Solid wire, high alloyed

Brand Standard AWS Standard EN ISO	Chemical Composition (%) Typical Values	Mechanical Properties Typical Values	Ø (mm)	Approvals	Characteristics and Applications
BOHLER Q NG 309L-Si AWS A5.9: ER309LSi EN ISO 14343-A: G 23 12 L Si	C: ≤ 0.03 Si: 0.9 Mn: 2.0 Cr: 24.0 Ni: 13.0	Shielding Gas: Ar + 2.5% CO_2 UTS : 550 MPa (≥ 510) YS: 400 MPa (≥ 320) El: 33% (≥ 30) CVN Impact: +20°C: 55J (≥ 47) -60°C: >32J	0.8 1.0 1.2	-	GMAW solid wire of type G 23 12 L Si / ER309LSi designed for first class welding, good wetting and feeding characteristics. For joining austenitic stainless steels and castings to unalloyed/ low-alloy steels/cast steel grades, stainless heat resistant Cr steels as well as depositing intermediate layers when welding cladded materials. Favorably high Cr and Ni contents, low C content. Application temperature max. 300°C (572 °F).
THERMANIT 22/09 AWS A5.9: ER2209 EN ISO 14343-A: G 22 9 3 N L	C: 0.025 Si: 0.5 Mn: 1.6 Cr: 23.0 Mo: 3.0 Ni: 9.0 N: 0.14	Shielding Gas: M12, M13 Ar + 20% He + 2% CO_2 UTS: 700 MPa YS: 510 MPa El: 25% CVN Impact: +20°C: 70J	0.8 1.0 1.2	TÜV, DB, GL, DNV, CE	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 austenitc steels / cast steel grades. Attention must be paid to embrittlement susceptibility of the parent metal.

Solid wire, nickel-base

Brand Standard AWS Standard EN ISO	Chemical Composition (%) Typical Values	Mechanical Properties Typical Values	Ø (mm)	Approvals	Characteristics and Applications
THERMANIT 625 AWS A5.14: ERNiCrMo-3 EN ISO 18274: S Ni 6625 (NiCr22Mo9Nb)	C: 0.03 Si: 0.25 Mn: 0.20 Cr: 22.0 Ni: Bal. Mo: 9.0 Nb: 3.6 Fe: <0.5	Shielding Gas: I1,M12 (ArHeC-30/0.5) UTS: 740 MPa YS: 460 MPa El: 30% CVN Impact: +20°C: 60J -196°C: 40J	0.8 1.0 1.2 1.6	TÜV, DB, CE	High resistance to corrosive environment. Resistant to stress corrosion cracking. Resistant to scaling up to 1000°C (1832 °F). Temperature limit: 500°C (932°F) max. in sulphureous atmospheres. High temperature resistant up to 900 °C (1652°F). Good toughness at subzero temperatures as low as –196°C (–321°F). For joining and surfacing work with matching / similar corrosion resistant materials as well as with matching and similar heat resistant, high temperature resistant steels and alloys. For joining and surfacing work on cryogenic austenitic CrNi(N) steels / cast steel grades and on cryogenic Ni steels suitable for quenching and tempering.
THERMANIT NICRO 82 AWS A5.14: ERNiCr-3 EN ISO 18274: S Ni 6082 (NiCr20Mn3Nb)	C: 0.02 Si: 0.2 Mn: 2.8 Cr: 19.5 Ni: >67 Nb: 2.5 Fe: <2.0	Shielding Gas: I1, Z (ArHeHC -30/2/~0, 1) UTS: 620 MPa YS: 380 MPa El: 35% CVN Impact: +20°C: 90J	0.8 1.0 1.2 1.6	TÜV, DNV GL, CE	Nickel alloy; heat and high temperature resistant. Good toughness at subzero temperatures as low as –269°C (–452°F). Good for welding austenitic ferritic joints. No Cr-carbide zone that become brittle in the ferrite weld deposit transition zone, even as a result of heat treatments above 300 °C (572°F). Good for fabricating tough joints and surfacing with heat resistant Cr and CrNi steels and Ni alloys.