

## Classifications

EN ISO 24598-A	AWS A5.23 / SFA-5.23
S S ZCrMoV2 FB	F9PZ-EG-G

## Characteristics and typical fields of application

**Union S 1 CrMo 2 V - UV 430 TTR-W** is wire – flux combination for submerged arc welding 2,25%Cr - 1%Mo - 0,25%V steel grades. The agglomerated fluoride-basic flux has a high basicity. It is characterized by a high degree of purity and therefore particularly suitable for use in reactor construction as well as for welding of hydrocrackers. The combination has been designed to give optimal mechanical properties with AC welding current (single wire or tandem AC/AC). Also after step cool heat treatment the weld metal keeps a very high toughness level.

## Base materials

Creep resistant 2,25%Cr - 1%Mo - 0,25%V steel grades and similar alloyed steels.  
 ASTM/ASME: A/SA832-22V; A/SA542-D-4/4a, SA182-F22V;SA336-F22V;SA514-22V  
 EN 10028-2 : 13CrMoV9-10

## Typical analysis

wt.-%	C	Si	Mn	Cr	Mo	V	Nb	X
wire	0.1	0.1	1.3	2.3	1.0	0.3	0.02	
all-weld metal	0.1	0.1	1.2	2.3	1.0	0.3	0.02	≤ 12

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

Condition	Tensile test Temperature	Yield strength	Tensile strength	Elongation A	Impact energy ISO-V KV J	
	°C	R <sub>0,2</sub> MPa	R <sub>m</sub> MPa	(L <sub>0</sub> =5d <sub>0</sub> ) %	-30°C	-20°C
a1, AC/(AC)	RT	415-620	585 – 760	≥ 18	≥ 54	≥ 100
a1, AC/(AC)	454	≥ 338	≥ 465	≥ 18	-	-
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a1 = 8 hours 705 °C, single wire and tandem; a2 = 32 hours 705 °C, single wire and tandem

## Operating data

	<b>Polarity</b>	AC ; AC/AC	<b>Dimension mm</b>
			3.2
			4.0

Preheating, interpass temperature and post weld heat treatment are determined by the base metal.

## Approvals

TÜV (10231), CE