

# ESR 11

*Rutile-Cellulosic Coated Electrode - Non Alloyed Steels*

Standards	
AWS/ASME SFA - 5.1	E6013
EN ISO 2560 - A	E 38 0 RC 11
TS EN ISO 2560 - A	E 38 0 RC 11

Approvals & Certificates		
TSE BV	TUV CE	DB HAKC

Materials	
EN	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
	AH 32, EH 36
	A, B, D

## 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. 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, slightly concave and blending into base metal without undercutting. Slag is self-releasing.



## Typical Chemical Values of Weld Metal

Type of Analysis	C	Si	Mn
Weld Deposit	0.10	0.45	0.70

## 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	480	550	25	0°C → 55

### Application Information

**Welding Positions**

PA

PB

PC

PD

PE

PF

PG

**Polarity:**

**Welding Parameters & Efficiency**

Diameter x Length (mm)	Current (A)
2.50x350	60-85
5.00x350	180-230
2.00x350	40-60
3.25x350	90-130
5.00x450	180-230
4.00x350	130-180
4.00x450	140-180
2.00x300	40-60
3.25x450	90-120
2.50x300	60-85

### Packaging Information

Product Code	Diameter X Length (mm)	Pieces per Box (-)	Weight Of The Box (kg)	Boxes Per Package	Weight Of The Package	Packaging Type
11100DQEM2	2.00x300	165 pcs	1.8	10	18.3	Cardboard Box
11100EBEM2	2.00x350	80 pcs	1.0	12	0.0	Plastic Box
11100EPEM2	2.00x350	79 pcs	1.0	12	12.8	Cardboard Box
11100EQEM2	2.00x350	198 pcs	2.5	6	15.4	Cardboard Box
11100EREM2	2.00x350	395 pcs	5.0	3	15.4	Cardboard Box
11100HBEM2	2.50x350	54 pcs	1.0	12	13.7	Plastic Box
11100HDEM2	2.50x350	136 pcs	2.5	3	8.1	Plastic Box
11100HEEM2	2.50x350	272 pcs	5.0	3	15.8	Plastic Box
11100HPEM2	2.50x350	54 pcs	1.0	12	13.5	Cardboard Box
11100HQEM2	2.50x350	136 pcs	2.5	6	15.4	Cardboard Box
11100HREM2	2.50x350	272 pcs	5.0	3	15.3	Cardboard Box
11100NBEM2	3.25x350	34 pcs	1.0	12	13.7	Plastic Box
11100NDEM2	3.25x350	84 pcs	2.5	3	8.1	Plastic Box
11100NEEM2	3.25x350	168 pcs	5.0	3	15.8	Plastic Box
11100NPEM2	3.25x350	34 pcs	1.0	12	12.8	Cardboard Box
11100NQEM2	3.25x350	84 pcs	2.5	6	15.4	Cardboard Box
11100NREM2	3.25x350	168 pcs	5.0	3	15.3	Cardboard Box
11100QBEM2	4.00x350	22 pcs	1.0	10	11.3	Plastic Box
11100QQEM2	4.00x350	55 pcs	2.5	6	15.4	Cardboard Box
11100QREM2	4.00x350	109 pcs	5.0	3	15.3	Cardboard Box
11100SREM2	4.00x450	89 pcs	5.0	3	15.4	Cardboard Box
11100SSEM2	4.00x450	115 pcs	6.5	3	19.9	Cardboard Box
11100TQEM2	5.00x350	37 pcs	2.5	6	15.4	Cardboard Box
11100TREM2	5.00x350	73 pcs	5.0	3	15.4	Cardboard Box
11100VQEM2	5.00x450	28 pcs	2.5	6	15.5	Cardboard Box
11100VSAM1	5.00x450	75 pcs	6.6	4	26.9	Cardboard Box

11100VSEM2	5.00x450	74 pcs	6.5	3	19.9	Cardboard Box
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#### Storage & Re-Drying Information

Generally not required. If required, redry for 1 hour at 110°C.