

S-717 X M-12K [A-2]

Type : Neutral



Conformances

AWS A5.17/ ASME SFA5.17 F7A(P)6-EM12K
 AWS A5.23/ ASME SFA5.23 F8A0-EA2-A4
 JIS Z3352 SA AB1
 EN ISO 14174-S A AB 1 / EN ISO 14171-A-S2Si [S2Mo]
 KR 3M, 3YM
 ABS 3M, 3YM
 LR 3YM
 BV A3, A3YM
 DNV-GL IIIYM

NK KAW53M
 CWB CSA W48 F49A(P)5-EM12K
 TÜV EN ISO 14174 - S A AB 1
 EN ISO 14171-A - S2Si
 DB DIN EN ISO 14174-S A AB1
 DIN EN ISO 14171-A-S2Si
 CE
 RS 3YM

Applications

- Pressure vessels
- Windtower
- Structural steels

Features

- Good performance with thick plates
- Good resistance to crack
- Density : 1.1g/cm³

Current

AC, DC +

Basicity Index

1.9

Packages (Flux)

Tin Can 20kg(44lbs)
 PE Bag 20kg(44lbs)

Flux Composition

Consumable	Chemical Composition, wt%			
	SiO ₂ + TiO ₂	Al ₂ O ₃ + MnO	CaO + MgO	CaF ₂
S-717	10	30	35	10

Diameter / Packaging

- M-12K : √ • A-2 : ○

Diameter mm (in)	Spool		Basket		Coil					Pac				
	20kg (44lbs)	25kg (55lbs)	100kg (220lbs)	25kg (55lbs)	100kg (220lbs)	200kg (440lbs)	250kg (551lbs)	300kg (661lbs)	500kg (1102lbs)	200kg (440lbs)	250kg (551lbs)	300kg (661lbs)	350kg (771lbs)	400kg (881lbs)
1.6 (1/16)	√○			√									√	
2.0 (5/64)	√	○		√○							√	○	√	√
2.4 (3/32)		√○	√	√○	√									√
3.2 (1/8)		√○	√	√○	√			○		√				√
4.0 (5/32)		√○	√	√○	√○	√○	○		√○	√	√○	√○	○	√○
4.8 (3/16)				√	√			√	√	√				

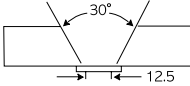
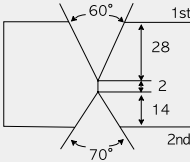
Typical Chemical Composition of All-Weld Metal(%)

Wire	C	Si	Mn	P	S	Mo	BM	Th.(mm)
M-12K	0.09	0.26	1.40	0.023	0.004	-	SS400	25
M-12K	0.08	0.54	1.47	0.025	0.018	-	BS4360-Gr,50D	44
A-2	0.08	0.35	1.58	0.023	0.005	0.49	SS400	25

Typical Mechanical Properties of All-Weld Metal

Wire	YS MPa(lbs/in ²)	TS MPa(lbs/in ²)	EL (%)	Temp °C(°F)	CVN-Impact Value J (ft-lbs)	BM	Th.(mm)
M-12K	555 (80,500)	614 (89,100)	29	-51 (-60)	60 (44)	SS400	25
M-12K	510 (74,000)	580 (84,200)	28	-20 (-4)	70 (52)	BS4360-Gr,50D	44
A-2	542 (78,610)	650 (94,300)	32	-20 (-4)	60 (44)	SS400	25

Typical Welding Parameters

Wire	Dia. (mm)	Th. (mm)	Groove Design (mm)	Pass	Amp. (A)	Volt. (V)	Speed (cm/min)	Remarks
M-12K (A-2)	4.0	25		1~13	570	30	40	AWS A5.17/ A5.23
M-12K	4.0	44		1	500	32	40	1st
				2~14	600	36	50	ML
				15 16~23	500 600	32 36	40 50	2nd
					Back Gouging			