



# UP P91

## Classification

AWS A5.23 : EB91

ISO 24598-A : S S CrMo91

## Description & Applications

Solid wire for submerged arc welding of creep resistant steels alloyed Chromium and Molybdenum (9% Cr - 1% Mo) like P91 applied at service temperature up to 650°C. Creep resistance improved due to Niobium (Nb), Vanadium (V) and Nitrogen (N) addition.

**Main applications:** Chemical and petrochemical industry...

### Base materials:

### Creep resisting steels :

EN	ASTM
X10CrMoVNb 9-1	A 182/A 336 gr F91
	A 213 gr T91
	A 217 gr C12A
	A 234 gr WP91
	A 335 gr P91
	A 387 gr 91

## Typical Chemical Composition ( % )

	C	Si	Mn	Cr	Ni	Mo	Cu
Min	0.07		0.40	8.50	0.40	0.85	
Max	0.13	0.50	1.25	10.50	1.00	1.15	0.10
Type	0.10	0.32	0.50	8.7	0.60	1.0	0.05
	Nb	V	Al	N	P	S	A/T
Min	0.03	0.15		0.03			
Max	0.10	0.25	0.04	0.07	0.010	0.010	0.50
Type	0.04	0.20	0.005	0.04	0.008	0.005	<0.50

## Welding Current & Instructions

Welding mode	Wire Ø (mm)	Welding parameters				Flux
		Current (A)	Voltage (V)	Stick out (mm)	Speed (cm/min)	
SAW AC / = +	2.4	200 - 400	25 - 30	18	40 - 60	UP WP380
	3.2	300 - 500	28 - 32	20	40 - 60	
	4.0	500 - 700	30 - 35	22	50 - 60	

FT-En-SF13-180925

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