

MT-309 Mo

1.4459

Rutile coated electrode for welding dissimilar steels and cladding stainless steels. Welding deposit of austenitic chrome nickel moly-steel, very low carbon content, suitable for working temperatures up to +350°C.

Standard designation

DIN 8556	E 22 12 2 LR 23
Material No.	equivalent to 1.4459
AWS/ASME SFA - 5.4	E 309 Mo L - 16
B. S. 2926	23.12.2 R
NF A 81 - 343	EZ 23 12.2 R 23
EN 1600	E 23 12 2 LR 32

Main fields of application

Dissimilar steels (joining austenitic to ferritic steels); cladding and buffer layer welding.

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

Thermal treatment		[°C]	untreated +20°
Test temperature			
0,2%-yield strength	R _{p0,2}	[N/mm ²]	350
1,0%-yield strength	R _{p1,0}	[N/mm ²]	380
Tensile strength	R _m	[N/mm ²]	650
Elongation	A ₅	[%]	35
Impact strength	A _v	[J]	60

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

C	Si	Mn	Cr	Mo	Ni
0,02	0,8	0,9	22,5	2,5	13,5

Structure

Austenite with increased portion of delta ferrite

Application notes

Self-releasing slag, producing smooth, fine welded seams. Single run clad and buffer layers will offer corrosion resistant weld deposit. Even at higher fusion temperatures (root pass) martensite will not be produced. Maximum working temperature for welded joints between austenitic and ferritic steels is about +300°C. Use nickel-based filler materials if the weld is going to be annealed at temperatures higher than +300°C and if the work-piece is to be subjected to working temperatures exceeding +300°C.

Redrying

Generally not necessary. The electrode coating, however, can be redried up to 350°C.

Approvals

TÜV, DB, UDT

Diameters, welding current, unit weights

Diameter [mm]	Length [mm]	Current [A]	Average weight kg/1000 pcs.	Pieces per box	Kg per box
2,0	300	40 - 60	11,6	345	4,0
2,5	300	60 - 80	18,7	214	4,0
3,2	350	80 - 110	36,8	136	5,0
4,0	350	110 - 150	55,0	91	5,0
5,0	450	150 - 190	110,8	54	6,0

