

ESB 48

Basic Coated Electrode - Non Alloyed Steels

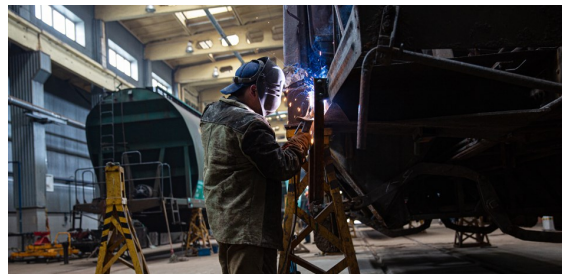
Standards	
AWS/ASME SFA - 5.1	E7018 H8
EN ISO 2560 - A	E 42 3 B 42 H10
TS EN ISO 2560 - A	E 42 3 B 42 H10

Approvals & Certificates		
DNV	RINA	RMRS
CWB	BV	ClassNK
TSE	ABS	DB
LR	CE	HAKC
TUV	TL	

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, bridge, shipbuilding, pipe-line, pressure vessels, tanks, boiler and machines where high toughness is required. Weld metal recovery is approx. 115%. Smooth and clean welds merging into base metal without undercuts. Good gap bridging properties. Welds are of X-ray quality. It is suited for depositing buffer layers on higher carbon steels.



Typical Chemical Values of Weld Metal

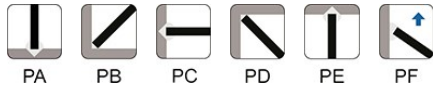
Type of Analysis	C	Si	Mn
Weld Deposit	0.08	0.40	1.10

Typical Mechanical Values of Weld Metal

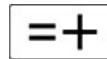
Test Condition	Yield Strength (N/mm ²)	Tensile Strength (N/mm ²)	Elongation A5 (%)	Charpy V-Notch Properties (J)	
As welded	460	560	28	-30°C → 140	-40°C → 90

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
5.00x350	200-250	0,69	16	2,31	123
5.00x450	200-250	0,69	13	2,31	123
4.00x350	140-190	0,64	28	1,64	123
4.00x450	140-190	0,67	21	1,68	123
6.00x450	260-340	0,69	8	2,68	123
2.00x350	50-70	0,61	84	0,63	126
2.50x350	60-90	0,61	70	0,79	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 pcs	1.0	10	11.3	Plastic Box
11204EJEM2	2.00x350	160 pcs	2.5	6	15.5	VAC Box
11204EPEM2	2.00x350	64 pcs	1.0	12	12.8	Cardboard Box
11204EQEM2	2.00x350	160 pcs	2.5	6	15.4	Cardboard Box
11204EREM2	2.00x350	256 pcs	4.0	3	12.4	Cardboard Box
11204HBEM2	2.50x350	43 pcs	1.0	12	12.8	Plastic Box
11204HJEM2	2.50x350	107 pcs	2.5	6	15.5	VAC Box
11204HPEM2	2.50x350	43 pcs	1.0	12	12.8	Cardboard Box
11204HQEM2	2.50x350	107 pcs	2.5	6	15.4	Cardboard Box
11204HREM2	2.50x350	213 pcs	5.0	3	15.4	Cardboard Box
11204NBEM2	3.25x350	28 pcs	1.0	12	0.0	Plastic Box
11204NJEM2	3.25x350	69 pcs	2.5	6	15.5	VAC Box
11204NPEM2	3.25x350	27 pcs	1.0	12	12.8	Cardboard Box
11204NQEM2	3.25x350	69 pcs	2.5	6	15.4	Cardboard Box
11204NREM2	3.25x350	137 pcs	5.0	3	15.4	Cardboard Box
11204PJEM2	3.25x450	53 pcs	2.5	6	15.6	VAC Box
11204PSEM2	3.25x450	138 pcs	6.5	3	19.9	Cardboard Box
11204QJEM2	4.00x350	45 pcs	2.5	6	15.5	VAC Box
11204QREM2	4.00x350	91 pcs	5.0	3	15.4	Cardboard Box
11204SJEM2	4.00x450	34 pcs	2.5	6	15.6	VAC Box
11204SREM2	4.00x450	69 pcs	5.0	3	15.4	Cardboard Box
11204SSEM2	4.00x450	90 pcs	6.5	3	19.9	Cardboard Box
11204TJEM2	5.00x350	28 pcs	2.5	6	15.5	VAC Box
11204VREM2	5.00x450	47 pcs	5.0	3	15.4	Cardboard Box
11204VSEM2	5.00x450	61 pcs	6.5	3	19.9	Cardboard Box
11204XSEM2	6.00x450	40 pcs	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.