

ES FLUX 171

SAW

ESWECO
The Art of Welding

Type Basic

EN 760: SA AB 1 66 AC H5

Description

ES FLUX 171 is a basic agglomerated, slightly Si- and Mn-alloying flux for submerged arc welding, specially designed for fillet welding and for the single- and multi-pass butt welding of mild, medium and high tensile steels. ES FLUX 171 is of the aluminate basic type and, for this slag system, it has a very high current-carrying capacity on both AC and DC and very good operating characteristics. ES FLUX 171 is ideally suited to narrow gap welding due to the excellent slag detachability and smooth side-wall blending.

Density

approx. 1.2 kg/dm³

Basicity index

1.6

Flux consumption, kg flux/kg wire

Voltage	DC+	AC
26	0.6	0.5
30	0.85	0.7
34	1.15	0.95
38	1.35	1.15

Typical all weld metal composition, %

Wire	C	Si	Mn	Cr	Ni	Mo
ES EL12	0.04	0.3	1.0	-	-	-
ES EM12	0.05	0.3	1.35	-	-	-
ES EM12K	0.08	0.5	1.4	-	-	-
ES EH12K	0.09	0.5	2.0	-	-	-

Typical mech. Properties all weld metal

Wire	Yield Stress MPa	Tensile strength MPa	Charpy V	
			°C	J
ES EL12	360	365	0	125
			-20	95
			-30	75
ES EM12	410	510	-40	65
			+20	135
			0	125
ES EM12K	425	520	-20	80
			-40	55
			+20	150
ES EH12K	480	580	0	140
			-20	100
			-40	60
ES EH12K	480	580	+20	150
			0	130
			-20	65
			-40	40

Classifications

Wire	EN 756	SFA/AWS A5.17
ES EL12	S 35 4 AB S1	F6A4-EL12/F6P5-EL12
ES EM12	S 38 4 AB S2	F7A4-EM12/F6P4-EM12
ES EM12K	S 38 4 AB S2Si	F7A5-EM12K/F6P5-EM12K
ES EH12K	S 46 4 AB S3Si	F7A5-EH12K//F7P5-EH12K