

AISi 12

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 welding will be of a different colour)

PROPERTIES AISi12 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 AISi5, which provides increased fluidity and reduced shrinkage. Hot cracking is significantly reduced when using AISi12 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 (AISi12(A))
DIN: W.Nr.	3.2585
DIN	1732: SG AISi12

SUITABLE FOR G-AISi10Mg, G-AISi11 G-AISi12 (Cu), G-AISi7Mg, G-AISi6Cu4 , G-AISi9Mg, G-AISi9Cu3, 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)	A ₅ (%)	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		
D (mm)	Voltage (V)	Current (A) DC+	spooling type	weight kg	pallet
0.8	13-22	50-160	D-100 / D-200	0.5 / 2.0	
1.0	13-26	70-180	D-100 / D-200 / K-300 / Drum	0.5 / 2.0 / 7.0 / 80	
1.2	20-29	140-260	D-100 / D-200 / K-300 / Drum	0.5 / 2.0 / 7.0 / 80	
1.6	25-30	190-350	K-300 / Drum	7.0 / 80	

REDRYING TEMPERATURE not required

GAS ACC. EN ISO 14175: I1, I3