
7. Handling and Storage

Minimize dust generation and accumulation.

Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

8. Exposure Controls / Personal Protection

Exposure Guidelines:

MATERIAL	DESCRIPTION	OSHA		ACGIH		UNIT
		TWA	STEL	TWA	STEL	
Aluminum	Total dust Respirable dust	15 5	NONE	10	NONE	mg/m ³
Zinc		NONE	NONE	NONE	NONE	mg/m ³
Iron		NONE	NONE	NONE	NONE	mg/m ³
Copper	Fume Dust	0.1 1.0	NONE	0.2 1.0	NONE	mg/m ³
Magnesium		NONE	NONE	NONE	NONE	mg/m ³
Manganese	Ceiling	5	NONE	0.2	NONE	mg/m ³
Silicon	Total dust Respirable dust	15 5	NONE	10	NONE	mg/m ³
Titanium		NONE	NONE	NONE	NONE	mg/m ³
Strontium		NONE	NONE	NONE	NONE	mg/m ³

Exposure Controls / Personal Protection:

Special ventilation should be used to convey finely divided metallic dust generated by grinding, sawing or polishing operations, in order to eliminate explosion hazards. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment.

Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Use only appropriately classified electrical equipment and powered industrial trucks.

9. Physical / Chemical Characteristics

Boiling Point:	Not applicable	Specific Gravity (H₂O = 1):	2.5-2.9
Vapor Pressure (mm Hg):	Not applicable	Melting Point:	900-1220°F (482-660°C)
Vapor Density (Air = 1):	Not applicable	Evaporation Rate	Not applicable
Solubility in Water:	Not applicable		
Flash Point:	Not applicable		
Appearance and Odor:	Grey to silver solid; odorless		

10. Stability and Reactivity

Stability: Stable at room temperature

Incompatibility (Materials to Avoid):

Molten aluminum may explode on contact with water. In the form of particles, may explode when mixed with halogenated acids, halogenated solvents, bromates, iodates or ammonium nitrate. Aluminum particles on contact with copper, lead, or iron oxides can react vigorously with release of heat if there is a source of ignition or intense heat.

Hazardous Decomposition or By-Products:

In the form of particles (small chips, fine turnings, dusts), aluminum reacts with water and air humidity, strong basic solutions, strong acidic solutions, halogenated acids (e.g.: hydrofluoric acid), producing flammable hydrogen gas.

Hazardous Polymerization: Will not occur

11. Toxicological Information

Acute Effects:

CAS	Designation	LD ₅₀ (Oral Rat)	LC ₅₀
7439-86-6	Iron	30 g/kg	Unknown
7439-96-5	Manganese	9000 mg/kg	Unknown
7440-21-3	Silicon	3160 g/kg	Unknown

Solid aluminum does not present any acute health effects.

Inhalation: Aluminum dusts generated during specific operations are considered as nuisance particulates

Skin Contact: Skin contact with hot metal can cause burns

Eyes Contact: Aluminum dust can irritate the eyes (mechanical abrasion)

Ingestion: Not applicable

Chronic Effects:

Solid aluminum does not present any chronic health effects.

Medical Conditions Aggravated by Exposure: Not applicable

Carcinogenicity:

None of the ingredients present at concentrations equal to or greater than 0.1% are listed as a carcinogen or potential carcinogen by National Toxicology Program (NTP) or Occupational Safety and Health Administration (OSHA).

Mutagenicity: No data available.

Reproductive Toxicity: No data available.

12. Ecological Information

Ecotoxicity: Aluminum ecotoxicity has not been demonstrated using standard OECD test protocols.

Mobility: Aluminum is not mobile in the environment, unless it comes in contact with an aqueous environment with a pH below 5.5 or above 8.5.

Persistence/Biodegradability: Not relevant for metals.

Bioaccumulation: Minimal

13. Disposal Considerations

Recycle. Aluminum in the form of particles may be reactive. Its hazardous characteristics, including fire and explosion, should be determined prior to disposal. Dispose of waste in accordance with federal, state, or local regulations.

14. Transport Information

Not regulated for shipping.

15. Regulatory Information

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372:

Chemical Name	CAS Number
Aluminum	7429-90-5

16. Other Information

Refer to NFPA 654, *Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids*, for safe handling.

NOTICE:

Although the information in this SDS was obtained from sources which we believe to be reliable, it cannot be guaranteed. In addition, this information may be used in a manner beyond our knowledge or control. The information is therefore provided for advice purposes only, without any representation or warranty express or implied.

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