

# MT-308 L

# 1.4316

Chrome nickel steel MIG/TIG wire with very low carbon content, for welding stainless and cold-tough austenitic steels exposed to temperatures of up to +400°C. Cold-tough down to -196°C.

**Standard designation**

Material No.	1.4316
AWS/ASME SFA-5.9	ER 308 L Si
EN ISO 14343-A	G 19 9 LSi/W 19 9 LSi

**Main base metals**

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

1.4306	X 2 Cr Ni 19 11	1.4301	X 5 CrNi 18 10
1.4306	X 7 Cr 14	1.4303	X 5 CrNi 18 12
1.4311	X 7 CrAl 13	1.4308	G-X 6 CrNi 18 9
1.4552	G-X 5 CrNiNb 18 9	1.4310	X 12 CrNi 17 7
1.4541	X 6 CrNiTi 18 10	1.4319	X 5 CrNi 18 7
1.4550	X 6 CrNiNb 18 10		

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

Welding process Gas shield Thermal treatment Test temperature	[°C]	TIG I1 untreated		MIG M 11 untreated	
		+20°C	-196°C	+20°C	-196°C
0,2%-yield strength R <sub>p0,2</sub>	MPa	≥270		≥270	
Tensile strength R <sub>m</sub>	MPa	≥510		≥510	
Elongation A <sub>5</sub>	[%]	25		35	
Impact strength A <sub>v</sub>	[J]	LNB	LNB	LNB	LNB

**Average chemical composition of all - weld - metal (%)**

C	Si	Mn	Cr	Ni
0,03	0,65-1,20	1,0-2,50	19,0-21,0	9,0-11,0

**Structure**

Austenite with delta ferrite

**Gas types applicable TIG  
Gas types applicable MIG**

I1  
M 11, M 12

**Approvals**

TÜV, DB, CE

**TIG rod diameters, unit weights**

Diameter [mm]	Length [mm]	Kg per box [kg]
1,00	1000	10,0
1,20	1000	10,0
1,60	1000	10,0
2,00	1000	10,0
2,40	1000	10,0
3,20	1000	10,0
4,00	1000	10,0
5,00	1000	10,0

**MIG welding wire**

Diameter 0,8mm 1,0mm 1,2mm 1,6mm

**Welding positions MIG acc.to EN ISO 6947  
Welding positions TIG acc.to EN ISO 6947**

PA, PB, PF  
PA, PB, PC, PF, PE

**Current/Polarity TIG**

= -

**Current/Polarity MIG**

= +