Union S 2 / UV 418 TT

SAW wire/flux combination, unalloyed

Classifications

SAW solid wire		SAW flux	
EN ISO 14171-A	**EN ISO 14171-B**	**AWS A5.17**	**EN ISO 14174**
S2	SU22	EM12	SA FB 1 55 AC H5

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EN ISO 14171-A	**EN ISO 14171-B**	**AWS A5.17**	**AWS A5.17M**
S 35 4 FB S2		F7A5-EM12	

Characteristics and typical fields of application

UV 418 TT is an agglomerated fluoride-basic flux with high basicity and neutral metallurgical behavior. It is suitable for single (AC and DC) and tandem (DC and AC or AC and AC) welding. Very good slag detachability also for narrow gap welding. Flux can especially be used for multi-pass butt welding of medium and high tensile steels. Very good impact toughness of weld metal at low temperatures.
Moisture content (1050°C): max. 0.06% H2O (as produced)
Weld metal hydrogen content acc. to EN ISO 3690: HD max. 5 ml/100 g
Grain size: EN ISO 14174: 3 – 20 (0.3 – 2.0 mm); **Tyler:** 8 x 48
Basicity (Boniszewski): 3.5 (Mol-%) / 2.6 (Weight-%)
Main constituents in %: SiO_2 + TiO_2 = 15% / CaO + MgO = 35% / Al_2O_3 + MnO = 20% / CaF_2 = 25%

Base materials

Steels up to a yield strength of 355 MPa.

S235J2-S355J2, S275N-S355N, S275M-S355M, S275NL-S355NL, S275ML-S355ML, P235GH-P355GH, P275NL1-P355NL1, P275NL2-P355NL2, P215NL, P265NL, P355N, P285NH-P355NH, P195TR1-P265TR1, P195TR2-P265TR2, P195GH-P265GH, L245NB-L360NB, L245MB-L360MB, GE200-GE240,

ASTM A 106 Gr. A, B, C; A 181 Gr. 60, 70; A 283 Gr. A, C; A 285 Gr. A, B, C; A 350 Gr. LF1, LF2; A 414 Gr. A, B, C, D, E, F, G; A 501 Gr. B; A 513 Gr. 1018; A 516 Gr. 55, 60, 65, 70; A 573 Gr. 58, 65, 70; A 588 Gr. A; A 633 Gr. A, C, D; A 662 Gr. A, B, C; A 707 Gr. L1, L3; A 711 Gr. 1013; A 841 Gr. A, B, C; API 5 L Gr. B, X42, X52, X56

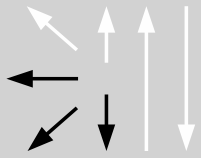
Typical analysis of the wire and of all-weld metal (wt.-%)

	C	Si	Mn
Wire %	0.11	0.12	1.1
Weld metal %	0.07	0.20	1.05

Mechanical properties of all-weld metal

Heat-treatment	Yield strength R_e	Tensile strength R_m	Elongation A (L_0=5d_0)	Impact work ISO-V CVN J		
	MPa	MPa	%	+20 °C	-20 °C	–50 °C
aw	400	480	26	160	100	47

Operating data



Polarity:	Redrying of flux:	ø mm
DC (+) / DC (–)	300 – 350 °C / 2 hrs min.	2.0 2.5 3.0 4.0

Approvals

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TÜV (10410), DB (51.132.05), CE