

MT-316 L

1.4430

MIG/TIG welding wire of austenitic chrome nickel moly – steel, very low carbon content, for welding stainless and cold – tough austenitic steels exposed to working temperatures up to + 400°C; cold – tough down to – 196°C.

Standard designation

DIN 8556	SG X 2 CrNiMo 19 12
EN 12072	G 19 12 3 LSi/W 19 12 3 LSi
Material No.	1.4430
AWS/ASME SFA-5.9	ER 316 L Si
B.S.2901 part 2	316 S93
NF A35-583	Z2 CNDS 19.13

Main base metals

Stainless austenitic chrome nickel moly – steel/cast steel, e.g.

1.4404	X 2 CrNiMo 17 13 2	1.4571	X 6 CrNiMoTi 17 12 2
1.4404	G-X 2 CrNiMo 18 10	1.4573	X 10 CrNiMoTi 18 12
1.4406	X 2 CrNiMoN 17 12 2	1.4580	X 6 CrNiMoNb 17 12 2
1.4429	X 2 CrNiMo 17 13 3	1.4581	G-X 5 CrNiMoNb 18 10
1.4435	X 2 CrNiMo 18 14 3	1.4583	X 10 CrNiMoNb 18 12
1.4408	G-X 6 CrNiMo 18 10	1.4436	X 5 CrNiMo 17 13 3
1.4401	X 5 CrNiMo 17 12 2	1.4420	X 5 CrNiMo 18 11

Mechanical properties of all – weld – metal (typical values)

Welding process Gas shield Thermal treatment Test temperature		[°C]	TIG Welding argon untreated		MIG M 11 untreated	
			+20°C	-196°C	+20°C	-196°C
0,2%-yield strength	R _{p0,2}	[N/mm ²]	315		315	
1,0%-yield strength	R _{p1,0}	[N/mm ²]	335		335	
Tensile strength	R _m	[N/mm ²]	540		540	
Elongation	A ₅	[%]	35		35	
Impact strength	A _v	[J]	130	40	130	35

Average Chemical Composition of all - weld - metal (%)

C	Si	Mn	Cr	Mo	Ni
0,02	0,8	1,7	18,0	2,7	12

Structure

Austenite with deltaferrite

Gas types applicable TIG Gas types applicable MIG

welding-argon

Mixed gases, e.g. M 11 and M 23 as well as M 32 and M 21, if carburization is taken into account.

TÜV, DB, UDT

Approvals TIG rod diameters, unit weights

Diameter [mm]	Length [mm]	Kg per box
1,0	1000	10
1,6	1000	10
2,0	1000	10
2,4	1000	10
3,2	1000	10
4,0	1000	10
5,0	1000	10

MIG welding wire

Diameters 0,8 mm 1,0 mm 1,2 mm 1,6 mm

TIG = -

MIG = +