

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		
TUV GOST DB	BV TSE	HAKC CE

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
	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 ²)	Tensile Strength (N/mm ²)	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)
2.00x300	40-60
2.00x350	40-60
2.50x300	60-85
2.50x350	60-85
3.25x350	90-130

3.25x450	90-140
4.00x350	130-180
4.00x450	140-180
5.00x350	180-230
5.00x450	180-230

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
11100DQAM1	2.00x300	170 AD	1.89	6	11.50	Cardboard Box
11100DQEM2	2.00x300	165 AD	1.79	9	16.30	Cardboard Box
11100E9EM1	2.00x350	15 AD	0.23	30	7.00	Blister
11100EPEM2	2.00x350	79 AD	1.05	17	18.00	Cardboard Box
11100EQEM2	2.00x350	198 AD	2.54	6	15.40	Cardboard Box
11100EREM2	2.00x350	395 AD	5.07	3	15.40	Cardboard Box
11100GQAM1	2.50x300	130 AD	2.09	6	12.80	Cardboard Box
11100H9EM1	2.50x350	15 AD	0.31	30	9.60	Blister
11100HDEM2	2.50x350	136 AD	2.64	3	8.10	Plastic Box
11100HEEM2	2.50x350	272 AD	5.21	3	15.80	Plastic Box
11100HPEM2	2.50x350	54 AD	1.05	17	18.00	Cardboard Box
11100HQAM1	2.50x350	100 AD	1.89	6	11.60	Cardboard Box
11100HQEM2	2.50x350	136 AD	2.54	6	15.40	Cardboard Box
11100HREM2	2.50x350	272 AD	5.06	3	15.30	Cardboard Box
11100N9EM1	3.25x350	15 AD	0.37	30	11.40	Blister
11100NDEM2	3.25x350	84 AD	2.64	3	8.10	Plastic Box
11100NEEM2	3.25x350	168 AD	5.21	3	15.80	Plastic Box
11100NPEM2	3.25x350	34 AD	1.05	17	18.00	Cardboard Box
11100NQAM1	3.25x350	90 AD	2.74	6	16.60	Cardboard Box
11100NQEM2	3.25x350	84 AD	2.54	6	15.40	Cardboard Box
11100NREM2	3.25x350	168 AD	5.06	3	15.30	Cardboard Box
11100PSAM1	3.25x450	170 AD	6.71	2	13.60	Cardboard Box
11100QQEM2	4.00x350	55 AD	2.54	6	15.40	Cardboard Box
11100QREM2	4.00x350	109 AD	5.06	3	15.30	Cardboard Box
11100QSAM1	4.00x350	115 AD	5.33	4	21.50	Cardboard Box
11100SREM2	4.00x450	89 AD	5.07	3	15.40	Cardboard Box
11100SSEM2	4.00x450	115 AD	6.58	3	19.90	Cardboard Box
11100TQEM2	5.00x350	37 AD	2.54	6	15.40	Cardboard Box
11100TREM2	5.00x350	73 AD	5.07	3	15.40	Cardboard Box
11100TSAM1	5.00x350	70 AD	5.21	4	21.00	Cardboard Box
11100VQEM2	5.00x450	28 AD	2.54	6	15.50	Cardboard Box
11100VSAM1	5.00x450	75 AD	6.68	4	26.90	Cardboard Box
11100VSEM2	5.00x450	74 AD	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.