

## Classifications

EN ISO 17633-A	EN ISO 17633-B
T 19 12 3 Nb P M21 1	TS318-F M21 1
T 19 12 3 Nb P C1 1	TS318-F C1 1

## Characteristics and typical fields of application

Rutile, strip alloyed, flux cored welding wire with fast freezing slag providing excellent positional welding characteristics and fast travel speeds. It is easy to use and operates with a powerful penetrating spray arc transfer, minimum spatter formation and self releasing slag. BÖHLER SAS 4 PW-FD offers many economical and quality advantages over solid wire pulse arc welding. High deposition rates and productivity gains are easily achievable. Additional cost effective benefits are offered through use of less expensive shielding gases, good wetting characteristics (less grinding), little temper discoloration and bead oxidation (less pickling expenses), easy operation and safe penetration (reduces the risk of weld defects and associated repair work costs), and smooth and clean weld finish (less post weld work).

Due to its characteristics mainly for positional welding and service temperatures between –120 °C to +400 °C. For downhand and horizontal welding positions (PA, PB, PC) our flux cored wire SAS 4-FD should be preferred.

## Base materials

1.4571 X6CrNiMoTi17-12-2, 1.4580 X6CrNiMoNb17-12-2, 1.4583 X10CrNiMoNb18-12, 1.4401 X5CrNiMo17-12-2, 1.4404 X2CrNiMo17-12-2, 1.4435 X2CrNiMo18-14-3, 1.4436 X3CrNiMo17-13-3, 1.4437 GX6CrNiMo18-12, 1.4581 GX5CrNiMoNb19-11-2, 1.4409 GX2CrNiMo19-11-2  
UNS S31653, AISI 316, 316L, 316Ti, 316Cb

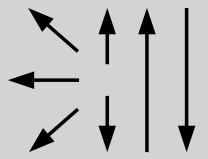
## Typical analysis of all-weld metal (wt.-%)

	C	Si	Mn	Cr	Ni	Mo	Nb
wt-%	0.03	0.6	1.3	18.8	12.2	2.7	+

## Mechanical properties of all-weld metal

Condition	Yield strength R <sub>p0.2</sub>	Tensile strength R <sub>m</sub>	Elongation A (L <sub>0</sub> =5d <sub>0</sub> )	Impact work ISO-V KV J	
	MPa	MPa	%	+20 °C	–120 °C
u	<b>430</b> (≥ 350)	<b>570</b> (≥ 550)	<b>35</b> (≥ 25)	<b>65</b>	<b>40</b> (≥ 32)
u untreated, as welded – shielding gas Ar + 18 % CO <sub>2</sub>					

## Operating data

	<b>Polarity:</b> DC ( + )	<b>Shielding gases:</b> M1 – M3; C1	<b>Redrying:</b> possible, 150 °C/24 h	<b>ø (mm)</b> 1.2	<b>Amps A</b> 100 – 220	<b>Voltage V</b> 20 – 31
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Welding with standard GMAW-facilities possible, slightly trailing torch position (angel appr. 80°), slight weaving is recommended for positional welding; when using 100 % CO<sub>2</sub> as shielding gas it is necessary to increase the voltage by 2 V; the gas flow should be 15 – 18 l/min