

Classifications

EN ISO 14343-A	EN ISO 14343-B	AWS A5.9	Mat. No.
W 22 9 3 N L	SS2209	ER2209	≈1.4462

Characteristics and typical fields of application

Duplex stainless steel; resistant to intercrystalline corrosion and wet corrosion up to 250 °C (482 °F). Good resistance to stress corrosion cracking in chlorine- and hydrogen sulphide-bearing environment. High Cr- and Mo-contents provide resistance to pitting corrosion. For joining and surfacing work with matching and similar austenitic steels / cast steel grades. Attention must be paid to embrittlement susceptibility of the parent metal.

Base materials

TÜV-certified duplex stainless steels
1.4462 – X2CrNiMoN22-5-3 and others,
combinations of mentioned steels and ferritic steels up to
S355J, 16Mo3 and 1.4583 – X10CrNiMoNb18-12

Typical analysis of the TIG rods (wt.-%)

	C	Si	Mn	Cr	Mo	Ni	N
wt-%	0.02	0.4	1.7	22.5	3.2	8.8	0.15

Structure: Austenite/ferrite

Mechanical properties of all-weld metal

Heat-treatment	Yield strength R _{p0.2}	Yield strength R _{p1.0}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J
	MPa	MPa	MPa	%	+20 °C
aw	600	650	720	25	100

Operating data

Polarity:	Shielding gas:	Marks:	ø (mm)	L mm
DC (–)	(EN ISO 14175) I1	✦ W 22 9 3 NL / ER2209	1.6	1000
			2.0	1000
			2.4	1000
			3.2	1000

Welding instruction

Materials	Preheating	Postweld heat treatment
Matching / similar steels / cast steel grades	None	Mostly none; if necessary solution annealing at 1050 °C (1922 °F) / water

Approvals

TÜV (03343), ABS, DNV, GL, LR, CE