

## **MATERIAL SAFETY DATA SHEET**

ALUMINUM GRANULAR, LAB GRADE  
CAROLINA BIOLOGICAL

Revised: 05/15/08  
Replaces: 07/19/07  
Printed: 05/20/08

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### **1. PRODUCT DESCRIPTION**

Product Name: Aluminum Granular, Lab Grade  
Product Code(s): 84-3050, 84-0932  
Size: 500g  
Chemical Name: Aluminum  
CAS Number: 7429-90-5  
Formula: Al  
Synonyms: Aluminum Flake  
Distributor: Carolina Biological Supply Company  
2700 York Road  
Burlington, NC 27215

Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)  
Chemtrec (Transportation Spill Response 24 hours): 800-424-9300

### **2. COMPOSITION/INFORMATION ON INGREDIENTS**

Principal Hazardous Components: Aluminum (CAS#7429-90-5) 100%  
TLV and PEL units: ACGIH-TLV 10mg/m3 (TWA) Metal Dust  
OSHA-PEL 15mg/m3 (TWA) Metal Total Dust

### **3. HAZARD IDENTIFICATION**

Emergency Overview: Not generally regarded as a poison. Inhalation of fine dust has been reported as a cause of pulmonary fibrosis.

Potential Health Effects:

Eyes: May cause irritation.

Skin: May cause irritation.

Ingestion: May cause gastrointestinal discomfort.

Inhalation: May cause irritation to respiratory tract.

### **4. FIRST AID MEASURES**

Emergency and First Aid Procedures:

Eyes - Flush with water for at least 15 minutes, raising and lowering eyelids occasionally. Get medical attention if irritation persists.  
Skin - Thoroughly wash exposed area for at least 15 minutes. Remove contaminated clothing. Launder contaminated clothing before reuse. Get medical attention if irritation persists.

Ingestion - Do not induce vomiting. If swallowed, if conscious, give plenty of water immediately and call a physician or poison control center. Never give anything by mouth to an unconscious person.

Inhalation - Remove to fresh air. Give oxygen if breathing is difficult; give artificial respiration if breathing has stopped. Keep person warm, quiet, and get medical attention.

### **5. FIREFIGHTING PROCEDURES**

Flash Point(Method Used): No data available

NFPA Rating: Health: 0  
(for dust) Fire: 3  
Reactivity: 1

Extinguisher Media:

Use dry chemical, CO2 or appropriate foam.

Flammable Limits in Air % by Volume: No data available

Autoignition Temperature: No data available

Special Firefighting Procedures:

Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.

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Unusual Fire and Explosion Hazards: Aluminum powder forms explosive mixtures in air. Reacts with some acids and caustics to produce hydrogen.

### **6. SPILL OR LEAK PROCEDURES**

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

Ventilate area of spill. Clean-up personnel should wear proper protective equipment. Avoid creating dust. Sweep or scoop up and containerize for disposal.

### **7. SPECIAL PRECAUTIONS**

Precautions to be Taken in Handling or Storing: Keep container tightly closed. Keep dry and isolated from acids, caustics, chlorinated hydrocarbons, and oxidizing materials.

Other Precautions: Wash after handling.

### **8. SPECIAL PROTECTION INFORMATION**

Respiratory Protection(Specify Type):

None needed under normal conditions of use with adequate ventilation.

NIOSH approved equipment should be worn if PELs are exceeded.

Ventilation:

Local Exhaust: If needed

Mechanical(General): Recommended

Special: No

Other: No

Protective Gloves:

Rubber, neoprene, PVC, or equivalent.

Eye Protection:

Splash proof chemical safety goggles should be worn at all times.

Other Protective Clothing or Equipment:

Lab apron, eye wash, and safety shower.

### **9. PHYSICAL DATA**

Molecular Weight: 26.98

Melting Point: 660°C

Boiling Point: 2327°C

Vapor Pressure: 0.00013 hPa at 974°C

Vapor Density(Air=1): No information available

Specific Gravity(H2O=1): 2.702

Percent Volatile by Volume: No information available

Evaporation Rate(H2O=1): No information available

Solubility in Water: Insoluble

Appearance and Odor: Silvery colored granular metal, odorless.

### **10. REACTIVITY DATA**

Stability: Stable

Conditions to Avoid: Avoid dusting, reacts with some acids and caustic solutions to produce hydrogen which is flammable.

Incompatibility(Materials to Avoid): Acids, corrosives, oxidizers, mineral acids, harsh alkalis, halogenated compounds, heavy metals.

Hazardous Decomposition Products: Aluminum oxide dust

Hazardous Polymerization: Will not occur

### **11. TOXICITY DATA**

Toxicity Data:

Effects of Overexposure: No toxicity data found.

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Acute: See section 3  
Chronic: No chronic effects data found. Not listed as causing cancer by IARC, NTP or OSHA.  
Conditions Aggravated by Overexposure: Respiratory conditions.  
Target Organs: Eyes, respiratory system.  
Primary Route(s) of Entry: Inhalation

## 12. ECOLOGICAL DATA

EPA Waste Numbers: None

## 13. DISPOSAL INFORMATION

Waste Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations.  
Always contact a permitted waste disposer (TSD) to assure compliance.

## 14. TRANSPORT INFORMATION

Not a regulated material in this form.

## 15. REGULATORY INFORMATION

EPA TSCA Status: On TSCA Inventory  
Hazard Category for SARA Section 311/312 Reporting: Acute, Reactive

Product or Components	SARA EHS	SARA Sec. 313		CERCLA	RCRA
	Sec. 302	Name	Chemical	Sec. 103	Sec.
	TPO	List	Category	RQ lbs.	261.33
Aluminum	No	Yes	No	No	No

## 16. ADDITIONAL INFORMATION

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

### Glossary

ACGIH.....American Conference of Governmental Industrial Hygienists  
CAS Number..Chemical Abstracts Service Number  
CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act  
DOT.....U.S. Department of Transportation  
IARC.....International Agency of Research on Cancer  
mppcf.....million particles per cubic foot  
N/A.....Not Available  
NTP.....National Toxicology Program  
OSHA.....Occupational Safety and Health Administration  
PEL.....Permissible Exposure Limit  
ppm.....parts per million  
RCRA.....Resource Conservation and Recovery Act  
SARA.....Superfund Amendments and Reauthorization Act  
TLV.....Threshold Limit Value  
TSCA.....Toxic Substances Control Act