

# ULTRA EM12K

## SUBMERGED ARC WIRE

**AWS A5.17: EM12K**  
Medium Manganese, High Silicon SAW Wire

### CLASSIFICATION:

- AWS A5.17: EM12K
- High deposition and smooth bead
- Used with neutral or slightly basic fluxes • Preferred for carbon and low alloy steels

### TYPICAL APPLICATIONS:

- Pipe fabrication
- Heavy machinery
- Bridge structures
- Boilers & pressure vessels
- Shipbuilding and general engineering

### KEY FEATURES:

- Excellent mechanical properties
- High toughness and strength
- Good impact values with proper flux
- Uniform copper coating
- Low spatter and easy slag removal

### TYPICAL CHEMICAL COMPOSITION OF WIRE (%):

C – 0.10	Mn – 1.0	Si – 0.3	S/P – ≤ 0.03
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### MECHANICAL PROPERTIES OF WELD METAL:

UTS (MPa)	YS (MPa)	Elongation (%)	Impact (J) at 0°C
550	460	27	80

### PARAMETERS & PACKING DATA:

Diameter (mm)	Amperage Range (A)
2.5 / 3.2 / 4.0	400–800

### DCEN(Electrode Negative)

Supplied in spools or drums with proper copper coating.  
Used with agglomerated or fused fluxes.

### DCEN

Electrode Negative  
WELDING POSITION



USE:  
For thin sections