

ESB 52

Basic Coated Electrode - Non Alloyed Steels

Standards

AWS/ASME SFA - 5.1	E7018-1 H4R
EN ISO 2560 - A	E 42 5 B 42 H5
TS EN ISO 2560 - A	E 42 5 B 42 H5
CSA W48	E4918-1-H4

Approvals & Certificates

ABS	HAKC	TSE
LR	TUV	CWB
CE	DNV	BV
TL	DB	

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

Properties and Applications

Suitable for welding of steel constructions, bridge, dam, thermal power plants, petrochemical industry, shipbuilding, high strength pipe-lines, pressure vessels, tanks, which are dynamically loaded and require high mechanical properties. The weld metal has a very low hydrogen content and is resistant to ageing. Produces tough and crack-free welded joints, also suitable for welding steels having a carbon content of up to 0.6 % and joining of rails. Good operating characteristic, also in root pass and positional welding. Very good gap bridging properties. Welds are of X-ray quality.



Typical Chemical Values of Weld Metal

Type of Analysis	C	Si	Mn
Weld Deposit	0.07	0.40	1.20

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	550	28	-46°C → 110	-50°C → 100

Application Information

Welding Positions						Polarity:
PA	PB	PC	PD	PE	PF	
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	100-140	0,64	33	1,33	122	
3.25x350	100-150	0,6	47	1,21	122	
2.50x350	60-100	0,59	73	0,8	123	
4.00x450	140-190	0,6	23	1,54	124	
4.00x350	140-190	0,62	31	1,67	124	
6.00x450	260-340	0,69	9	3,19	124	
5.00x450	180-250	0,65	15	2,36	124	
2.00x300	40-70	0,59	89	0,68	124	

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
11206DJEM2	2.00x300	131 pcs	1.8	10	18.3	VAC Box
11206HJEM2	2.50x350	105 pcs	2.5	6	15.6	VAC Box
11206HQEM2	2.50x350	105 pcs	2.5	6	15.4	Cardboard Box
11206HREM2	2.50x350	209 pcs	5.0	3	15.4	Cardboard Box
11206NJEM2	3.25x350	70 pcs	2.5	6	15.4	VAC Box
11206NQEM2	3.25x350	70 pcs	2.5	6	15.4	Cardboard Box
11206NREM2	3.25x350	140 pcs	5.0	3	15.4	Cardboard Box
11206PJEM2	3.25x450	52 pcs	2.5	6	15.6	VAC Box
11206PSEM2	3.25x450	135 pcs	6.5	3	19.9	Cardboard Box
11206QJEM2	4.00x350	48 pcs	2.5	6	15.5	VAC Box
11206QQEM2	4.00x350	48 pcs	2.5	6	15.4	Cardboard Box
11206QREM2	4.00x350	96 pcs	5.0	3	15.4	Cardboard Box
11206SJEM2	4.00x450	37 pcs	2.5	6	15.6	VAC Box
11206SREM2	4.00x450	73 pcs	5.0	3	15.4	Cardboard Box
11206SSEM2	4.00x450	95 pcs	6.5	3	19.9	Cardboard Box
11206VJEM2	5.00x450	24 pcs	2.5	6	16.0	VAC Box
11206VSEM2	5.00x450	61 pcs	6.5	3	19.9	Cardboard Box
11206XJFM2	6.00x450	16 pcs	2.5	5	15.6	VAC Box
11206XSEM2	6.00x450	42 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.