

AK ER4643

TIG/MIG

Description:

ER4643 is a heat-treatable Al-Si-Mg filler that welds much like ER4043, with similar flow, crack resistance, and machine settings. It also offers very good corrosion resistance, and after solution heat treatment and aging it can help 6061/6063/6070/6071 welds recover significantly more strength.

Application scenario:

Use ER4643 for 6xxx extrusions, structural fabrications, and similar-composition aluminum parts when you want 4043-like weldability but better post-heat-treat performance. It also fits low-dilution joints, heavier sections, and some thin-section brazing-style applications.

Typical Chemical Composition(%):

	Si	Fe	Cu	Mn	Mg	Zn	Ga V	Ti
Requirement	3.60-4.60	0.80	0.10	0.05	0.10-0.30	0.10	---	0.15
Actual Result	3.82	0.58	0.02	0.02	0.153	0.06	---	0.12
	Zr	Al	Be	Other				
Requirement	---	Rem.	0.0003	0.05				
Actual Result	---	Rem.	0.0001	0.01				

Typical Mechanical Properties:

	Tensile Strength (MPa)	Yield Stress (MPa)	Elongation (%)	Impact Values (J)
Requirement				
Actual Result				