Solid wire, unalloyed

Brand Standard AWS Standard EN ISO	Chemical Composition (%) Typical Values	Mechanical Properties Typical Values	Ø x L (mm)	Approvals	Characteristics and Applications
BOHLER N ER 70 S-6 AWS A5.18: ER70S-6 EN ISO 14341-A: G42 4 M21 3Si1/G 42 4 C1 3Si1	C: 0.09 Si: 0.80 Mn: 1.49 P: 0.01 S: 0.01 Cr: 0.01 Mo: 0.01 Ni: 0.01	As welded: Shielding Gas: CO_2 UTS: 600 MPa YS: 510 MPa El: 28% CVN Impact: -30°C >50J	0.8 1.0 1.2	-	Universally applicable copper coated wire electrode with a largely spatter free material transfer using CO_2. The wire electrode is suitable for joint welding in the construction of boilers, containers and building structures. This wire has been designed to provide X-ray quality porosity free welds. High tensile strength in as welded condition. High arc stability at high welding current amperage. Designed to feed ideally even at high wire feed rates. Suitable for robotic applications. It is a great choice for welding light to moderately scaled, oily or rusty plates due to the presence of balanced amount of de-oxidizers.

Solid wire, low alloyed

Brand Standard AWS Standard EN ISO	Chemical Composition (%) Typical Values	Mechanical Properties Typical Values	Ø x L (mm)	Approvals	Characteristics and Applications
UNION MoNi AWS A5.28: ER90S-G EN ISO 16834-A: G 62 5 M21 Mn3Ni1Mo	C: 0.10 Si: 0.65 Mn: 1.55 Mo: 0.40 Ni: 1.10	Heat treatment: As welded Shielding Gas: M21 UTS: 700 MPa YS: 620 MPa El: 18% CVN Impact: +20°C: 100J -50°C: 47J	0.8 1.0 1.2	TÜV, DB, DNV, GL, WIWEB, VG 95132-1, CE	Medium alloy solid wire electrode for shielded arc welding of quenched and tempered and thermomechanically treated fine grained structural steels; creep resistant structural steels with higher yield strength. Outstanding toughness values of the weld metal at low temperatures when deposited with CO_2 and gas mixture.
THERMANIT MTS 3 AWS A5.28: ER90S-B9 EN ISO 21952-A: G CrMo91	C: 0.1 Si: 0.3 Mn: 0.5 Cr: 9.0 Mo: 1.0 Ni: 0.5 Nb: 0.06 V: 0.2	Heat treatment: 760°C/2 h Shielding Gas: M12, (M13) UTS: 620 MPa YS: 520 MPa El: 16% CVN Impact: 50J	1.0 1.2	-	High temperature resistant, resistant to scaling up to 600°C. Suited for joining and surfacing applications with quenched and tempered 9 % Cr steels, particularly for matching high temperature resistant parent metal like T91 / P91 according to ASTM.
THERMANIT MTS 616 AWS A5.28: ER90S-G / ER90S-B9(mod.) EN ISO 21952-A: GZ CrMoWVNb 9 0.5 1.5	C: 0.1 Si: 0.25 Mn: 0.5 Cr: 8.5 Mo: 0.4 Ni: 0.5 W: 1.6 V: 0.2 Nb: 0.06 N: 0.04	Heat treatment: 760°C / ≥ 2h Shielding Gas: M12, (M13) UTS: 720 MPa YS: 560 MPa El: 15% CVN Impact: 41J	0.8 1.0 1.2 1.6	-	High temperature resistant. Suited for joining and surfacing applications with matching high temperature resistant parent metal P92 according to ASTM A 335.
UNION NiMoCr AWS A5.28: ER100S-G / [ER100S-1(mod.)] EN ISO 16834-A: G 69 6 M21 Mn4Ni1, 5CrMo	C: 0.08 Si: 0.60 Mn: 1.70 Cr: 0.20 Mo: 0.50 Ni: 1.50	Heat treatment: As welded Shielding Gas: M21 UTS: 780 MPa YS: 720 MPa El: 16% CVN Impact: +20°C: 100J -60°C: 47J	0.8 1.0 1.2	TÜV, DB, ABS, BV, DNV, GL, LR, VG 95132-1, CE	Low-alloyed solid wire electrode for shielded arc welding of quenched and tempered and thermomechanically treated fine grained structural steels; for joint welding of wear resistant steels. For use with CO_2 and gas mixture. Outstanding toughnesss of the weld metal at low temperatures. For use in crane and vehicle manufacturing.