WELDING ELECTRODES

**HILCO HARDMELT 620**
AWS A5.13: E Fe-4 (mod.)
EN 14700: E F 4-UM-60-ST
Rutile coated electrode for wear resistant surfacing tool steels subject to metal-to-metal wear at elevated temperatures up to 550°C. Deposit weld metal is a high speed steel (HSS). Hardness of pure weld metal is 62 HRC can be increased after tempering.

**HILCO HARDMELT 638**
EN 14700: E Fe-4
Basic coated high efficiency (205%) electrode for wear resistant surfacing parts subject to grinding abrasion and moderate impact. Hardness of pure deposit weld metal is 63 HRC.

**HILCO SUGARHARD**
EN ISO 1071: E CNI-Cl
AWS A5.15: E N-Cl
Basic coated electrode for roughening the wet mill rollers used in the sugar can crushing process. Hardness of pure deposit weld metal is 63 HRC.

**HILCO PURE NICKEL**
EN ISO 1071: E C Ni-1
AWS A5.15: E N-Cl
Basic coated electrode for cold welding grey and malleable cast iron grades and for joining these base metals to steel, copper and copper alloys. Recommended for usage on highly contaminated cast iron grades.

**HILCO NICKEL IRON**
EN ISO 1071: E C Ni-1
AWS A5.15: E N-Cl
Basic coated electrode for repair, construction and production welding all commercial cast iron grades.

**ALUMINIUM ALLOYS**

**HILCO ALUMINIL Si5**
AWS A5.3: E 4043
EN ISO 18273: E Al-Si5 (AlSi5)
Werkstoffnr. 3.2245
The original all-purpose aluminium electrode for arc welding and brazing aluminium alloys containing up to 7% Si. Preheat at 150°C to 250°C thicker work-pieces prior to welding!

**HILCO ALUMINIL Si12**
EN ISO 18273: E Al-Si12 (AlSi12)
Werkstoffnr. 3.2585
Smooth welding aluminium electrode for welding aluminium castings, good colour match with base materials. Preheat thicker work-pieces prior to welding.

**COPPER ALLOYS**

**HILCO BRONSIL**
AWS A5.6: E Cu-Sn-Cl (mod.)
EN ISO 17777: CuSn7 (CuSn7)
Werkstoffnr. 2.1025
Basic coated tin-bronze electrode for joining and surfacing copper, copper alloys and bronze alloys. To be used for mechanical engineering and ship-building.

**Welding positions**
- All positions
- All positions, except vertical downwars
- Flat butt and fillet welds only
- Flat butt, fillet welds, limited vertical upwards and overhead
- Flat butt and fillet welds, limited vertical upwards

**Other Hilco ready-to-weld consumables and accessories**
- MIG/MAG welding wires for:
  - mild and high tensile steels
  - low alloy steels
  - stainless steels
  - aluminium & aluminium alloys
  - copper and copper alloys
- TG welding rods for:
  - mild and high tensile steels
  - low alloy steels
  - stainless steels
  - aluminium & aluminium alloys
  - copper and copper alloys
- Accessories:
  - cutting and gouging electrodes
  - tungsten-electrodes
  - welding cables
  - welding machines
  - abrasives
  - oxy-acetylene gas welding rods
  - brazing rods and fluxes for brazing
UN- AND LOW ALLOYED STEEL

## Rutile Coated Electrodes

**HILCO RED EXTRA**
AWS A5.1: E 6013
EN ISO 2560-A: E 42 0 RC 11
- Universal electrode for all welding positions, including vertical down. This electrode is characterised by easy handling, smooth arc transfer, easy slag removal and a finely rooted bead surface. Especially suitable for construction work where the use of one single type of electrode is permissible.

**HILCO VELVETA**
AWS A5.1: E 6013
EN ISO 2560-A: E 42 0 RR 32
- The quiet and easy controllable electrode, for smooth welding, especially vertical upwards. Designed for small diameter pipes, excellent X-ray quality. All-current type (AC/DC).

**HILCO BROWN**
AWS A5.1: E 6013
EN ISO 2560-A: E 42 0 RC 11
- Fast freezing rutile coated electrode for all welding positions, especially vertical down. Excellent for usage on rusty, primed and contaminated steels.

**HILCO VELORA**
AWS A5.1: E 6013
EN ISO 2560-A: E 42 0 RR 12
- Slow freezing electrode for welding thin plate in horizontal position. Spatter free type, less rework. Easy striking, even on transformers with low OCV, min. 42V.

## Low Hydrogen Electrodes

**HILCO BASIC SS**
AWS A5.1: E 7016
EN ISO 2560-A: E 38 3 B 12 H10
- Double coated rutile basic electrode for all position welding on both AC and DC current except vertical down position. This electrode is characterised by easy handling, a well-controllable arc, excellent root penetration, easy slag removal and excellent metallurgical properties up to -350°C.

**HILCO BASIC SUPER**
AWS A5.1: E 7018-I
EN ISO 2560-A: E 42 5 B 32 HS
- Universal low hydrogen electrode for all welding positions, except vertical down position. For applications where high demands on impact values (even at low temperatures, down to -40°C) are required. Operates on both AC and DC.

**HILCO BASIC**
AWS A5.1: E 7018-I
EN ISO 2560-A: E 42 5 B 32 HS
- General purpose low hydrogen electrode for all welding positions, except vertical down. Smooth, quiet arc, very low spatter, easy slag removal and excellent mechanical properties down to -350°C.

**HILCO B19CrMo**
AWS A5.1: E 8018-B2 H4
EN ISO 3580-A: E CrMo 1 B 32 HS
- Basic coated low hydrogen (HDM < 5 ml./100 gr. deposit weld metal) for welding low alloyed fine grain and creep resistant steels like 13CrMo4-5 up to a maximum operating temperature of 550°C.

**HILCO B20CrMo**
AWS A5.1: E 9018-B3 H4
EN ISO 3580-A: E CrMo 2 B 32 HS
- Basic coated low hydrogen (HDM < 5 ml./100 gr. deposit weld metal) electrode for welding Low alloyed fine grain and creep resistant steels like 10CrMo9-10 up to a maximum operating temperature of 600°C.

## High Efficiency Electrodes

**HILCO REGINA 150**
AWS A5.1: E 7024-I
EN ISO 2560-A: E 42 2 RA S3
- Rutile-acid coated (recovery 160%) electrode for making x-ray quality fillet welds in the flat and horizontal position. The electrode has a smooth quiet arc, very low spatter and easily removable slag (self-releasing even in narrow angles).

**HILCO REGINA 160**
AWS A5.1: E 7024-I
EN ISO 2560-A: E 42 0 RR S3
- Easy-to-handle high efficiency (recovery 160%) electrode for smooth fast fillet welding in the flat and horizontal position. An all-current type (AC/DC).

## Cellulose Coated Electrodes

### HILCO PIPEWELD 6010
AWS A5.1: E 6010
EN ISO 2560-A: E 38 3 C 21
- This electrode is recommended for all welding positions, particularly in vertical down and overhead position. Characterised by a deeply penetrating, forceful, spray type arc and readily removable slag.

### HILCO PIPEWELD 7010
AWS A5.1: E 7010
EN ISO 2560-A: E 42 3 C 25
- This electrode is recommended primarily for welding high-strength pipe butt joints in the vertical down position. The electrode is characterised by a deeply penetrating, forceful, spray type arc and readily removable slag.

### HILCO E6011
AWS A5.1: E 6011
- Universal electrode for all welding positions. The electrode is characterised by a deeply penetrating, easy handling, forceful, spray type arc and readily removable slag. The ideal choice for welding through light to medium amounts of dirty, rusty painted or galvanized materials.

## Stainless Steel

### Corrosion and Acid Resistant

**HILCO HILCHROME 308R**
AWS A5.4: ~E312-17
EN ISO 3581-A: E 19 9 L R 3 2
- Welding electrode for welding low carbon 18Cr10Ni austenitic stainless steel grades like AISI 304, 304L. Typical applications include all industries where similar materials (incl. higher carbon types) as well as ferritic 13% Cr steels are used.

**HILCO HILCHROME 316R**
AWS A5.4: E316L-17
EN ISO 3581-A: E 19 12 3 L R 3 2
- Multi-purpose electrode for welding low carbon 17Cr12NiMo austenitic stainless steel grades like AISI 316, 316L. Universal in applications but typical for all industries where super corrosion resistance is required.

**HILCO HILCHROME 347R**
AWS A5.4: E19-17
EN ISO 3581-A: E 19 9 Nb R 3 2
- Stabilised electrode for welding low carbon 18Cr10NiMoNb (Cb) austenitic stainless steel grades like AISI 347, 321. Also suitable for unstable grades 304 and 304L. All-current type (AC/DC).

## Repair and Maintenance

### HILCO HILCHROME 307R
AWS A5.4: E 307-16 (mod.)
EN ISO 3581-A: E 18 8 Ph R 12
Werkstoffnr. 1.4307
- Stabilised electrode for joining dissimilar steels and difficult-to-weld steels. Typical applications include joining 18-8 steels, spring steels, tool steels, and high carbon steels. The electrode is recommended for buffer layers prior to surfacing.

### HILCO HILCHROME 312R
AWS A5.4: E312-17
EN ISO 3581-A: E 29 9 R 3 2
Werkstoffnr. 1.4337
- Rutilic electrode for welding low carbon 18Cr10Ni austenitic stainless steel grades like AISI 304, 304L. Typical applications include all industries where similar materials (incl. higher carbon types) are used.

### HILCO HILCHROME 309R
AWS A5.4: E309Mo-17
EN ISO 3581-A: E 23 12 L R 3 2
Werkstoffnr. 1.4439
- Rutilic electrode for welding corrosion resistant and heat resistant CrNi steels: joining dissimilar materials and buffering. Typical applications include joining high-strength steels, un- and low alloyed heat treatable steels, stainless ferritic chromium and austenitic chrome-nickel steels, austenitic manganese steels. The electrode suitable for joining clad steels.

### HILCO HILCHROME 309MoR
AWS A5.4: E309MoNb-17
EN ISO 3581-A: E 23 12 L R 3 2
Werkstoffnr. 1.4459
- Rutilic electrode for joining similar and dissimilar steels, buffering joining hardenable and difficult-to-weld steels. Increased FN content ensuring maximum cracking resistance.

### HILCO HARDMELT 600
EN 14700 E 608
DIN 8555: E 6-UHM-60
- Basic coated electrode for wear resistant surfaces on parts of steels, cast steel and high Mn-steel, subject to abrasion, metal-to-metal wear, impact and/or compression stress. Deposit can be machined by grinding only. Hardness of pure weld deposit approx. 600 HB.