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A Handy & Harman Company
Global Brazing Solutions®

Technical Data Sheet

AL 802
(ZN/AL 98/2)

NOMINAL COMPOSITION

Aluminum	2.0% ± 0.5%
Zinc	Remainder
Other Elements (Each)	0.05% Max
Other Elements (Total)	0.15% Max

PHYSICAL PROPERTIES

Color	Grayish-White
Melting Point (Solidus)	710°F (377°C)
Flow Point (Liquidus)	725°F (385°C)
Brazing Range	725°F - 755°F (385°C - 402°C)
Specific Gravity	6.90
Density (Lbs/in^3)	0.249
Electrical Conductivity (%IACS) [(1)]	N/A
Electrical Resistivity (Microhm-cm)	N/A

[(1)] IACS = International Annealed Copper Standard

PRODUCT USES

AL 802 is a general purpose, free flowing soft soldering filler metal for joining of all solderable grades of aluminum and aluminum alloys when using open air heating methods.

PROPERTIES OF SOLDER JOINTS

The properties of a solder 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. Zinc based alloys offer the highest strength in comparison to other commercially available low temperature aluminum soldering alloys often surpassing shear strengths of 18,000 PSI as long as proper joint design techniques are implemented. Below are the tensile strengths for lap joints brazed and analyzed.

	Tensile Strength (lbs/in^2)	Elongation (% in 2 in.)
3003 Aluminum	20,000 - 30,000	5.00 - 15.0
3003 to Copper	5,000 - 20,000	2.00 - 5.00

Prolonged heating should be avoided due to the erosion of Al802 into the base metal. Small clearances should also be avoided. Excessive heat times at brazing temperature and small clearances can lead to the erosion seen in the picture below:

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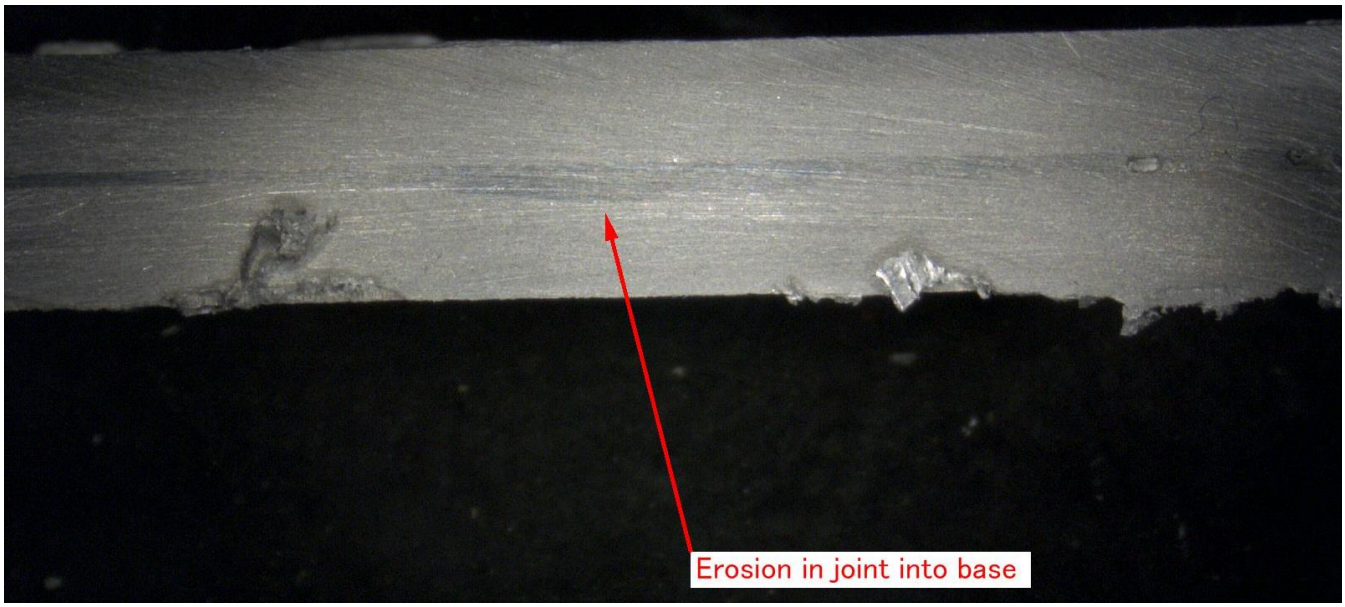

Figure 1: Erosion of Al filler metal into Al base metal

AVAILABLE FORMS

Wire

SPECIFICATIONS

AL 802 alloy conforms to the following specifications: N/A

APPLICABLE PRODUCT CODE(S)

The applicable Lucas-Milhaupt product code(s) for this technical data sheet: A00000388, Legacy Codes: 62-802, 34734.

SAFETY INFORMATION

The operation and maintenance of brazing equipment or facility should conform to the provisions of American National Standard (ANSI) Z49.1, "Safety in Welding and Cutting". For more complete information refer to the Material Safety Data Sheet for Al 802.

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