

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

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.

Approvals & Certificates

ABS	BV	ClassNK
CWB	DB	DNV
GL	HAKC	LR
RINA	TL	TSE
TUV	CE	

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

Typical Chemical Values of Weld Metal







Type of Analysis	C	Si	Mn
Weld Deposit	0.075	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	500	570	27	-40°C → 80	-30°C → 90

Application Information

Welding Positions

Polarity:
= +

Welding Parameters & Efficiency

Diameter x Length (mm)	Current (A)
2.00x350	50-70
2.50x350	60-90
3.25x350	90-150
3.25x450	90-140
4.00x350	140-190
4.00x450	140-190

Product Code	Diameter x Length (mm)	Quantity per Box	Box Gross Weight (Kg)	Boxes per Outer Box	Outer Box Gross Weight (Kg)	Packaging Type
11204EREM2	2.00x350	256 AD	4.07	3	12.40	Cardboard Box
11204HJEM2	2.50x350	107 AD	2.54	6	15.50	VAC Box
11204HREM2	2.50x350	213 AD	5.06	3	15.40	Cardboard Box
11204NJEM2	3.25x350	69 AD	2.54	6	15.50	VAC Box
11204NREM2	3.25x350	137 AD	5.07	3	15.40	Cardboard Box
11204PSEM2	3.25x450	138 AD	6.58	3	19.90	Cardboard Box
11204QJEM2	4.00x350	45 AD	2.54	6	15.50	VAC Box
11204QREM2	4.00x350	91 AD	5.07	3	15.40	Cardboard Box
11204SJEM2	4.00x450	34 AD	2.56	6	15.60	VAC Box
11204SREM2	4.00x450	69 AD	5.07	3	15.40	Cardboard Box
11204SSEM2	4.00x450	90 AD	6.58	3	19.90	Cardboard Box
11204VREM2	5.00x450	47 AD	5.07	3	15.40	Cardboard Box
11204VSEM2	5.00x450	61 AD	6.58	3	19.90	Cardboard Box
11204XSEM2	6.00x450	40 AD	6.58	3	19.90	Cardboard Box

Storage & Re-Drying Information

It can be dried maximum 5 times.
 It should be stored in a dry room (relative humidity < 50%, room temperature > 20°C) on wooden pallets.
 It has to be dried at 350°C for 2 hours.