



*Les Best Of*



**magmaweld™**

*By*



## Why has the METACONCEPT Group chosen the MAGMAWELD™ brand?

### QUALITY BENEFITS

- **Constant quality of products and their performance** thanks to our control of QA processes
- **All products have TUV approval and CE certification:** can be sold to all users in accordance with the standard EN 1090, without restrictions in terms of clientele or field of application
- **Vacuum packaging for all products that are susceptible to moisture regain** (basic structural and stainless steel electrodes) and upon request for solid and coated wires for areas with high humidity levels..
- **Systematic issuance of the 3.1 chemical and mechanical certificate** in accordance with EN ISO 10204 when supplying ESB 48 (AWS A5.4: E7018) and ESB 52 (AWS A5.4: E7018-1) basic electrodes.

### PRODUCT BENEFITS

- Experience and expertise since 1957
- A strong **dynamic for development** and investment
- **Competitiveness** in relation to **large volume production** on a 24/7 basis
- **A brand that is already recognised internationally** in the following sectors:
  - Energy
  - Chemicals, Petrochemicals
  - Oil & Gas
  - Marine Construction
  - Works of art
  - Mines and Quarries, etc.

### SERVICE BENEFITS

- **Product range guaranteed** by METACONCEPT services
- **Significant stock** available at Chaponost
- **Short delivery times**
- **Dedicated** and responsive sales **team**
- **Efficient technical department**
- Bespoke **training programmes**
- **O 9001:2008** company certification

METACONCEPT Groupe  
Distributeur officiel de la marque



**Choose a supplier**  
who is committed to you and its products.

## RUTILE ELECTRODES: welding ordinary steels

Name	Characteristics	Dimensions	Packaging	Standards
<b>ESR 11</b>	All position rutile electrode for welding thin tubes and sheet metal < 5 mm and all standard structural steels	Ø 2.5 x 350 mm Ø 3.2 x 350 mm Ø 4.0 x 350 mm Other dimensions available upon request	Plastic-coated cardboard box weighing 5 kg, with 3 inner boxes per outer box	. AWS A5.1: E 6013 . EN ISO 2560A: E 38 0 RC 11 . CE certified. Approvals: BV, DB and TUV
<b>ESR 13</b>	Universal rutile electrode for assembling and repairing standard structural steels, preferably with a thickness of > 5 mm	Ø 2.5 x 350 mm Ø 3.2 x 350 mm Ø 4.0 x 350 mm Other dimensions available upon request	Plastic-coated cardboard box weighing 5 kg, with 3 inner boxes per outer box	. AWS A5.1: E 6013 . EN ISO 2560A: E 42 0 RR 12 . CE certified Approvals: ABS, BV, CWB, DB, TL and TUV



**Plastic film per individual cardboard box + cardboard box outer packaging (x 3 boxes) + many approvals for unrestricted use in all sectors.**

## BASIC ELECTRODES: security assemblies

Name	Characteristics	Dimensions	Packaging	Standards
<b>ESB 48</b>	Basic electrode with high mechanical characteristics and very high operational weldability for assembling structural steels as well as flanged assemblies subject to significant stresses.	Ø 2.5 x 350 mm Ø 3.2 x 350 mm Ø 4.0 x 350 mm Ø 4.0 x 450 mm	Vacuum packed boxes weighing 2.5 kg, with 6 inner boxes per outer box	. AWS A5.1: E 7018 . EN ISO 2560A: E 42 3 B 42 H10 . CE certified Approvals: ABS, BV, CWB, DB, DNV, GL, RINA, TL, LR and TUV
<b>ESB 52</b>	Basic electrode with low diffusible hydrogen levels for welding pipes and all structures with high demands in terms of mechanical characteristics.	Ø 2.5 x 350 mm Ø 3.2 x 350 mm Ø 4.0 x 350 mm Ø 4.0 x 450 mm	Plastic-coated cardboard boxes weighing 5 kg, with 3 inner boxes per outer box or vacuum packed boxes weighing 2.5 kg, with 6 inner boxes per outer box	. AWS A5.1: E 7018-1 . EN ISO 2560A: E 42 6 B 42 H5 . CE certified Approvals: ABS, BV, CWB, DB, DNV, GL, HAKC, LR and TUV.
<b>EM 170</b>	Welds are of x-ray quality.	Ø 2.5 x 350 mm Ø 3.2 x 350 mm Ø 4.0 x 450 mm	Vacuum packed box weighing 2.5 kg 6 boxes per outer box	. AWS A5.5: E 9018-G H4 . EN ISO 2560A: E 50 6 Mn1NiB 42 H5



**Products can be supplied in vacuum packaging to ensure their integrity whatever the storage conditions.**

**ESB 48 and ESB 52 electrodes: supplied with a 3.1 chemical and mechanical certificate as standard + very good price/performance ratio**

## STAINLESS STEEL ELECTRODES: resistant to corrosion

Name	Characteristics	Dimensions	Packaging	Standards
<b>EI 308L</b>	Rutile-basic covered electrode made from austenitic steel with a ferrite content of around 4 to 10% for welding 304L steels or equivalent.	Ø 2.5 x 300 mm Ø 3.2 x 350 mm Ø 4.0 x 350 mm	Vacuum packed boxes weighing 1.75 kg for the ø 2.5 and 2 kg for the other ø, with 9 inner boxes per outer box.	. AWS A5.4 : E 308L-16 . EN ISO 3581A: E 19 9 L R 32 . CE certified . Approvals: TUV
<b>EI 309L</b>	Rutile-basic covered electrode made from austenitic steel with a ferrite content of around 15% for welding dissimilar steels and plated steel sheets for resistance to corrosion.	Ø 2.5 x 300 mm Ø 3.2 x 350 mm Ø 4.0 x 350 mm	Vacuum packed boxes weighing 1.75 kg for the ø 2.5 and 2 kg for the other ø, with 9 inner boxes per outer box.	. AWS A5.4: E 309L-16 . EN ISO 3581A: E 23 12 L R 12 . CE certified . Approvals: BV, DB, TUV
<b>EI 316L</b>	Rutile-basic covered electrode made from austenitic steel with a ferrite content of around 4 to 10% for welding food-grade stainless steels and Cr.Ni.Mo steels or equivalent.	Ø 2.5 x 300 mm Ø 3.2 x 350 mm Ø 4.0 x 350 mm	Vacuum packed boxes weighing 1.75 kg for the ø 2.5 and 2 kg for the other ø, with 9 inner boxes per outer box.	. AWS A5.4: E 316L-16 . EN ISO 3581A : E 19 12 3 L R 32 . CE certified . Approvals: BV et TUV



Products are supplied in vacuum packaging to ensure their integrity whatever the storage conditions and at the same price as the standard packaging offered by our leading competitors.

## MAINTENANCE AND REPAIR ELECTRODES

Name	Characteristics	Dimensions	Packaging	Standards
<b>ESB 44</b>	Basic double-covered, multi-purpose electrode specially designed for maintaining and repairing steels when mechanical characteristics are required.	Ø 2.5 x 350 mm Ø 3.2 x 350 mm Ø 4.0 x 450 mm	Plastic-coated cardboard box weighing 5 kg (350 mm) and 6.5 kg (450 mm) with 3 inner boxes per outer box.	. AWS A5.1: E 7016; . EN ISO 2560A : E 38 2 B 12 H10 . CE certified . Approvals: DB, DNV et TUV
<b>EI 312</b>	Rutile-basic coated electrode made from austenitic steel with a ferrite content of around 50% for welding high security steels that are difficult to weld, dissimilar steels, moulded steels and tool steels.	Ø 2.5 x 350 mm Ø 3.2 x 350 mm Ø 4.0 x 350 mm	Vacuum packed box weighing 1.75 kg for the ø 2.5; 3.2 and 2 kg for the ø 4.0 with 9 inner boxes per outer box.	. CE certified . Approvals: TUV



**ESB 44 electrodes: plastic film per individual box + many approvals for unrestricted use in all sectors for maintenance and fabrication.**

**EI 312 electrodes: supplied in vacuum packaging to ensure their integrity whatever the storage conditions and at the same price as the standard packaging offered by our leading competitors.**

## CAST IRON ELECTRODES: for buttering and assembling

Name	Characteristics	Dimensions	Packaging	Standards
EN 416	Electrode with a nickel-iron wire core for assembling and repairing spheroidal graphite cast irons with or without pre-heating, for assemblies subject to intense strain.	Ø 2.5 x 350 mm Ø 3.2 x 350 mm Ø 4.0 x 450 mm	Vacuum packed boxes weighing 1.75 kg (Ø 2.5, 3.2) and 2.25 kg (Ø 4.0) with 9 inner boxes per outer box.	. AWS A5.15 : E NiFe CI . EN ISO 1071 : EC NiFe CI 3
EN 402	Electrode with a nickel wire core for assembling and repairing grey cast irons, white- and black-cored malleable cast irons and nodular cast irons, with pre-heating.	Ø 2.5 x 350 mm Ø 3.2 x 350 mm Ø 4.0 x 350 mm	Vacuum packed boxes weighing 1.75 kg (Ø 2.5, 3.2) and 2.25 kg (Ø 4.0) with 9 inner boxes per outer box.	. AWS A5.15 : E Ni CI . EN ISO 1071 : EC Ni CI 3



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## HARD FACING APPLICATIONS: shocks, pressure and metallic or mineral abrasions

Name	Characteristics	Dimensions	Packaging
EH 245	Basic covered, austenitic manganese steel electrode for wear-resistant hardfacing deposits. For parts subjected to heavy impacts and shocks. Also suitable for repairing Hadfield-type steel with magnesium.	Ø 3.2 X 350 mm Ø 4.0 x 450 mm	Plastic-coated cardboard boxes weighing 5 kg for the Ø 3.2 mm and 6.5 kg for the Ø 4.00, with 3 inner boxes per outer box.
EH 360R	Rutile-covered electrode for hard facing steels subject to a combination of wear through metallic or mineral abrasions, shocks and pressure.	Ø 3.2 X 350 mm Ø 4.0 x 450 mm	Plastic-coated cardboard boxes weighing 5 kg for the Ø 3.2 mm and 6.5 kg for the Ø 4.00, with 3 inner boxes per outer box.
EH 531	Hard covered, high recovery (235%), hard facing electrode depositing primary chrome and boron carbides making the deposit highly resistant to mineral abrasions and moderately resistant to shocks.	Ø 3.2 X 350 mm Ø 4.0 x 350 mm	Plastic-coated cardboard boxes weighing 5 kg, with 3 inner boxes per outer box.



Plastic film per individual box + cardboard outer packaging (x 3 boxes) + wide range of options enabling you to refine your selection according to specific stresses

## WIRES: for thin welding, root pass or filling pass, welding under a solid flux

Name	Characteristics	Dimensions	Packaging	Standards
<b>OG 2</b>	Solid copper-coated steel wire with a higher manganese content for the oxyacetylene welding of low carbon-based steels with mechanical characteristics up to 410 N/mm <sup>2</sup> .	Ø 1.6 mm Ø 2.0 mm Ø 2.4 mm Ø 3.2 mm	5 kg cardboard box	. AWS A5.2 : R 60 . EN ISO 12736 : O II
<b>TG 1</b>	Solid copper-coated steel wire for the argon gas-shielded TIG welding of low carbon-based steels.	Ø 1.6 mm Ø 2.0 mm Ø 2.4 mm Ø 3.2 mm	5 kg cardboard box	. AWS A5.18 : ER 70 S-3 . EN ISO 636-A : W 42 3 W2Si
<b>TG 2</b>	Solid copper-coated wire for the gas-shielded (argon) TIG welding of E36 structural steels or equivalent.	Ø 1.6 mm Ø 2.0 mm Ø 2.4 mm Ø 3.2 mm	5 kg cardboard box	. AWS A5.18: ER 70 S-6 . EN ISO 636-A : W 46 2 W3Si1 . CE certified . Approvals: BV, CWB, DNV; GL, and TUV.
<b>MG 2</b>	Solid copper-coated wire for the CO <sub>2</sub> or Ar+CO <sub>2</sub> gas-shielded MAG welding of low-carbon and low-alloy steels, E36 structural steels or equivalent.	Ø 0.8 mm Ø 1.0 mm Ø 1.2 mm	1, 5 and 15 kg spools, 250 and 400 kg drum upon request with lead time	. AWS A5.18: ER 70 S-6 . EN ISO 14341-A : G 42 4 M21 G 3Si1 . CE certified, . Approvals: ABS, BV, CWB, DB, GL, HAKC, LR, RINA, TL and TUV.
<b>FCW 21</b>	Metal-cored, flux-cored wire for welding structural steels with exceptional weld properties using short arc and axial spray arc procedures. Well-suited to root and position welding, even on unprepared joints.	Ø 1.2 mm	15 kg metallic spool with hub	. AWS A5.18 : E70C-6M H4 . AWS A5.20 : E71T-1MJ H4 . EN ISO 17632-A : T 46 4 M M 2 H5 . CE certified . Approvals: TUV
<b>FCW 12</b>	Rutile flux-cored wire specially designed for welding structural steels for boiler works, piping, mechanically-welded manufacturing and shipbuilding using an M21 gas mixture.	Ø 1.2 mm Ø 1.6 mm	15 kg spool	. AWS A 5.20 : E71T1-M . EN ISO 17632-A : T 46 2 P M 1
<b>FCH 360</b>	Metallic powder, flux-cored wire for the gas-shielded-repair of parts that must be resistant to mineral abrasion, metal/metal abrasion and moderate shocks for operating temperatures up to 600°C.	Ø 1.2 mm Ø 1.6 mm	15 kg spool	. EN 14700 : T Fe6



Several approvals for unrestricted use in all sectors + products are generally supplied with a 3.1 certificate.