

Classification

EN ISO 14174

SA FB 1 55 AC H5

Characteristics and typical fields of application

UV 421 TT is an agglomerated flux of fluoride basic type for joining and surfacing of high strength steels and cryogenic fine grained structural steels. The silicon and manganese pick-ups and burn-off rates are neutral because of its metallurgical behaviour. The cryogenic toughness of the weld metal is very good. It can be welded with nearly every wire electrode. The flux can be used for tandem and multi wire welding with DC and AC. Very good slag detachability.

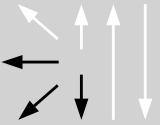
Base Materials

Unalloyed steels, high strength steels, cryogenic fine grained structural steels

Composition of sub-arc welding flux (wt. %)

	SiO ₂ +TiO ₂	CaO+MgO	Al ₂ O ₃ +MnO	CaF ₂
wt-%	15	38	20	25

Operating data

	Polarity DC (+) / AC	Basicity acc. to Boniszewski: 3.3 Mol. % 2.5 weight %
		Grain size acc. to EN ISO 14174: 3 – 20 (0,3 – 2,0 mm)
		Flux consumption: 1.0 kg flux per kg wire
		Redrying: 300 – 350 °C, 2 hrs min.

Typical Composition of all-weld Metal with different Wires

SAW wires	C	Si	Mn	Cr	Mo	Ni
Union S 2	0.07	0.20	1.05			
Union S 2 Mo	0.07	0.20	1.05		0.47	
Union S 2 Ni 370	0.06	0.20	1.00			1.25
Union S 2 Ni 2,5	0.07	0.25	1.05			2.20
Union S 2 Ni 3,5	0.06	0.20	1.00			3.20
Union S 2 NiMo 1	0.08	0.20	1.05		0.22	0.85
Union S 3	0.08	0.25	1.50			
Union S 3 NiMo	0.06	0.20	1.50		0.42	1.45
Union S 3 NiMo 1	0.08	0.20	1.55		0.55	0.90
Union S 3 NiMoCr	0.08	0.20	1.60	0.32	0.58	2.00
Union S 3 Si	0.08	0.30	1.55			
Union S 4 Mo	0.08	0.20	1.85		0.47	

	Wire classification	
	EN ISO	AWS
Union S 2	S2	EM12
Union S 2 Mo	S2Mo	EA2
Union S 2 Ni 370	S2Ni1,5	EG [ENi (mod.)]
Union S 2 Ni 2,5	S2Ni2	ENi2
Union S 2 Ni 3,5	S2Ni3	ENi3
Union S 2 NiMo 1	SZ2Ni1	ENi1
Union S 3	S3	EH10K
Union S 3 NiMo	S3Ni1,5Mo	EG [EF1 (mod.)]
Union S 3 NiMo 1	S3Ni1Mo	EF3
Union S 3 NiMoCr	SZ3Ni2,5CrMo	EG [EF6 (mod.)]
Union S 3 Si	S3Si	EH12K
Union S 4 Mo	S4Mo	EA3

Approvals	TÜV	ABS	BV	WIWEB	GL	LR	DNV	DB
Union S 2	05497					X		51.132.06
Union S 2 Mo	03344					X		51.132.06
Union S 2 Ni 370	05210 08010							51.132.06
Union S 2 Ni 2,5	02213	X	X		X	X	X	51.132.06
Union S 3	05498					X	X	51.132.06
Union S 3 Si	10424					X	X	
Union S 3 NiMo				X	X			
Union S 3 NiMo 1	10425					X	X	
Union S 3 NiMoCr	05063	X	X	X	X	X	X	51.132.06