KAISER ALUMINUM CORPORATION

300 LAKESIDE DRIVE, OAKLAND, CALIFORNIA 94643

MATERIAL SAFETY DATA SHEET

Company Plant	Issue Date	Identification Number
Kaiser Aluminum Corporation	Revised 9/1/89	KDS-6a
Trade Name (Common Name or Synonym)	**Emergency Phone Number**	
Aluminum Alloys Containing Lithium		
Chemical Name	**Formula**	**DOT Identification Number**
Aluminum	Al-Li	NA

I. INGREDIENTS

Material or Component BASE METAL	CAS NUMBER	% COMPOSITION BY WEIGHT	ACGIH TWA (mg/m³)	OSHA 1910.1000 TWA (mg/m³)	WISHA PEL (mg/m³)	AIHA Recommended Limit (mg/m³)
Aluminum, Al	7429-90-5	80–99.7	10.0, as metal dust and oxide 5.0, as welding fume	15.0, as total dust 5.0, as respirable fraction	10.0, as metal dust and oxide 5.0, as welding fume	— —
ALLOYING ELEMENT	**CAS NUMBER**	**MAXIMUM % COMPOSITION BY WEIGHT 0.1–10.0**	**ACGIH TWA (mg/m³)**	**OSHA 1910.1000 TWA (mg/m³)**	**WISHA PEL (mg/m³)**	**AIHA Recommended Limit (mg/m³)**
Cobalt, Co	7440-48-4	W	0.05, as dust and fume	0.05, as fume and dust	0.05, as fume and dust	—
Copper, Cu	7440-50-8	W	0.2, as fume 1.0, as dust	0.1, as fume 1.0, as dust	0.1, as fume 1.0, as dust	— —
Iron, Fe	1309-37-1	W	5.0, as oxide fume	10.0, as oxide dust and fume	5.0, as oxide dust and fume	—
Lithium, Li	7580-67-8	W	Not established	Not established	Not established	1.0, as lithium oxide/hydroxide, one minute TWA
Magnesium, Mg	1309-48-4	W	10.0, as oxide fume	10.0, as total dust oxide fume 5.0, as respirable fraction oxide fume	10.0, as total dust oxide fume 5.0, as respirable oxide fume	— —
Manganese, Mn	7439-96-5	W	1.0, as fume 3.0 STEL, as fume 5.0, as dust	1.0, as fume	5.0, Ceiling	—
Silicon, Si	7440-21-3	W	10.0, as total dust	10.0, as total dust 5.0, as respirable fraction	10.0, as total dust 5.0, as respirable fraction	— —
Silver, Ag	7440-22-4	P	0.1, as metal	0.01, as metal dust and fume	0.01, as metal	—
Tin, Sn	7440-31-5	W	2.0, as oxide and metal	2.0, as oxide	2.0, as oxide fume	—
Zinc, Zn	1314-13-2	W	5.0, as oxide fume 10.0 STEL, as oxide fume 10.0, as total dust	5.0, as oxide fume 10.0, as zinc oxide total dust 5.0, as zinc oxide respirable fraction	5.0, as oxide fume 10.0 STEL, as oxide fume	— —

Key: W = Wrought aluminum (fabricated products)
P = Prime and ingot hardener aluminum
STEL = Short Term Exposure Limit
TWA = Time Weighted Average
PEL = Permissible Exposure Limit

Note: Kaiser Aluminum alloys may be comprised of all or variations of the alloys shown here. In addition, the welding of aluminum alloys may produce the products listed in Section VII, #7. See Section VII, #8 for comments concerning aluminum scrap. Certain products may be coated with a residual lubricant containing polycyclic aromatic hydrocarbons. An allowable TWA exposure level is 0.2 mg/m³, the allowable exposure level for benzene solubles.

II. PHYSICAL DATA

Material is (At Normal Conditions):	Appearance and Odor			
☐ Liquid ☒ Solid ☐ Gas ☐ Other	Metallic appearance; no odor			
Acidity/Alkalinity	**Melting Point**	**Boiling Point**	**Specific Gravity (H_2O = 1)**	**Vapor Pressure (mm Hg at 20°C)**
pH = NA	950–1215 °F	NA °F	2.5–2.9	NA
			Solubility in water (% by weight) nil	

III. PERSONAL PROTECTIVE EQUIPMENT

Appropriate personal protective equipment is required when melting, casting, machining, forging, or otherwise processing. The nature of the processing activity will determine what form of equipment is necessary, i.e., glasses, respirator, protective clothing, and ear protection.

IV. EMERGENCY MEDICAL PROCEDURES

For skin contact, remove particles by thoroughly washing with soap and water.
For eye contact, flush with water for at least 15 minutes. Get medical attention if irritation persists.
For inhalation, remove from exposure. Get medical attention if experiencing breathing difficulty.

NA = Not Applicable