

AL 713

NOMINAL COMPOSITION

Aluminum	Remainder
Silicon	10.0% ± 0.7%
Iron	0.8% Max
Copper	0.25% Max
Titanium	0.2% Max
Other Elements (Each)	0.1% Max

PHYSICAL PROPERTIES

Color	Grayish-White
Melting Point (Solidus)	1065°F (574°C)
Flow Point (Liquidus)	1110°F (599°C)
Brazing Range	1110°F - 1140°F (599°C - 616°C)
Specific Gravity	2.71
Density (lbs/in ³)	1.41
Electrical Conductivity (% IACS) ⁽¹⁾	N/A
Electrical Resistivity (Microhm-cm)	N/A

⁽¹⁾ IACS = International Annealed Copper Standard

PRODUCT USES

AL 713 is a general purpose brazing filler metal to join aluminum and aluminum alloys. When joining dissimilar metals thought should be given to the galvanic potential between the metals to avoid galvanic corrosion problems. The corrosion resistance of AL 713 is satisfactory but somewhat lower than that of AL 718 alloy. To maintain joint integrity on heat treatable aluminum alloys, the solution temperature must be below the solidus of the filler metal. To prevent liquation, it is recommended that the parts be heated rapidly through the solidus-liquidus temperature range.

PROPERTIES OF BRAZED JOINTS

The properties of a brazed joint are dependent upon numerous factors including base metal properties, joint design, metallurgical interaction between the base metal and the filler metal. Joint clearances of 0.003 - 0.005 in. per side are optimum for achieving highest joint strength. Joints with increased clearances can still produce adequate joint strengths depending on final operating conditions due to the alloy's ability to bridge larger gaps.

AVAILABLE FORMS

Paste.

SPECIFICATIONS

Aluminum powder chemistry is manufactured in accordance to the following specifications:

- AWS A5.8M/A5.8 BAlSi-5
- QQ-B-655 (FS-BAlSi-5)
- AA 4045

Technical Data Sheet

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