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-A: S Al 4043A (AlSi5(A))	Al: bal. Si: 4.5 – 6.0 Fe: < 0.6 Cu: < 0.3 Mg: < 0.2 Ti: < 0.15 Mn: < 0.15 Zn: < 0.1	UTS: 120 MPa YS: 40 MPa El: 8%	1.6 x 1000 2.0 x 1000 2.4 x 1000 3.2 x 1000 4.0 x 1000	DB	TIG welding rod of Aluminium alloys. The weld metal is not suitable for anodizing of decorative purposes. Very fluid weld pool. Thicker plate materials and castings require preheating 150-200°C (302 – 392 °F).
UNION Al Si 12 AWS A5.10: ER4047 EN ISO 18273-A: S Al 4047A (AlSi12(A))	Al: bal. Si: 11.0 – 13.0 Fe: < 0.6 Cu: < 0.3 Mg: < 0.1 Ti: < 0.15 Mn: < 0.15 Zn: < 0.2 Be: < 0.0003	UTS: 130 MPa YS: 60 MPa El: ≥5%	1.6 x 1000 2.0 x 1000 2.4 x 1000 3.2 x 1000	-	UNION Al Si 12 is used for aluminium-silicium casting alloy with a Si content up to 12%. Good mechanical characteristics, an excellent corrosion resistance and a low melting point ensure high quality welding results.
UNION AlMg 4.5 Mn AWS A5.10: ER5183 EN ISO 18273-A: S Al 5183 (AlMg4.5Mn0.7(A))	Al: bal. Mn: 0.5 – 1.0 Cr: 0.05 – 0.25 Mg: 4.3 – 5.2 Ti: < 0.15 Si: < 0.4 Zn: < 0.25 Cu: < 0.1	UTS: 275 MPa YS: 5 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, WIWEB	TIG welding rod for AlMg alloys. Seawater resistant weld metal. Thorough cleaning of the workpiece bevels is necessary. Thicker plate materials require preheating to 150°C (302°F).
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 Si: < 0.25 Zn: < 0.1 Cu: < 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 5.0 x 1000	TÜV, DB	TIG welding rod for AlMg alloys containing up to 5% Mg. Seawater resistant weld metal. Good colour matching with base metal after anodizing. Thorough cleaning of the workpiece bevels is necessary. Thicker plate materials require preheating to 150°C (302°F).