

Leave the part to cool slowly and away from air currents.

Where possible, place it in vermiculite or cover with a thermal blanket.

TECHNICAL DATA:

Typical hardness: 95 HRB

Tensile Shear Strength: 517N/mm2 (75,000psi)

Maximum Service Temperature: 1200°F (649° C)

Proxon 21021

Pre-Alloyed, Self-Bonded Powder Whichproduces Homogenous Coatings With Conventional Combustion Or Plasma Thermal Spray Equipment

DESCRIPTION

ProXon 21021 is a pre-alloyed, self-bonding powder which produces homogenous coatings with conventional combustion or plasma thermal spray equipment. The unique exothermic nature of the powder minimizes dependence on operator technique to obtain excellent quality coatings. A separate bond coat material is not required.

21021 powder is specially designed to produce coatings for many applications involving wear due to abrasion, particle erosion, fretting and bearing- t surfaces. Coatings exhibit excellent inter-particle and tensile bond strengths. This results in an extremely “tough” coating that will display excellent impact resistance for a thermal spray coating.

Coating can be deposited more economically than other conventional self-bonding materials, with all spray systems, due to higher spray rates, higher deposit efficiencies and greater coverage per pound. Additionally, because of the unique Manufacturing process used to produce Proxon 21021 nozzel build-up and loading , frequently a problem with composite self bonding powders, is eliminated.

Product Details:

- Minimal operator technique needed for excellent coatings
- Seperate bond coating material is not required
- Excellent impact resistance for a thermal spray coating
- May be nished by machining

APPLICATIONS

Thickness Limit: >0.125 inch

Transportation:

Crankshafts, Timing Gear Fits, Pully Fits, Thrust faces

Pulp and Paper:Pump Shaft, Bearing Fits General: Dimensional Restoration, Hydraulic Cylinder cases.

PROCEDURE FOR USE:

Preparation:

Clean and preheat the spray areas to 50 – 150°C. Remove damaged material and round off edges.

Spraying:

Roughing can be done at 0.004 inch per revolution crossfeed with infeed of 0.010 to 0.030 inch.

Apply the powder in the preheated state to achieve the desired coating thickness. Maintain the spray layer temperature between 50°C and 200°C. Do not exceed a coating thickness of 2 mm.

Cooling: Allow the coating to cool in still air. Good machined nishes can be obtained using carbide tools with low turning speeds in the range of 50 to 80 surface feet per minute.

Finishing can be done at less than 0.004 inch per revolution crossfeed with infeed of less than 0.005 inch (turningspeed can be increased somewhat for nishing). Coolants and applications involving corrosion should be avoided. Note: please refer the parameters given in operation manual .

TECHNICAL DATA

Values	Combustion	Plasma
Macrohardness:	78 HRB	84HRB
Microhardness:	175 DPH	215 DPH
Bond Strength:	>5000 psi	> 6 0 0 0 p s i

Max. Service Temperature: 1200°F (649°C) Melting Point: 2500°F (1371°C)

ProXon 21023

An Easy-To-Machine, One-Step, Iron-Nickel- Aluminum-Molybdenum Powder

ProXon 21023 is an iron - nickel - aluminum - molybdenum composite powder designed for use with both Plasma spray and Combustion spray processes.

Coatings of 21023 exhibit excellent self-bonding properties and are suitable for use as a one-step product. Each lot of powder is subjected to extensive quality checks to insure a consistent particle size distribution and chemical composition. Coatings of 21023 are recommended to satisfy a number of broad requirements:

Machinabili t y - Exhibits better machinability and less tool wear than similar coatings.

Oxidation Resistance - Coatings are resistant to oxidizing atmospheres upto a maximum temperature of 1500°F.

Bond Coating - May be used as a bond coat for nickel - chromes, carbides or stainless steels.

Product Details

- Outstanding machinability
- Excellent oxidization resistance
- High quality coatings with minimum operator technique dependence
- May be used for bond coat for nickel-chromes, carbides or stainless steels

APPLICATIONS

Thickness Limit: >0.125 inch

- Salvage and build-up of carbon steel and stainless steel parts
- Exhaust mufflers and heat treating xtures
- Press ts and bearing seats to resist fretting wear

PROCEDURE FOR USE:

Preparation:

Clean and preheat the spray areas to 50 - 150°C. Remove damaged material and round off edges.

Spraying:

Roughing can be done at 0.004 inch per revolution crossfeed with infeed of 0.010 to 0.030 inch.

Apply the powder in the preheated state to achieve the desired coating thickness. Maintain the spray layer temperature between 50°C and 200°C. Do not exceed a coating thickness of 2 mm. Cooling: Allow the coating to cool in still air. Good machined nishes can be obtained using carbide tools with low turning speeds in the range of 50 to 80 surface feet per minute. Finishing can be done at less than 0.004 inch per revolution crossfeed with infeed of less than 0.005 inch (turningspeed can be increased somewhat for nishing). Coolants and applications involving corrosion should be avoided.

Note: please refer the parameters given in operation manual .

TECHNICAL DATA

Typical hardness: 87 HRB
Bond Strength : 6000 psi
Max. Service Temperature: 1500°F (816°C)

ER80S-B6 MIG & TIG Welding Wire, ER80S-B6 MIG & TIG Welding Wire Manufacturers, ER80S-B6 MIG & TIG Welding Wire Suppliers, ER80S-B6 MIG & TIG Welding Wire Stockists, ER80S-B6 MIG & TIG Welding Wire Exporters

Proxon 21031

Pre-Alloyed, Self-Bonding "Stainless Type" Nickel-Chromium Powder

Description

Proxon 21031 is a pre-alloyed, self-bonding «stainless type» nickel-chromium powder designed for producing homogenous coatings using conventional combustion or plasma thermal spray equipment. It is particularly well-suited for applications involving corrosion at high temperatures.

Product Details

- Coating of parts in the pulp & paper industry
- Protection of fan blades, shaft sleeves, and roller bearing seats Coating of compressor pistons

APPLICATIONS:

Thickness Limit: >0.125 inch

Proxon 21031 is a self-bonding NiCrAl alloy with good resistance to corrosion from wastewater. Coatings from Proxon 21031 have a very low coefficient of friction and provide thick deposit capability (<3mm).

Utilities: Pump shaft bearing t, pump pistons, impeller shafts

General: Electric motor shafts, end bells, grinder spindle bearings, drill press quills

PROCEDURE FOR USE

Preparation:

Clean and preheat the spray areas to 50 - 150°C. Remove damaged material and round off edges.

Spraying:

Roughing can be done at 0.004 inch per revolution crossfeed with infeed of 0.010 to 0.030 inch.

Apply the powder in the preheated state to achieve the desired coating thickness. Maintain the spray layer temperature between 50°C and 200°C. Do not exceed a coating thickness of 2 mm.

Cooling: Allow the coating to cool in still air. Good machined nishes can be obtained using carbide tools with low turning speeds in the range of 50 to 80 surface feet per minute.

Finishing can be done at less than 0.004 inch per revolution crossfeed with infeed of less than 0.005 inch (turningspeed can be increased somewhat for nishing). Coolants and applications involving corrosion should be avoided.

Note: please refer the parameters given in operation manual

TECHNICAL DATA

Values	Combustion	Plasma
Macrohardness:	HRB 85	84HRB
Microhardness:	DPH 225	215 DPH
Bond Strength:	>4000 psi	>5000psi

Max. Service Temperature: 1600°F

Melting Point: 2550°F (1379°C)

Hastelloy C-276 Welding Electrodes, Hastelloy C-276 Welding Electrodes Manufacturers, Hastelloy C-276 Welding Electrodes Suppliers, Hastelloy C-276 Welding Electrodes Stockists, Hastelloy C-276 Welding Electrodes Exporters

Proxon 21071

Gas Atomized Aluminum - Bronze Alloy Powder Used In Both Plasma Spray And Combustion Spray Processes

Description

Proxon 21071 is a high-quality, gas-atomized aluminum-bronze alloy powder designed for use in both plasma spray and combustion spray processes. It is particularly well-suited for applications requiring machinable coatings with excellent corrosion resistance.

Product Details

High-Quality Machinable Coatings: Ideal for soft bearing applications. Repeatable, High-Integrity Coatings: Requires minimal operator technique.

Versatility: Can be used on steel and copper alloy parts to restore dimensions, provide self-lubricating surfaces, and offer excellent corrosion resistance in caustic solutions.

APPLICATIONS

Thickness Limit: 0.08 inch
Repair of Ship Screws
Coating of Metal Parts from Chemical Engineering
Protection of Shafts, Pistons, and Bearing Seats
Rebuilding of Worn Parts
Coating of Valve Seats Reclaiming Copper-Base Parts
Diesel Engine Cooler Element Parts Transmission Gear Shafts and Piston Guides Shifter Forks
Worn Bearing Fits

PROCEDURE FOR USE

Preparation:

Clean and preheat the spray areas to 50 – 150°C. Remove damaged material and round off edges.
Spraying:
Roughing can be done at 0.004 inch per revolution crossfeed with infeed of 0.010 to 0.030 inch.

Apply the powder in the preheated state to achieve the desired coating thickness. Maintain the spray layer temperature between 50°C and 200°C. Do not exceed a coating thickness of 2 mm.

Cooling: Allow the coating to cool in still air. Good machined nishes can be obtained using carbide tools with low turning speeds in the range of 50 to 80 surface feet per minute.

Finishing can be done at less than 0.004 inch per revolution crossfeed with infeed of less than 0.005 inch (turningspeed can be increased somewhat for nishing). Coolants and applications involving corrosion should be avoided.

Note: please refer the parameters given in operation manual .

TECHNICAL DATA

Typical hardness: 60 HRB

Bond Strength : 3000 psi

Max. Service Temperature: 700°F (371°C)

CDP Standard Plates

CastoDurDiamond Plate 4601

DESCRIPTION

CDP XuperWave 4601 is the ideal wearplate for applications where the right balance between price and service life is required, thus maintaining the Castolin high standard welding quality and smooth surface. The exclusive XuperWave weld bead pattern drastically reduces the wear rate, especially in applications exposed to high velocity erodent fluxes. The extreme hard weld cladded surface is specially designed for erosion and abrasion applications.
Dimensions: 1.500 x 3.000mm (1.220 x 2.740mm coated, 3,34 m2) Base material: mild steel - other metals available on request
Available versions (other sizes available on request):

4601 DXW Coated on one side with a single layer of wearfacing alloy.

Product Details

- Reduces maintenance costs through better and longer service life of parts exposed to abrasion and erosion
- Reduces wear rate with its Castolin Eutectic XuperWave pattern and its rich chromium carbide structure.
- Offers the right balance between price and performance for all your everyday applications
- Conserves resources and protects the environment

APPLICATIONS

Industries: Cement, mining, dredging, quarries, public works, steel.

Components: Pump and dredger parts, rolls, crusher pinions and rolls, conveyor screws, bulldozer blades, ripper teeth, dredger pump shaft supports, augers, grader blades, vehicle track links, scrapers, wire drawing entry and exit guides.

ER310 MIG & TIG Welding Wire, ER310 MIG & TIG Welding Wire Manufacturers, ER310 MIG & TIG Welding Wire Suppliers, ER310 MIG & TIG Welding Wire Stockists, ER310 MIG & TIG Welding Wire Exporters

MT 304H MIG & TIG, MT 304H MIG & TIG Manufacturers, MT 304H MIG & TIG Suppliers, MT 304H MIG & TIG Stockists, MT 304H MIG & TIG Exporters

TECHNICAL DATA

Typical hardness: 60 - 58 HRC

Carbide Content: > 30%

Max. Service Temperature: 250°C

Dimensions: 1.500 x 3.000mm (2.740 × 1.220mm coated, 3.34 m²)

Pattern: Exclusive XuperWave weld bead pattern

Available versions (other sizes available on request)

Base material thickness(mm)	Hardfacing Thickness (mm)
5mm	3mm
6mm	4mm
8mm	4mm
8mm	5mm
10mm	5mm
15mm	5mm

CastoDurDiamond Plate 3952

DESCRIPTION

Special, self-shielded flux cored alloy wire speci cally developed for outdoor maintenance and repair welding of thick, heavy components where faster weld deposition rates over traditional coated electrodes are required.

Complex carbides alloy containing chromium, molybdenum, and niobium giving deposits with very high concentration of ultra-hard, primary, and eutectic phases to produce maximum resistance to ne, hot particle abrasion and erosion by coke, clinker, cement, or sand at elevated temperatures.

Product Details

- Exceptional resistance to hot abrasion up to 650°C.
- Smooth deposits without machining.
- Very hard deposits with one or two layers maximum.
- Automatic formation of stress relief cracks. Deposits can be grinded and resist rusting.
- Ideal choice for eld work or on-site applications. No need for costly gas cylinders, regulators, or flow meters.
- Relatively thick, wide overlays possible in single pass.
- No enforced stop-starts increase welding duty cycles.
- Variable electrode stick out capability improves control over heat input, dilution, deposition rate, visibility, and access in tight spaces.

Hastelloy G-30 Welding Electrodes, Hastelloy G-30 Welding Electrodes Manufacturers, Hastelloy G-30 Welding Electrodes Suppliers, Hastelloy G-30 Welding Electrodes Stockists, Hastelloy G-30 Welding Electrodes Exporters

APPLICATIONS

- For use on steel, alloy steel, and 12-14% Mn steel parts.
- Clinker, sinter crushers. Cement exhaust fan blades. Blast furnace bells and hoppers.
- Hot screens, wear plates, mold extruders.
- Sinter crushers and fans, hot sieves, screens, and bells.

TECHNICAL DATA:

Typical hardness : 65HRC

Max. Service Temperature: 650 C

Available versions (other sizes available on request)

Base material thickness(mm)	Hardfacing Thickness (mm)
5mm	3mm
6mm	4mm
8mm	4mm
8mm	5mm
10mm	5mm
15mm	5mm

CastoDurDiamond Plate 4623i

Castodur Diamond Plates Active Protection Against Impact And Mild Abrasion

DESCRIPTION

CDP 4623i is the High Load impact wearplate. The tough martensitic matrix contains complex carbides that are nely and homogeneously dispersed. This speci c crystallographic structure allows the CDP 4623i to withstand extreme conditions of impacts even when mild abrasion is present. This product is suitable for chutes, buckets, crushers and any other application with impacts.

Product Details

- Offers the best protection against combined wear by impact and mild abrasion.
- Resists impact where standard wearplates fail.
- Improves service life of parts such as buckets, chutes, conveyors and any other element exposed to strong impacts.

APPLICATIONS

- Industries: Suitable for applications involving chutes, buckets, crushers, and any other equipment subjected to impacts.
- Components: Buckets, chutes, conveyors, crushers.

TECHINICAL DATA:

Typical hardness: 53-55 HRC

Max operating temperature: 150°C

Base material thickness(mm)	Hardfacing Thickness (mm)
5mm	3mm
6mm	4mm
8mm	4mm
8mm	5mm
10mm	5mm
15mm	5mm

Hastelloy G-35 Welding Electrodes, Hastelloy G-35 Welding Electrodes Manufacturers, Hastelloy G-35 Welding Electrodes Suppliers, Hastelloy G-35 Welding Electrodes Stockists, Hastelloy G-35 Welding Electrodes Exporters

ER309/309L MIG & TIG Welding Wire, ER309/309L MIG & TIG Welding Wire Manufacturers, ER309/309L MIG & TIG Welding Wire Suppliers, ER309/309L MIG & TIG Welding Wire Stockists, ER309/309L MIG & TIG Welding Wire Exporters

ER2209 MIG & TIG Welding Wire, ER2209 MIG & TIG Welding Wire Manufacturers, ER2209 MIG & TIG Welding Wire Suppliers, ER2209 MIG & TIG Welding Wire Stockists, ER2209 MIG & TIG Welding Wire Exporters

CastoDurDiamond Plate 4666

Castodur Diamond Plates Active Protection Against Impact And Mild Abrasion

DESCRIPTION

Eutectic CDP 4666 premium wear plate is a complex carbide alloy that is weld overlayed to a carbon steel base plate. When used in situations involving severe abrasion and moderate impact, CDP 4666 outlasts chromium carbide plates 2 to 4 times. CDP 4666 premium wear plate is manufactured in 51.5" x 112" sheets that can be cut, formed, or rolled to desired shapes. CDP 4666 is easily bolted or welded into place. For custom fabrication, please contact Eutectic Technical Services. Standard plates are manufactured in a XuperWave-s pattern. The XuperWave-s pattern is a unique sinus weld bead geometry that provides additional value, improving even more wear performance and minimizing plate scrap

Product Details

Type: Wear Plate

Base Material: Mild Steel (other metals available on request)

Wearfacing Material: Chromium Carbide, Niobium Carbide, and Boron Carbide Rich Alloy

APPLICATIONS

For wear-preventive protecting of a wide range of ER90S-B3 MIG & TIG Welding Wire, ER90S-B3 MIG & TIG Welding Wire Manufacturers, ER90S-B3 MIG & TIG Welding Wire Suppliers, ER90S-B3 MIG & TIG Welding Wire Stockists, ER90S-B3 MIG & TIG Welding Wire Exporters

steel components subject to severe abrasion or erosion by mineral particles, sand, rocks, gravel etc. processed in the Quarry, Earthmoving, Dredging, Sand/ Gravel, Coal/ Coke and Cement industries: pneumatic conveyor systems, mixer blades, pump impellers, mold screws, coal screens, excavator bucket teeth, conveyor chutes, sand pumps, concrete mixers, asphalt handling.

TECHNICAL DATA

Typical hardness: 61 - 64 HRC

Microhardness: DPH 2100-2000

Max Service Temperature: 1200°F (649°C)

Available versions (other sizes available on request)

Base material thickness(mm)	Hardfacing Thickness (mm)
5mm	3mm
6mm	4mm
8mm	4mm
8mm	5mm
10mm	5mm
15mm	5mm

CastoFuse

Highest Impact - Abrasion Resistant Liner

DESCRIPTION

CASTOFUSE is a wear-resistant fused alloy steel plate designed for durability and smooth material flow. Manufactured with controlled parameters, it offers a dense, carbide-rich overlay that's undiluted, low-friction, and free of weld beads. With a consistent microstructure and hardness down to the fusion line, dilution with the backing plate is minimal, ensuring predictable wear rates. The alloy layer is bonded at a controlled temperature to equalize stress. CASTOFUSE enhances abrasion and impact resistance, extending equipment lifespan, efficiency, and productivity, all while reducing maintenance costs. Ideal for demanding applications, it boosts performance and optimizes operational costs.

Product Details :

- The world's best wear resistant liner CASTOFUSE wear plate.
- Very smooth Surface, very low residual stress. (No weld bead on surface)
- Unique manufacturing process produces a flat fusion line.
- Low friction coefficient properties (Anti Hang up)
- Single pass alloy deposition, Consistent &
- dense alloy composite microstructure.
- Minimal metal dilution, No plate distortion.
- 100% metallurgical bonding between alloy and base material.
- Controlled colling provides perfect carbide formation.
- 100% metallurgical bonding between alloy and base material.
- Controlled colling provides perfect carbide formation.
- Can fabricate & supply as per drawing prepared parts.

APPLICATIONS

Industries: Industrial applications requiring localized heating and precise control of gases. Components: Coating and repair work, particularly where precise heat application is necessary.

TECHNICAL DATA :

Typical hardness : 56 - 62HRC

Carbides dispersed : 50 to 60 % at surface.

Available versions (other sizes available on request) Available versions (other sizes available on request)

ER80S-B8 MIG & TIG Welding Wire, ER80S-B8 MIG & TIG Welding Wire Manufacturers, ER80S-B8 MIG & TIG Welding Wire Suppliers, ER80S-B8 MIG & TIG Welding Wire Stockists, ER80S-B8 MIG & TIG Welding Wire Exporters

Base material thickness(mm)	Hardfacing Thickness (mm)
6mm	6mm
8mm	8mm
10mm	10mm
12mm	11mm
12mm	18mm

CastoDur Diamond Powder Plates

Castodur Diamond Plate Best Protection Against Corrosion, Erosion And Abrasion!

DESCRIPTION

CastoDur Diamond Powder Plates (CDP) are specialized wear-resistant plates designed for industrial applications requiring protection against corrosion, erosion, and abrasion. These plates are fabricated using advanced techniques such as arc welding, vacuum fusion, or laser powder coating, ensuring high-quality and uniform properties across the entire surface.

Product Details

CDP 112: Highest abrasion and erosion resistance. CDP 212: High abrasion and erosion resistance in non-corrosive conditions.

CDP 496: High corrosion resistance and low metal friction.

APPLICATIONS

- Precision Parts: Suitable for precision parts and complex constructions.
- Metal/Metal Friction Applications: Ideal for applications where clogging and deposits on the plate surface must be avoided.
- Cutting Methods: Can be cut with laser, plasma, or water-jet machines.
- Formability: Easily formed by rolling.

Hastelloy HYBRID-BC1 Welding Electrodes, Hastelloy HYBRID-BC1 Welding Electrodes Manufacturers, Hastelloy HYBRID-BC1 Welding Electrodes Suppliers, Hastelloy HYBRID-BC1 Welding Electrodes Stockists, Hastelloy HYBRID-BC1 Welding Electrodes Exporters

TECHNICAL DATA :

Base material 4 mm Coating thickness: 2 mm

Available versions (other sizes available on request)

ER310 MIG & TIG Welding Wire, ER310 MIG & TIG Welding Wire Manufacturers, ER310 MIG & TIG Welding Wire Suppliers, ER310 MIG & TIG Welding Wire Stockists, ER310 MIG & TIG Welding Wire Exporters

ER312 MIG & TIG Welding Wire, ER312 MIG & TIG Welding Wire Manufacturers, ER312 MIG & TIG Welding Wire Suppliers, ER312 MIG & TIG Welding Wire Stockists, ER312 MIG & TIG Welding Wire Exporters

ER316/316H MIG & TIG Welding Wire, ER316/316H MIG & TIG Welding Wire Manufacturers, ER316/316H MIG & TIG Welding Wire Suppliers, ER316/316H MIG & TIG Welding Wire Stockists, ER316/316H MIG & TIG Welding Wire Exporters

HD8

High Performance Coating

DESCRIPTION

HD8 contains a high content of tungsten carbides (about 60%) in a nickel-based matrix. Extreme wear-resistant coating Very high density of tungsten carbides in a nickel-based matrix. Smooth surface ideal for protection against extreme abrasion or erosion.

Plates as well as customized parts available.

Product Details :

- Extreme wear resistance.
- High tungsten carbide content in a nickel-based matrix.
- Innovative welding process reducing matrix brittleness.
- Low and even dilution. Smooth surface.
- High deposition rate.
- Flexibility in plate sizes and cutting quality.
- Base Metal Dilution, Homogeneous and lower than 15%.

APPLICATIONS

Industries: Mining, power generation, cement, steel manufacturing, agriculture.

Speci c Uses: Heavy-duty fans, nozzle rings in vertical roller mills, open mine excavators, bucket shovels teeth, ploughs, FLSmidth Cross-Bar Coolers.

The deposit is machinable by grinding. Arc or plasma cutting equipment may also be used.

Ultimet Welding Electrodes, Ultimet Welding Electrodes Manufacturers, Ultimet Welding Electrodes Suppliers, Ultimet Welding Electrodes Stockists, Ultimet Welding Electrodes Exporters

ER2594 MIG & TIG Welding Wire, ER2594 MIG & TIG Welding Wire Manufacturers, ER2594 MIG & TIG Welding Wire Suppliers, ER2594 MIG & TIG Welding Wire Stockists, ER2594 MIG & TIG Welding Wire Exporters

ER80S-B2 MIG & TIG Welding Wire, ER80S-B2 MIG & TIG Welding Wire Manufacturers, ER80S-B2 MIG & TIG Welding Wire Suppliers, ER80S-B2 MIG & TIG Welding Wire Stockists, ER80S-B2 MIG & TIG Welding Wire Exporters

ER90S-B9 MIG & TIG Welding Wire, ER90S-B9 MIG & TIG Welding Wire Manufacturers, ER90S-B9 MIG & TIG Welding Wire Suppliers, ER90S-B9 MIG & TIG Welding Wire Stockists, ER90S-B9 MIG & TIG Welding Wire Exporters

TECHNICAL DATA :

Typical hardness: 60 HRC.

Available versions (other sizes available on request)

Base material thickness(mm)	HD8 Thickness (mm)
6mm	3mm
8mm	3mm
10mm	3mm
12mm	3mm
15mm	3mm
20mm	3mm

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