Soudotec

www.fsh-welding.ca

1-800-361-9097

EZ PACK - 0.5 kg

STEEL / ALLOY STEEL BRONZE / ALUMINUM STAINLESS STEEL

HARDFACING CUTTING - PIERCING -CHAMFERING / CAST IRON

SUMMARY & EQUIVALENCES

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High quality electrode with a specially designed coating for welding mild steels and specifically galvanized steels.

Elongation :

Tensile strength : 80 000 psi (550 MPa) Yield strength : 64 000 psi (440 MPa) 24 - 28 %

The product 🕀 :

- All-position welding, including vertical down
- Excellent on AC power supply, low amperage
- Ideal for thin sheets
- · Flexible moisture-resistant coating
- Easy striking and re-striking (OCV = 45 V); ideal for tack welds

APPI ICATIONS

Recommended for steel furniture, thin sheet metal, farm machinery,

PROCEDURE

Remove any trace of oil, grease and dirt from the surface. Remove damaged metal and cracks with the Soudotec G12 electrode. Maintain a short arc. Remove slag between each pass.

Ø mm - (pouce)	AMPÉRAGE (A)
1.6 - (1/16)	30 - 45
2.0 - (5/64)	40 - 60
2.5 - (3/32)	70 - 90



STEEL



Exceptional **high-strength** electrode for welding high carbon and high alloy steels. Highly recommended for welding all types of unknown steels between themselves or as dissimilar assemblies. Excellent as a cushion before hardfacing on high alloy steel.

ALLOY

STEEL

Tensile strength :	120 000 psi (827 MPa)
Yield strength :	100 000 psi (690 MPa)
Hardness :	21 HRC
Elongation :	28 - 32 %

The product 🕀 :

- · Excellent mechanical properties
- · Very good weldability in position
- · Machinable, crack-free deposit
- · Corrosion, heat and oxidation resistance

APPLICATIONS

Repair of spring blades, drill bits, molds, dies, chains, mechanical shovel parts, crane booms, axles, shafts, tool steels, cast steels, armour steels, etc.

PROCEDURE

Remove any trace of oil, grease and dirt from the surface. Remove damaged metal with the **Soudotec G12** electrode. Maintain a short arc. Remove slag between each pass.







CUTTING & CHAMFERING

Exceptional electrode with **superior blowing capacity** for gouging, cutting and piercing almost any metal such as carbon steels, low alloy steels, stainless steels, cast iron, copper and aluminum.

The product 🔂 :

- · Does not require any compressed air
- · Excellent performance on AC power supply
- · Easy striking and restriking
- Easy-to-use electrode
- No slag adherence to base metal

APPLICATIONS

Ideal for gouging weld beads, cast irons, stainless steels and almost any other metal. Excellent for piercing and cutting.

PROCEDURE

Place electrode tip on metal and push rapidly back and forth in a sawing motion while holding almost flat (20°) and in direct contact with the workpiece. For deeper grooves, repeat the procedure.

Ø mm - (inch)	AMPERAGE (A)
2.5 - (3/32)	120 - 225



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HARDFACING

All-position economical hardfacing electrode for hardfacing carbon steels, lowalloy steels, cast steels and manganese steels subjected to abrasion, moderate impacts, and metal-to-metal friction.

Hardness (as-welded): 55 - 60 HRC

The product 🔂 :

- · Excellent all-position weldability, even on AC power supply
- Crack-free deposit
- · Smooth arc and low spatter
- · Dense and porosity-free deposits
- · Easy slag removal

APPLICATIONS

Crusher jaws, plow blades, excavation equipment, pulleys, guides and transport rails, chisels, scrapers, bucket teeth, etc.

PROCEDURE

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Remove any trace of oil, grease and/or dirt from the surface. Remove damaged metal with **Soudotec G12**. Keep a short arc with the electrode slightly inclined. Remove slag between passes. If more than three passes are required, use **Soudotec 340** or **Soudotec 342** as a cushion.

Ø mm - (inch)	AMPERAGE (A)
3.2 - (1/8)	110 - 135





STAINLESS STEEL

Very high-recovery (175%) 316L «JET» type electrode for welding and building up Cr-Ni-Mo stainless steels type; 316, 316L, 317, 317L and 318.

 Tensile strength :
 90 000 psi (620 MPa)

 Yield strength :
 68 200 psi (470 MPa)

 Elongation :
 40 %

The product 🔂 :

- · Excellent corrosion and heat resistance
- · Easy slag removal
- · Easy striking and restriking; the electrode will not overheat
- · Ideal on thin sheets and heavy sections
- · Very high deposit rate

APPLICATIONS

Recommended for food and dairy industries, slaughterhouses, bottling machinery, hospital equipment, paper mills, chemical industries, etc. Ideal for 1.6 mm (1/16") thick stainless steel sections.

PROCEDURE

Remove any trace of oil, grease and dirt from the surface. Remove damaged metal and cracks with the **Soudotec 212 SP** or **Soudotec G12** electrode. Maintain a short arc. Remove slag between each pass. Only use perfectly dry electrodes.

Ø mm - (inch)	AMPERAGE (A)
1.6 - (1/16)	35 - 50
2.5 - (3/32)	55 - 105







Economical ferro-nickel type electrode (Ni 60) for joining grey, malleable, nodular and highly solicited cast iron. Recommended for welding dissimilar assemblies between cast iron and steel. Excellent on dirty and oily cast iron.

Tensile strength : 65 000 psi (450 MPa) Hardness : 200 BH

The product 🛟 :

- · High cracking resistance and homogeneous deposit
- · Excellent anchorage of deposited metal
- All position weldability
- · Hardly machinable deposit
- Conform to standard AWS A5.15 : ENiFe-CI

APPLICATIONS

Engine blocks, agricultural equipment, high thickness parts, pump housings, foundry defaults, cast parts, etc.

PROCEDURE

Clean surface of oil, grease and dirt. Remove cracks with **Soudotec G12** electrode. Keep a short arc. Peen each bead for stress relief. Let cool slowly.

	Ø mm - (inch)	AMPERAGE (A)
	2.5 - (3/32)	50 - 80
М	3.2 - (1/8)	90 - 110







Economical pure nickel type electrode (Ni 99) for joining grey, malleable and nodular cast iron. Excellent for buttering before using a ferro-nickel type electrode. The coating is non conductive.

Tensile strength: 50 000 psi (350 MPa)

Hardness : 180 BH

The product 🛟 :

- Excellent machinability
- Porosity free deposit
- All position weldability
- · Excellent anchorage of deposited metal
- Conforms to standard AWS A5.15 : ENi-CI

APPLICATIONS

Ideal for rebuilding cast iron parts and for joining thin parts. Machinable errors, head of engine, cylinder chamber, transmission box, reducers, cast parts. Recommended for sealing joints.

PROCEDURE

Clean surface of oil, grease and dirt. Remove damaged metal or chamfer cracks with the **Soudotec G12** electrode. Keep a short arc. Peen each bead for stress relief. Let cool slowly.

Ø mm - (inch)	AMPERAGE (A)
2.5 - (3/32)	50 - 80
3.2 - (1/8)	90 - 110



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High strength flux-coated rod with low silver content for brazing ferrous metals and copper alloys together or as dissimilar assemblies.

COPPER

ALLOY

 Tensile strength :
 100 000 psi (689 MPa)

 Elongation :
 25 %

 Hardness :
 200 BH

 Bonding temperature :
 760°C (1 400°F)

The product 🔂 :

- Excellent fluidity
- · May replace silver alloys in certain applications
- · Good adherence to cast irons, copper alloys, stainless and alloy steels
- · Deposits suitable to plating

APPLICATIONS

Dissimilar assemblies. Recommended for the repair of tempered steel parts, tools, molds (tool steel), extending drill bits, bearings, fittings, vices, bushings, etc. Do not use on aluminum and/or magnesium alloys.

PROCEDURE

Clean the section to be brazed. Gouge the thick sections and preheat the joint. Heat to obtain a liquid flux. Melt filler metal until it flows and bonds easily with the base metal. Cool slowly. Use a neutral flame.









ALUMINUM

Specially designed electrode for welding and rebuilding aluminum and its various alloys.

 Tensile strength :
 34 000 psi (235 MPa)

 Elongation :
 15 - 25 %

 Hardness :
 40 - 60 BH

The product 🔂 :

- · Porosity-free and corrosion resistant deposit
- · Good color match with aluminum
- · Stable arc in all positions
- · Active coating especially suited for welding of contaminated aluminum
- May be used with torch
- Only use in CC+ polarity

APPLICATIONS

Recommended for cast aluminum parts, truck bodies, transmissions, tanks, pipes, repairing machining errors, building up missing sections on castings and mouldings, extrusions, plates, etc.

PROCEDURE

Remove the oxide layer prior to welding. Preheating of thick sections is recommended to facilitate welding. Weld while holding the electrode almost vertical while maintaining a short arc so the coating almost touches the base metal. Remove slag between each pass and cool slowly. The deposit may not be anodized.

Ø mm - (inch)	AMPERAGE (A)
2.5 - (3/32)	50 - 80
3.2 - (1/8)	70 - 120





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Soudotec 390 is an all position easy applicable hardfacing electrode for all steels Soudotec 70 is an aluminum electrode DC+ only and can be used for torch brazing Soudotec 57 FC is a silver nickel torch rod with a very high strengh for brazing all these categories

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STAINLESS STEELS	FOR 100% MACHINABLE CAST IRON	DIRTY OILY UNKNOWN CAST IRON	UNKNOWN STEELS	HARD TO WELD STEELS	CAST STEELS	ALL MILD STEELS	BASE METAL	CHOOSE
416	99 BF	60	230	230	230	222	ALL MILD STEELS	THE R
416	99 BF	60	230	230	230	230	CAST STEELS	IGHT E
230	60 - 99 BF	60	230	230	230	230	HARD TO WELD STEELS	LECTR
230	60 - 99 BF	60	230	230	230	230	UNKNOWN STEELS	ODEF
8	•	60	60	60	60	60	DIRTY OILY UNKNOWN CAST IRON	OR TH
	99 BF	•	99 BF	99 BF	60 - 99 BF	60 - 99 BF	FOR 100% MACHINABLE CAST IRON	ERIGH
416		60	230	230	416	416	STAINLESS STEELS	T JOB
For gouging, piercing and cutting all ferrous and non-fer- rous metals AC or DC AC or DC Welder use Soudotec G12								