

Reference Material Documentation

Aluminum

Element	Melting Point (°C/K)	ΔH_f (J/g)
Aluminum (Al)	660.33/933.47 ¹	398.1 ¹

Trade Name: Aluminum Reference Standard

EA Labs P/N: NN-RSAL01

CAS#: 7429-90-5

Engineering Analytics Laboratories provides the above 99.999% pure material as a calibration standard with the intended use of determining the melting point and Enthalpy of Fusion by Differential Thermal Analysis or alternate means.

Safety:

Please see an appropriate industry MSDS for additional safety or handling information. This material has known environmental hazards and fire hazards in specific forms. In its pure, wire form, this material is considered generally inert. Store this material within its supplied container and both in a cool, dry place. A complete MSDS can be downloaded directly from www.EngineeringAnalytics.us/consulting/literature-and-references/

Made in the USA Statement:

EA Labs has verified, based on the reporting of suppliers, that this product meets the FTC's standards for the "Made in America" statement due to the majority price being in US dollars and paid to US manufacturers or producers. An estimated 97+% of the unit price is maintained within the USA, and provides for the employment of 3+ individuals across 3 companies.

References:

1. Eysel and K.H. Breuer, *Thermochimica Acta*, 57, 317-321 (1982).
2. R. Sabbah et al., *Thermochimica Acta*, 331 (1999) pg. 123 - 126

Valid references utilized for the above properties determined and verified by Engineering Analytics Laboratories (EA Labs). Please direct any questions regarding the accuracy or verification of these properties to EA Labs at www.EngineeringAnalytics.us.

Specific Material Information

The following information is specific to the ordered item. Please retain a copy of this documentation for reference.

Information	Data
Product Name (Purity):	Aluminum (99.999%)
EA Labs Lot Number:	AL1801
Material Dimensions / Mass:	5 x 1 mm x 38.1 mm (segments x r x l) / 401 mg
Intended Use:	Melting Point
Literature Melting Point:	660.33 °C ²
Additional Use:	$\Delta H_f = 398.1 \text{ J/g}^1$
Stability:	Single Use. Not intended for multiple uses.

Spectrographic Analysis

The following information is reported from the Certificate of Analysis provided by the manufacturer of the material. EA Labs is not responsible for the determination or validation of this data.

Element	ppm / %	Element	ppm / %
Aluminum (Al)	99.9998 %	Manganese (Mn)	< 0.1
Boron	< 0.1	Nickel (Ni)	< 0.1
Chromium	0.1	Titanium (Ti)	0.1
Copper (Cu)	0.4	Vanadium (V)	0.1
Iron (Fe)	0.2	Zinc (Zn)	0.1
Magnesium (Mg)	0.2		

Please contact Engineering Analytics Laboratories at EngAnLab@gmail.com with questions, clarifications, or concerns.