



ALLWELD 6013

C-Mn and low-alloy steels

Classification

AWS A5.1: E 6013 - EN ISO 2560-A: E 38 0 R 12

Features

- Rutile medium-heavy coated, finely rippled smooth weld beads.
- Very soft arc, minimum spatter, smooth fine rippled radiographic weld bead.
- Superior slag detachability.
- Excellent impact notch toughness at 0°C.
- Allweld 6013 is a high quality electrode designed to give high impact toughness properties.
- The electrode formulation promotes a forceful arc to ensure fusion and is tolerant to variations in welding current, which are important considerations when welding under site conditions.

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.
- Manufacturing - Architectural and Structural Metals, Mining, Agricultural, Motor Vehicles, Aerospace, Shipbuilding
- Construction - Residential, Commercial, Bridges, Dams, Utilities
- Or any other industry where welders may work

Usage Instructions

- Step 1: Prepare the metal to be welded. Attach clamps to hold your metal pieces together, if needed and attach ground clamp to the larger piece of stock that is being welded. Turn on your welding machine and select the correct amperage range for the work you are attempting.
- Step 2: Insert or clamp electrode to electrode holder. Hold the electrode holder in your dominant hand by the insulated handle, with the rod in a position so that striking the tip of it against the plate you are welding will be as natural a movement as possible.
- Step 3: Select the point where you wish to begin your weld. Strike the electrode against the surface of the metal, pulling it back slightly when you see an electric arc occur. Travel across the path of your weld with the electrode keeping a consistent arc, moving at a consistent speed, and in line with the path you want to weld. Keep the arc established as you move along the weld you are making and move the electrode in a sweeping motion to create a wider bead.

Technical Specifications

Base materials: S(P)235 to S(P)355; GP240-GP280

All weld metal mechanical properties (typical)

Heat Treatment	Tensile Strength R_m (N/mm ²)	Yield Strength R_m (N/mm ²)	Elongation A_5 %	Impact Energy ISOV(J) -30°C	Hardness
As welded	470-540	>380	>24	>70	--

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

Welding recommendations:

= +	~
-----	---

Welding positions:



Typical weld metal Chemical Composition (%)

C	Si	Mn	P	S
0.07	0.20	0.50	0.03	0.03

Amperes (A)

2.00	2.40	2.50	2.60	3.15/3.20
50-70	60-80	65-90	0.03	65-90
3.25	4.00	4.80	P	
100-140	150-190	160-220	180-230	