



Product Data Sheet

Rutile type C-Mn steels

SUPER OPTIMAL 6013

- ★ Superior weldability, finely rippled smooth weld beads.
- ★ Very soft arc, minimum spatter, radiographic quality welds.
- ★ Superior slag detachability.
- ★ Excellent impact notch toughness at 0°C.

Classification

AWS A5.1: E 6013

EN ISO 2560-A: E 38 0 R 12

Description and applications

Rutile type medium coated electrode, used for the welding of large structures and process pipe work in the shipbuilding and construction industries where precise fit-ups are difficult to achieve. Super Optimal 6013 is a high quality electrode designed to give high impact toughness properties. The electrode formulation promotes a forceful arc to ensure sound fusion and is tolerant to variations in welding current, which are important considerations when welding under site conditions.

Base Materials

S(P)235 to S(P)355; GP240-GP280

Typical Weld Metal Chemical Composition(%)

C	Si	Mn	P	S
0.070	0.30	0.40	0.030	0.030

All weld metal Mechanical Properties (Typical)

Heat Treatment	Yield Strength R_p (N/mm ²)	Tensile Strength R_m (N/mm ²)	Elongation A_5 (%)	Charpy impact value (ISO-V J 0°C)
As welded	≥380	470-540	≥24	≥70

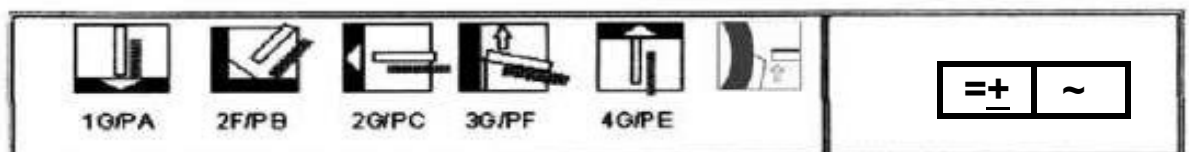
Amperes (A)

2.00mm	2.40mm	2.50/2.60mm	3.15/3.20mm	3.25mm	4.00mm	4.80mm	5.00mm
50-70	60-80	60-90	90-130	110-140	140-180	160-220	180-230

Welding instruction

Keep dry and avoid condensation.
Re-drying not generally required. If necessary : 100-110 °C for 1 hour.

Welding Positions



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