

## ESR 12

Rutile-Cellulosic Coated Electrode - Non Alloyed Steels

### Standards

AWS/ASME SFA - 5.1	E6012
EN ISO 2560 - A	E 38 0 RC 11
TS EN ISO 2560 - A	E 38 0 RC 11

### Properties and Applications

Especially suitable for welding in sheets thinner than 5 mm, galvanized sheets and tubes, primer painted, painted and slightly rusty steels and in production of tanks and boilers, tube installations. Very easily operated in positional welding, including vertically-down. Good gap-bridging even at wide root openings. Smooth arc, well suited for tack-welding due to its easy arc striking and re-striking properties. Possible to use equally well both with AC and DC. Welds are smooth and blending into base metal without undercutting.

### Materials

Width	DIN
S185 - S355J0	St 33 - St 52-3
P235GH, P265GH	H I, H II
P295GH	17Mn4
P235TR2 - P355T2	St 37.4 - St 52.4
P235G1TH, P255G1TH	St 35.8, St 45.8
L210 - L360NB	StE 210.7 - StE 360.7
S255N - S355N	StE 255- StE 355
GE 200, GE 240	GS 38, GS 45

### Typical Chemical Values of Weld Metal

Type of Analysis	C	Si	Mn
Weld Deposit	0.10	0.35	0.75

### Typical Mechanical Values of Weld Metal

Test Condition	Yield Strength (N/mm <sup>2</sup> )	Tensile Strength (N/mm <sup>2</sup> )	Elongation A5 (%)	Charpy V-Notch Properties (J)
As welded	470	540	26	0°C → 47

### Application Information

**Welding Positions**

PA PB PC PD PE PF PG

**Polarity:**

**Welding Parameters & Efficiency**

Diameter x Length (mm)	Current (A)
2.00x300	40-60
2.50x350	55-85
3.25x350	90-140
4.00x350	140-180
5.00x450	180-240

### Packaging Information

Product Code	Diameter x Length (mm)	Quantity per Box	Box Gross Weight (kg)	Boxes per Outer Box	Outer Box Gross Weight (kg)	Packaging Type
11107DREM2	2.00x300	377 pcs	4.07	3	12.40	Cardboard Box
11107HREM2	2.50x350	272 pcs	5.07	3	15.40	Cardboard Box
11107NREM2	3.25x350	168 pcs	5.07	3	15.40	Cardboard Box
11107QREM2	4.00x350	109 pcs	5.07	3	15.40	Cardboard Box
11107VSEM2	5.00x450	74 pcs	6.58	3	19.90	Cardboard Box

### Storage & Re-Drying Information

Generally not required. If required, redry for 1 hour at 110°C.  
It should be stored in a dry room (relative humidity < 50%, room temperature > 20°C) on wooden pallets.