

ESR 13

Rutile Coated Electrode - Non Alloyed Steels

Standards	
AWS/ASME SFA - 5.1	E6013
EN ISO 2560 - A	E 42 0 RR 12
TS EN ISO 2560 - A	E 42 0 RR 12

Approvals & Certificates		
DB	ABS	BV
TUV	TSE	CWB
TL	GOST	CE

Materials	
Width	DIN
S185 - S355J0	St 33 - St 52.3
P235GH, P265GH	H I, H II
P295GH	17Mn4
P235TR2 - P355T2	St37.4 - St 52.4
P235G1TH, P255G1TH	StE 35.8, StE 45.8
L210 - L360NB	StE 210.7 - StE 360.7
S255N - S355N	StE 255 - StE 355
GE 200, GE 240, GE 260	GS 38, GS 45, GS 52
	AH 32, EH 36
	A, B, D

Properties and Applications

Suitable for joining and repair welding of light steel fabrications, iron works, wrought iron works, agricultural machines, boiler, chassis of vehicles. Suitable for all position except vertical-down. Particularly suited for the welding of horizontal fillets. Very smooth weld bead appearance, with easy arc striking and re-striking properties, quite and stable arc with fine-droplet metal transfer. Possible to use equally well both with AC and DC. Slag is completely self-releasing.



Typical Chemical Values of Weld Metal			
Type of Analysis	C	Si	Mn
Weld Deposit	0.07	0.45	0.6

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	500	575	28	0°C → 50

Application Information

Welding Positions

PA

PB

PC

PD

PE

PF

Polarity:

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Welding Parameters & Efficiency

Diameter x Length (mm)	Current (A)
2.00x250	40-60
2.00x300	40-60
2.00x350	40-60
2.50x350	60-90
3.25x350	90-140

4.00x350	140-190
4.00x450	140-180
5.00x350	200-240
5.00x450	200-240
6.00x450	260-320

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
11101CPAM1	2.00x250	170 AD	1.60	6	9.70	Cardboard Box
11101DQAM1	2.00x300	170 AD	1.83	6	11.10	Cardboard Box
11101DREM2	2.00x300	382 AD	4.07	3	12.40	Cardboard Box
11101EPEM2	2.00x350	79 AD	1.05	17	18.00	Cardboard Box
11101EQEM2	2.00x350	198 AD	2.54	6	15.40	Cardboard Box
11101EREM2	2.00x350	397 AD	5.07	3	15.40	Cardboard Box
11101HEEM2	2.50x350	238 AD	5.21	3	15.80	Plastic Box
11101HPAM1	2.50x350	5 AD	0.12	0	8.30	Cardboard Box
11101HPEM2	2.50x350	48 AD	1.05	17	18.00	Cardboard Box
11101HQAM1	2.50x350	100 AD	2.16	6	13.00	Cardboard Box
11101HQAM2	2.50x350	95 AD	2.05	6	12.30	Cardboard Box
11101HQAML	2.50x350	100 AD	2.20	6	13.20	Cardboard Box
11101HQEM2	2.50x350	119 AD	2.54	6	15.40	Cardboard Box
11101HREM2	2.50x350	238 AD	5.07	3	15.40	Cardboard Box
11101NEEM2	3.25x350	149 AD	5.21	3	15.80	Plastic Box
11101NPAM1	3.25x350	5 AD	0.18	0	8.30	Cardboard Box
11101NPEM2	3.25x350	30 AD	1.05	17	18.00	Cardboard Box
11101NQAM2	3.25x350	60 AD	2.05	6	12.30	Cardboard Box
11101NQEM2	3.25x350	74 AD	2.54	6	15.40	Cardboard Box
11101NRAM1	3.25x350	100 AD	3.43	4	13.80	Cardboard Box
11101NRAML	3.25x350	100 AD	3.42	4	13.70	Cardboard Box
11101NREM2	3.25x350	149 AD	5.07	3	15.40	Cardboard Box
11101QQEM2	4.00x350	51 AD	2.54	6	15.40	Cardboard Box
11101QRAM1	4.00x350	100 AD	4.97	4	20.00	Cardboard Box
11101QRAML	4.00x350	100 AD	4.96	4	19.90	Cardboard Box
11101QREM2	4.00x350	102 AD	5.07	3	15.40	Cardboard Box
11101SQEM2	4.00x450	35 AD	2.57	6	15.60	Cardboard Box
11101SREM2	4.00x450	70 AD	5.07	3	15.40	Cardboard Box
11101SSAM1	4.00x450	100 AD	7.24	2	14.60	Cardboard Box
11101SSEM2	4.00x450	91 AD	6.58	3	19.90	Cardboard Box
11101TQEM2	5.00x350	32 AD	2.54	6	15.40	Cardboard Box
11101TREM2	5.00x350	64 AD	5.07	3	15.40	Cardboard Box
11101TSAM1	5.00x350	65 AD	5.14	4	20.60	Cardboard Box
11101VSAM1	5.00x450	65 AD	6.62	2	13.30	Cardboard Box
11101VSEM2	5.00x450	65 AD	6.58	3	19.90	Cardboard Box
11101XSAM1	6.00x450	50 AD	7.22	2	14.50	Cardboard Box
11101XSEM2	6.00x450	46 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.