

ESB 50

Basic Coated Electrode - Non Alloyed Steels

Standards

AWS/ASME SFA - 5.1	E7018 H8
EN ISO 2560 - A	E 42 3 B 42 H5
TS EN ISO 2560 - A	E 42 3 B 42 H5

Properties and Applications

Suitable for welding fabrication of dynamically loaded heavy steel constructions, bridge, shipbuilding, pipe line, pressure vessels, tanks, boiler and machines where mechanical properties are required. Weld metal exhibits good toughness properties down to -60°C and produce tough and crack-free welded joints even on steels having a carbon content of up to 0.4%. Weld metal recovery amounts to approx. 120%. Welds are of X-ray quality. Electrode is suitable for depositing buffer layers on higher carbon steels.

Approvals & Certificates

ABS	BV	DB
DNV-GL	RINA	TL
TSE	TUV	CE

Materials

EN	DIN
S185 - S355J0	St 33- St 52.3
E295	St 50.2
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

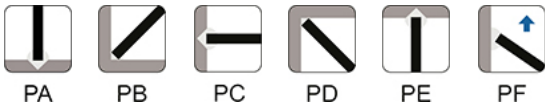
Type of Analysis	C	Si	Mn
Weld Deposit	0.07	0.35	1.45

Typical Mechanical Values of Weld Metal

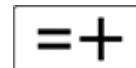
Test Condition	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation A5 (%)	Charpy V-Notch Properties (J)	
As welded	500	570	28	-30°C → 100	-50°C → 60

Application Information

Welding Positions



Polarity:



Welding Parameters & Efficiency

Diameter x Length (mm)	Current (A)
2.00x300	40-60
2.00x350	40-60
2.50x350	60-90
3.25x350	90-150
3.25x450	90-140

6.00x450	260-340
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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
11205DQAM1	2.00x300	140 AD	1.82	6	10.90	Cardboard Box
11205EJEM2	2.00x350	133 AD	2.06	6	12.60	VAC Box
11205EREM2	2.00x350	267 AD	4.07	3	12.40	Cardboard Box
11205HJEM2	2.50x350	111 AD	2.54	6	15.50	VAC Box
11205HQAM1	2.50x350	90 AD	2.07	6	12.50	Cardboard Box
11205HQEM2	2.50x350	111 AD	2.54	6	15.40	Cardboard Box
11205HREM2	2.50x350	223 AD	5.06	3	15.40	Cardboard Box
11205NJEM2	3.25x350	70 AD	2.54	6	15.50	VAC Box
11205NQEM2	3.25x350	70 AD	2.54	6	15.40	Cardboard Box
11205NRAM1	3.25x350	90 AD	3.26	4	13.00	Cardboard Box
11205NREM2	3.25x350	141 AD	5.06	3	15.40	Cardboard Box
11205PRAM1	3.25x450	100 AD	4.60	2	9.20	Cardboard Box
11205PSEM2	3.25x450	144 AD	6.58	3	19.90	Cardboard Box
11205QJEM2	4.00x350	47 AD	2.54	6	15.50	VAC Box
11205QQEM2	4.00x350	47 AD	2.54	6	15.40	Cardboard Box
11205QREM2	4.00x350	94 AD	5.07	3	15.40	Cardboard Box
11205QSAM1	4.00x350	100 AD	5.40	4	21.60	Cardboard Box
11205SSAM1	4.00x450	100 AD	6.94	2	13.90	Cardboard Box
11205SSEM2	4.00x450	95 AD	6.58	3	19.90	Cardboard Box
11205VSAM1	5.00x450	65 AD	6.94	2	13.90	Cardboard Box
11205VSEM2	5.00x450	62 AD	6.58	3	19.90	Cardboard Box
11205XSAM1	6.00x450	40 AD	5.96	2	11.90	Cardboard Box
11205XSEM2	6.00x450	44 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.