TIG rods, Aluminium

Brand Standard AWS Standard EN ISO	Chemical Composition (%) Typical Values	Mechanical Properties Typical Values	Ø x L (mm)	Approvals	Characteristics and Applications
UNION Al Si 5 AWS A5.10: ER4043 EN ISO 18273: S Al 4043A (AlSi5(A))	Al: bal. Si: 4.5 – 6.0 Fe: < 0.6 Cu: < 0.3 Mg: < 0.2 Mn: < 0.15 Zn: < 0.1	UTS: 130 MPa YS: 70 MPa El: 16%	1.6 x 1000 2.0 x 1000 2.4 x 1000 3.2 x 1000 4.0 x 1000	DB, CE	Rod for GTAW of Al alloys containing up to 2% of alloying elements and for aluminium alloys containing up to 7% Si. The weld metal is not suitable for anodizing for decorative purposes. Very fluid weld pool. Not applicable for welding hardenable alloys is high stressed zones. Thorough cleaning of the workpiece bevels is necessary prior to welding.
UNION Al Si 12 AWS A5.10: ER4047 EN ISO 18273: S Al 4047A (AlSi12(A))	Al: bal. Si: 11.0 – 13.0 Fe: < 0.6 Cu: < 0.3 Mg: < 0.1 Mn: < 0.15 Zn: < 0.2	UTS: 130 MPa YS: 60 MPa El: 5%	1.6 x 1000 2.0 x 1000 2.4 x 1000 3.2 x 1000 4.0 x 1000	-	Rod for GTAW of AlSi cast alloys containing 7-12% Si. The weld metal is not suitable for anodizing for decorative purposes. Very fluid weld pool. Good mechanical properties, excellent corrosion resistance and a low melting point ensure high quality welding results. Thorough cleaning of the workpiece bevels is necessary prior to welding.
UNION AlMg 4.5 Mn AWS A5.10: ER5183 EN ISO 18273-A: S Al 5183 (AlMg4.5Mn0.7(A))	Al: bal. Mn: 0.6 – 1.0 Cr: 0.05 – 0.25 Mg: 4.3 – 5.2 Ti: < 0.15	UTS: 275 MPa YS: 125 MPa El: 17%	1.6 x 1000 2.0 x 1000 2.4 x 1000 3.2 x 1000 4.0 x 1000	TÜV, DB, CE	TIG-rod for welding of AlMg alloys. The weld metal is resistant against sea water. Base material should be cleaned near the seam. Pre-heating 150 °C for plates > 15 mm.
UNION AlMg 5 AWS A5.10: ER5356 EN ISO 18273-A: S Al 5356 (AlMg5Cr(A))	Al: bal. Mn: 0.05 – 0.2 Cr: 0.05 – 0.2 Mg: 4.5 – 5.5 Ti: 0.06 – 0.2 Fe: < 0.4 Zn: < 0.1	UTS: 240 MPa YS: 110 MPa El: 17%	1.6 x 1000 2.0 x 1000 2.4 x 1000 3.2 x 1000 4.0 x 1000	TÜV, DB, CE	Rod for GTAW of AlMg alloys containing up to 5% Mg. Seawater resistant weld metal. Susceptible to stress corrosion cracking if exposed to service temperatures >65°C. Good colour matching with base metal after anodizing. Thorough cleaning of the workpiece bevels is necessary prior to welding.