ESB 48

Basic Coated Electrode - Non Alloyed Steels

Standards

AWS/ASME SFA - 5.1	E7018 H8
EN ISO 2560 - A	E 42 3 B 42 H10
TS EN ISO 2560 - A	E 42 3 B 42 H10

Approvals & Certificates

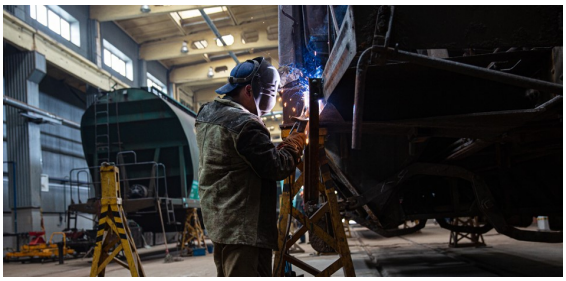
TUV	CWB	TSE
HAKC	BV	CE
LR	UKCA	UKCA-DoP
RMRS	CE-DoP	TL
ClassNK	ABS	DNV
RINA	DB	

Materials

EN	DIN
S185 - S355J2	St 33- St 52.3
P235GH, P265GH	H I, H II
P295GH, P355GH	17Mn4, 19Mn5
P235TR2 - P355T2	St37.4 - St 52.4
P235G1TH, P255G1TH	StE 35.8 - StE 45.8
L210 - L360NB	StE 210.7 - StE 360.7
L290MB - L360MB	StE 290.7 TM - StE 360.7 TM
S255N - S420N	StE 255- StE 420
GE 200, GE 240, GE 260	GS 38, GS 45, GS 52
	AH 32, EH 36
	A, B, D, E

Properties and Applications

Suitable for welding fabrication of dynamically loaded steel constructions, bridges, shipbuilding, pipelines, pressure vessels, tanks, boilers, and machinery where high toughness is required. Weld metal recovery is approximately 115%. Produces smooth and clean welds that merge seamlessly into the base metal without undercuts. Offers good gap-bridging properties. Welds are of X-ray quality. Also suitable for depositing buffer layers on high-carbon steels.



Typical Chemical Values of Weld Metal

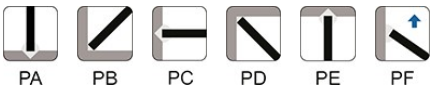
Type of Analysis	C	Si	Mn
Weld Deposit	0.08	0.40	1.10

Typical Mechanical Values of Weld Metal

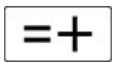
Test Condition	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation A5 (%)	Charpy V-Notch Properties (J)	
As welded	460	560	28	-30°C → 140	-40°C → 90

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)	Efficiency(%)
3.25x450	90-140	0,64	33	1,22	122
6.00x450	260-340	0,69	8	2,68	123
5.00x450	200-250	0,69	13	2,31	123
5.00x350	200-250	0,69	16	2,31	123
4.00x450	140-190	0,67	21	1,68	123
4.00x350	140-190	0,64	28	1,64	123
2.50x350	60-90	0,61	70	0,79	126
2.00x350	50-70	0,61	84	0,63	126
3.25x350	90-150	0,64	43	1,28	128

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
11204EBEM2	2.00x350	66	1.0	10	11.3	Plastic Box
11204EJEM2	2.00x350	160	2.5	6	15.5	VAC Box
11204EPEM2	2.00x350	64	1.0	12	12.8	Cardboard Box
11204EQEM2	2.00x350	160	2.5	6	15.4	Cardboard Box
11204EREM2	2.00x350	256	4.0	3	12.4	Cardboard Box
11204HBEM2	2.50x350	43	1.0	12	13.4	Plastic Box
11204HJEM2	2.50x350	107	2.5	6	15.5	VAC Box
11204HPEM2	2.50x350	43	1.0	12	12.8	Cardboard Box
11204HQEM2	2.50x350	107	2.5	6	15.4	Cardboard Box
11204HREM2	2.50x350	213	5.0	3	15.4	Cardboard Box
11204NBEM2	3.25x350	28	1.0	10	0.0	Plastic Box
11204NJEM2	3.25x350	69	2.5	6	15.5	VAC Box
11204NPEM2	3.25x350	27	1.0	12	12.8	Cardboard Box
11204NQEM2	3.25x350	69	2.5	6	15.4	Cardboard Box
11204NREM2	3.25x350	137	5.0	3	15.4	Cardboard Box
11204PJEM2	3.25x450	53	2.5	6	15.6	VAC Box
11204PSEM2	3.25x450	138	6.5	3	19.9	Cardboard Box
11204QJEM2	4.00x350	45	2.5	6	15.5	VAC Box
11204QREM2	4.00x350	91	5.0	3	15.4	Cardboard Box
11204SJEM2	4.00x450	34	2.5	6	15.6	VAC Box
11204SREM2	4.00x450	69	5.0	3	15.4	Cardboard Box
11204SSEM2	4.00x450	90	6.5	3	19.9	Cardboard Box
11204TJEM2	5.00x350	28	2.5	6	15.5	VAC Box
11204VREM2	5.00x450	47	5.0	3	15.4	Cardboard Box
11204VSEM2	5.00x450	62	6.5	3	19.9	Cardboard Box
11204XSEM2	6.00x450	40	6.5	3	19.9	Cardboard Box

Storage & Re-Drying Information

It can be dried maximum 5 times.
It has to be dried at 350°C for 2 hours.