

AlSi 12 Tig

CATEGORY GMAW-GTAW Solid wires

TYPE Aluminium silicon alloy for welding cast aluminum parts, also suitable as brazing alloy with suitable flux.

APPLICATIONS Aluminium alloy for welding and brazing. This material is generally used for brazing aluminium sheets, for extrusions and castings. (After anodizing the weld will be of a different colour)

PROPERTIES AlSi12 was originally developed as a brazing alloy to take advantage of its low melting point and narrow freezing range. In addition, it has a higher silicon content than AlSi5, which provides increased fluidity and reduced shrinkage. Hot cracking is significantly reduced when using AlSi12 as a filler alloy. The alloy may be used in applications at sustained elevated temperatures. Non-heat treatable. Thicker sections should be preheated (150°C) prior to welding.

CLASSIFICATION

AWS	A 5.10: ER 4047
EN ISO	18273: S Al4047A (AlSi12(A))
DIN: W.Nr.	3.2585
DIN	1732: SG AlSi12

SUITABLE FOR G-AlSi10Mg, G-AlSi11 G-AlSi12 (Cu), G-AlSi7Mg, G-AlSi6Cu4, G-AlSi9Mg, G-AlSi9Cu3, AlMgSi0.8, AlMgSi1, 4145, 3.2581, 3.2583, 3.2381, 3.2383, 3.2373, 3.2163, 3.2371, 3.2151, B 413.0, 361.0, 359.0, 356.0, 319.0

APPROVALS CE approved

WELDING POSITIONS:



WELD DEPOSIT WEIGHT (TYPICAL) %

Al	Mn	Si	Cu	Zn	Fe	Mg	Ti	Be	others
rem	<0.15	11-13	<0.30	<0.20	<0.6	<0.1	<0.15	<0.0006	<0.15

TYPICAL MECHANICAL PROPERTIES

Heat Treatment	R _{P0,2} (N/mm ²)	R _m (N/mm ²)	A5 (%)	Impact Energy (J) ISO-V			T (°C)
				-20°C	-40°C	-60°C	
as welded	>75	>170	>6				573-585

WELDING PARAMETERS / PACKING

Welding Parameters		Packing (kg)	
D (mm)	Current (A) AC	single	master
1,6 x 1000	25-50	5	20
2,0 x 1000	40-75	5	20
2,4 x 1000	90-130	5	20
3,2 x 1000	160-240	5	20
4,0 x 1000	290-340	5	20

REDRYING TEMPERATURE not required

GAS ACC. EN ISO 14175: I1