Kurt J. Lesker Company

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SALES: (800) 245-1656
(412) 387-9200 Fax: (412) 384-2745

Material Certification

Material Type: Aluminum , Al **Analysis Type:** Actual,PPM by Wt.

Description: Pellets, 1/8" Diameter X 1/8" Long , 100 grams **Purity:** 99.99%

KJLC Part Number: EVMAL40EXED **Lot Number:** AL49718921 / 599863

Ac:		Cu:	2.3	N:	<6	Sc:	0.03
Ag:	<0.005	F:	<0.05	Na:	0.11	Se:	<0.03
Al:	Rem.	Fe:	5.2	Nb:	<0.005	Si:	5.1
Ar:		Ga:	0.16	Ne:		Sm:	0.02
As:	<0.005	Ge:	<0.01	Ni:	0.18	Sn:	<0.01
At:		H:	0.092	O:	14	Sr:	<0.005
Au:	<0.05	He:		Os:	<0.001	Ta:	<1
B:	0.05	Hf:	<0.005	P:	1.9	Tb:	0.009
Ba:	<0.001	Hg:	<0.01	Pb:	<0.005	Te:	<0.01
Be:	<0.005	I:	<0.001	Pd:	<0.005	Ti:	0.3
Bi:	<0.005	In:	<0.005	Pt:	<0.01	V:	0.09
Br:	<0.005	Ir:	<0.001	Ra:		W:	0.02
C:	<6	K:	<0.01	Rb:	<0.001	Y:	0.01
Ca:	0.55	Kr:		Re:	<0.001	Zn:	0.14
Cd:	<0.01	La:	0.48	Rh:	<0.5	Zr:	0.04
Cl:	0.5	Li:	<0.005	Rn:		Ce:	0.58
Co:	<0.005	Mg:	2.2	Ru:	<0.005	Dy:	0.07
Cr:	0.11	Mn:	0.12	S:	0.68	Gd:	0.07
Cs:	<0.005	Mo:	<0.01	Sb:	0.02	Nd:	0.39

Materials Technician: John McElhattan **Date:** 6-08-07

MATERIAL SAFETY DATA SHEET

ALUMINUM

Section I

Kurt J. Lesker Company 1515 Worthington Avenue Clairton, PA 15025 Ph: 412/233-4200 Fax: 412/233-4275	Emergency Phone Numbers KJLC 800/245-1656 Chemtrec 800/424-9300 Poison Center 800/562-8236

Chemical Name and Synonyms **Aluminum**	Date of Last Revision 8/15/05

Formula Al	Chemical Family Element	Chemical Abstract No. 7429-90-5
TSCA		Calc. Molecular Wt. 26.96

Section II Hazardous Ingredients

Hazardous Ingredients	CAS #	%	TLV	OSHA PEL
Aluminum	7429-90-5	99.999		
as dust	7429-90-5		10	15,5 resp
as fume	7429-90-5		5	5

LD50 or LC50 found for oral, dermal or inhalation routes of administration.

Section III Physical Data

Boiling Point (0°C): 2467°C	Density (gmcc): 2.7
Vapor Pressure: NA	% Volatile by Volume:
Reaction with Water: NA	Evaporation Rate (H_2O -1)
Solubility in Water: Insoluble	Melting Point (°C): NA
Appearance and Odor: Solid, color varies from dull grate to metallic silver, no odor	Other Comments

Section IV Fire & Explosion Hazard Data

Flash Point (method)	Autoignition Temp.	Flammability	LEI	UEI
NA	NA	NA	NA	NA

Extinguishing Media: Water spray on chips, turnings, etc. Use Class D extinguishing agents or dry sand on fines.

Special Fire Fighting Procedures
DO NOT use halogen or water on dust fires.

Unusual Fire and Explosion Hazards: Dust clouds may be explosive, molten aluminum may explode on contact with water. Damp aluminum dust may spontaneously heat with liberation of hydrogen to form explosive air mixtures.

Section V Spill or Leak Process

Steps to be Taken in Case Material is Released or Spilled: NA

Waste Disposal Method (Consult federal, state or local authorities for proper disposal procedures.): Collect scrap for remelting.

Section VI **Health Hazard Data** Aluminum

Toxicity Data: Aluminum dust/fines and fumes are low health risk, threat as a nuisance dust.	HMIS Hazard Rating Health: Flammability: Reactivity: Personal Protection:
Route(s) of Entry Inhalation Skin Ingestion	
Effects of Overexposure (acute and chronic) Inhalation: Low health risk Dermal/Eye Contact: Not an irritant but particulate can cause mechanical irritation of the eyes. Other (specify):	
Medical Conditions Generally Aggravated by Exposure	
Carcinogenicity NTP: IARC Monographs OSHA Regulations	
Emergency and First Aid Procedures Ingestion: Inhalation: If irritation or pulmonary symptoms develop, consult physician. Skin Contact: If irritation develops, consult physician. Eye Contact: If irritation develops, consult physician.	

Section VII **Reactivity Data**

Stability Stable: Unstable:	Conditions Contributing to Instability: For finely divided Aluminum (small chips, dust): with water: generates hydrogen and heat slowly with strong oxidizers: violent reaction with much heat generated.
Incompatibility (materials to avoid): Anhydrous bromine.	
Hazardous Decomposition Products - Thermal and Other (list) Damp aluminum dust may liberate hydrogen.	
Hazardous Polymerization May Occur: Will Not Occur:	Conditions to Avoid

Section VIII Special Protective Information

Respiratory Protection (specify type). Use Only Niosh Approved Equip. Use dust and fume respirator where exposure limit may be reached.	
Ventilation (always maintain exposure below permissible limits) Local Exhaust: For dust or fumes Mechanical (general): NA Special: NA Other: NA	
Protective Gloves: Not required	Eye Protection: If dusty
Other Protective Equipment/Work Practices: NA	

Section IX **Special Precautions**

Precautions to be Taken in Handling and Storing: Keep powder or dust dry.
Transportation Requirements DOT Class: Not regulated UN Number: IMCO Class: Other:

The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control, the Kurt J. Lesker Company makes no warranty, either express or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. User should satisfy himself that he had all current data relevant to his particular use.

ND = NO DATA FOUND NA = NOT APPLICABLE