

## Classifications

<b>EN ISO 14341-A</b>	<b>AWS A5.28 / SFA-5.28</b>
G 50 6 M21 Z3Ni1	ER80S-G
G 46 4 C1 Z3Ni1	

## Characteristics and typical fields of application

Pipeshield X series of solid wires for GMAW are specifically designed for fully automatic circumferential all position pipe welding. Pipeshield X combines the benefits of engineered wire surfaces and thoroughly controlled chemical compositions leading to good impact values even at low temperatures. Consistent wire geometry supports wire feeding and stable arc performance. The 1%Ni-alloyed Pipeshield X 80 covers pipe steel grades up to API X80 offering good impact toughness at low temperatures down to -60 °C (-76 °F) and CTOD values at -10 °C (14 °F). Root pass capability up to X100. This product can be used in sour gas applications. (HIC tested acc. to NACE TM-0284).

## Base materials

API5L: X42, X52, X56, X60, X65, X70 and X80, EN 10208-2: L290MB – L555MB; L290NB – L415NB and similar steel grades

## Typical analysis

	C	Si	Mn	Ni	Ti	S	P
wt.-%	0.065	0.69	1.55	0.9	+	≤ 0.015	≤ 0.020

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

Condition	Yield strength $R_{p0.2}$	Tensile strength $R_m$	Elongation A ( $L_0=5d_0$ )	Impact energy ISO-V KV J	
	MPa	MPa	%	-40 °C J	-60 °C J
u1	500 (≥ 485)	590 (≥ 570)	28 (≥ 25)	60 (≥ 47)	-
u2	520 (≥ 500)	630 (≥ 600)	26 (≥ 24)	125 (≥ 80)	100 (≥ 60)
u3	590	670	24.4	-	-
u4	-	608	-	170	90

u1 untreated, as welded – shielding gas 100% CO<sub>2</sub>

u2 untreated, as welded – shielding gas Ar + 15 – 25% CO<sub>2</sub>

u3 untreated, as welded – shielding gas M21, field result, round tensile specimen, longitudinal

u4 untreated, as welded – shielding gas M21, field result, round tensile specimen, transverse

## Operating data

	Polarity	DC+	Dimension mm
	Shielding gas (EN ISO 14175)	C1 M2	0.9
			1.0
			1.02
			1.2

## Approvals

TÜV (19757), ABS, DNV, CE