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

CWB	BV	ABS
DB	CE-DoP	TL
UKCA-DoP	UKCA	TSE
CE	TUV	

Materials

EN	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. Used in 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 (%)

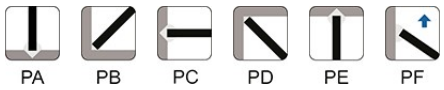
Type of Analysis	C	Si	Mn
Weld Deposit	0.07	0.45	0.60

Typical Mechanical Values of Weld Metal

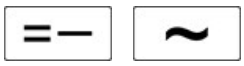
Test Condition	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation A5 (%)	Charpy V-Notch Properties (J)
As welded	500	560	28	0°C → 50

Application Information

Welding Positions



Polarity:



Welding Parameters & Efficiency

Diameter x Length (mm)	Current (A)	Weld Deposit(Kg)/1Kg Consumed Electrode	Number of Electrodes/1Kg Weld Deposit	Weld Metal Deposition Rate (Kg/h)
2.00x300	40-60	0,55	172	0,5
2.50x350	60-90	0,53	93	0,68
2.00x350	40-60	0,53	156	0,5
5.00x450	200-240	0,57	17	1,9
6.00x450	260-320	0,58	12	2,79
3.25x350	90-140	0,54	56	0,99
4.00x350	140-190	0,56	36	1,36
4.00x450	140-180	0,55	27	1,41
5.00x350	200-240	0,55	22	1,9

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
11101DREM2	2.00x300	382	4.0	3	12.4	Cardboard Box
11101EPEM2	2.00x350	79	1.0	12	12.8	Cardboard Box
11101EQEM2	2.00x350	198	2.5	6	15.4	Cardboard Box
11101EREM2	2.00x350	397	5.0	3	15.4	Cardboard Box
11101HBEM2	2.50x350	50	1.0	12	13.2	Plastic Box
11101HEEM2	2.50x350	253	5.0	3	15.8	Plastic Box
11101HPEM2	2.50x350	50	1.0	12	12.7	Cardboard Box
11101HQEM2	2.50x350	126	2.5	6	15.4	Cardboard Box
11101HREM2	2.50x350	253	5.0	3	15.4	Cardboard Box
11101NBEM2	3.25x350	30	1.0	12	13.5	Plastic Box
11101NEEM2	3.25x350	149	5.0	3	15.8	Plastic Box
11101NPAM1	3.25x350	5	0.2	0	8.3	Cardboard Box
11101NPEM2	3.25x350	30	1.0	12	12.8	Cardboard Box
11101NQAM2	3.25x350	60	2.0	6	12.3	Cardboard Box
11101NQEM2	3.25x350	74	2.5	6	15.4	Cardboard Box
11101NREM2	3.25x350	149	5.0	3	15.4	Cardboard Box
11101QQEM2	4.00x350	51	2.5	6	15.4	Cardboard Box
11101QREM2	4.00x350	102	5.0	3	15.4	Cardboard Box
11101SQEM2	4.00x450	35	2.5	6	15.6	Cardboard Box
11101SREM2	4.00x450	70	5.0	3	15.4	Cardboard Box
11101SSEM2	4.00x450	91	6.5	3	19.9	Cardboard Box
11101TQEM2	5.00x350	32	2.5	6	15.4	Cardboard Box
11101TREM2	5.00x350	64	5.0	3	15.4	Cardboard Box
11101VSEM2	5.00x450	65	6.5	3	19.9	Cardboard Box
11101XSEM2	6.00x450	46	6.5	3	19.9	Cardboard Box

Storage & Re-Drying Information

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