

Classifications

EN ISO 14171-A	AWS A5.17
S 42 Z AR S2Si	F7AZ-EM12K

Characteristics and typical fields of application

Union S EM12K - UV C 305 is a wire flux combination for joining applications with general purpose steels. It is particularly well-suited for single-wire or twin-arc fillet welding with small wire diameter (e.g. with 2.0 mm) with high welding speed. Wall thickness <10 mm.

The flux is characterized by low silicon and moderate manganese pick-up.

The welding characteristics are good producing a smooth weld bead with excellent slag detachability.

Base materials

Steels up to a yield strength of 420 MPa.

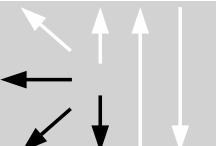
Typical analysis of the wire and of all-weld metal (wt.-%)

	C	Si	Mn	P	S
Wire	0.09	0.25	1.1	0.02	0.004
Weld metal	0.05	0.6	1.2	0.03	0.01

Typical Mechanical properties of all-weld metal

Heat-treatment	Yield strength, R _{p0.2}	Tensile strength, R _m	Elongation A (L ₀ =5d ₀)	Impact strength CVN J	
	MPa	MPa	%	+20°C	0°C
AW	450	530	31	70	40
PWHT					

Operating data

	Polarity: DC + / AC	Re-drying for flux: 300-350°C, min. 2 hours
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Approvals

Wire/flux combination:

Size and Packaging

Size mm	Spooling	Weight (Kg)
1.6	Basket/Basketless	25
2.0	Basket/Basketless	25
2.4	Basket/Basketless	25
3.2	Basket/Basketless	25