

## Classifications

<b>EN ISO 14171-A</b>	<b>AWS A5.23 / SFA-5.23</b>
S 50 6 FB SZ2Ni1Mo0,3 H5	F8A10-ENi1-Ni1 - F8P10-ENi1-Ni1

## Characteristics and typical fields of application

**Union S 2 NiMo 1 - UV 418 TT** is a wire flux combination for submerged arc welding of non- and low alloyed steel grades. Recommended for multi-pass butt welding of medium and high tensile steels e.g. in off-shore constructions (wind power) and oil and gas industry including sour service applications. Very good impact toughness of weld metal at low temperatures. Good CTOD results have been reported (all weld metal test) even at very low test temperatures (e.g. -50°C / -60°C).

**UV 418 TT** is an agglomerated fluoride-basic flux with high basicity and neutral metallurgical behavior. Detailed information about the flux can be found in the separate datasheet of the flux.

## Base materials

General purpose structural steels, fine grained structural steels, medium and high tensile steels up to 460 MPa minimum yield strength.

## Typical analysis

wt.-%	C	Si	Mn	Ni	Mo	S	P
all-weld metal	0.06	0.20	1.20	0.93	0.25	≤ 0.010	≤ 0.012

## Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength	Tensile strength	Elongation A	Impact energy ISO-V KV J		
	$R_{p0.2}$	$R_m$	( $L_0=5d_0$ )	-60°C	-40°C	20°C
	MPa	MPa	%			
u, DC+	≥ 500	≥ 570	≥ 25	≥ 70	≥ 120	≥ 180
a1, DC+	≥ 470	≥ 550	≥ 25	≥ 80	≥ 140	≥ 180
a2, DC+	≥ 470	≥ 550	≥ 25	≥ 80	≥ 140	≥ 180
a3, DC+	≥ 260	≥ 480	≥ 30	≥ 27	≥ 50	≥ 120
a4, DC+	≥ 350	≥ 470	≥ 30	≥ 140	≥ 180	≥ 200

u untreated, as welded ; a1 = 15 hours 580 °C ; a2 = 1 hour 620 °C ; a3 = 1 hour 920 °C / air ;  
a4 = 1 hour 920 °C / air + 2 hours 620 °C / air

## Operating data

	<b>Polarity</b>	DC / AC	<b>Dimension mm</b>
	<b>Polarity</b>	DC + / AC	2.5
			3.2
			4.0

## Approvals

LR, DNV, ABS