

MT-309 L

1.4332

TIG/MIG welding wire of austenitic chrome nickel steel, very low carbon content, for cladding on stainless and dissimilar steels.

Weld metal suitable for working temperatures of up to +350°C

Creep resistant up to +1200°C.

Standard designation

DIN 8556	SG X 2 CrNi 24 12
Material No.	1.4332
AWS/ASME SFA-5.9	ER 309 L
EN 12072	G 23 12 LSi/W 23 12 LSi

Main fields of application

Dissimilar steels (joint welds of austenitic to ferritic steels) cladding and buffer layer welding.

Main base metals

Heat – proof and non – scaling steels e.g.

1.4710	G-X 30 CrSi 6	1.4825	G-X 25 CrNiSi 18 9
1.4729	G-X 40 CrSi 13	1.2780	X 15 CrNiSi 20 12
1.4740	G-X 40 CrSi 17	1.4828	X 15 CrNiTi 20-12

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

Welding process			TIG Welding argon untreated +20°	MIG M11 untreated +20°C
Gas shield		[°C]		
Thermal treatment				
Test temperature				
0,2%-yield strength	R _{p0,2}	[N/mm ²]	390	390
1,0%-yield strength	R _{p1,0}	[N/mm ²]	420	420
Tensile strength	R _m	[N/mm ²]	540	540
Elongation	A ₅	[%]	30	30
Impact strength	A _v	[J]	65	65

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

C	Si	Mn	Cr	Ni
0,025	0,4	1,7	24,5	12,5

Structure

Austenite with increased delta ferrite standard

Application notes

The first buffer layer or clad weld with MT – 309L will give corrosion resistant deposits. Even at elevated temperatures no martensite will be produced in the root runs. Max. working temperature for welded joints between austenitic and ferritic steels +300°C. If the work – piece is subjected to temperatures higher than +300°C, it is recommended that nickel based filler materials should be used.

Gas types applicable TIG Gas types applicable MIG Approvals

Welding argon
Mixed gases, e.g. M 11 and M 23
TÜV,UDT

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 wires

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

TIG = -

MIG = +