



MATERIAL SAFETY DATA SHEET  
COMPLIES WITH 29 CFR 1910.1200.  
OSHA HAZARD COMMUNICATION RULE

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## CHEMICAL IDENTITY

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LABEL IDENTITY	<b>ALUMINUM</b>
CHEMICAL NAME/SYNONYMS	<b>ALUMINUM</b>
FORMULA	<b>Al</b>
CHEMICAL FAMILY	<b>ELEMENTAL METAL</b>
CAS REGISTRY NUMBER	<b>7429-90-5</b>
HAZARDOUS INGREDIENTS	<b>ALUMINUM</b>
% <b>100</b>	TLV: <b>10mg/m3</b> OSHA PEL: <b>NOT LISTED</b>

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## PHYSICAL AND CHEMICAL PROPERTIES

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COLOR, FORM AND ODOR	<b>Color varies from dull gray to metallic silver, no odor.</b>
BOILING POINT (C°)	<b>2450</b>
DENSITY (gm/cc)	<b>2.7</b>
VAPOR PRESSURE @ 20°	<b>1mm @ 1284</b>
% VOLATILE BY VOLUME (%)	<b>None</b>
REACTION WITH WATER	<b>NA</b>
EVAPORATION RATE (H2O=1)	<b>NA</b>
SOLUBILITY IN WATER	<b>Insoluble</b>
MELTING POINT (C°)	<b>660</b>
OTHER	<b>Soluble in HCl, H2SO4, and Alkalizes</b>

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## FIRE AND EXPLOSION HAZARD DATA

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FLASH POINT	<b>NA</b>
AUTOIGNITION TEMPERATURE (°C)	<b>NA</b>
FLAMMABILITY	<b>Non-flammable</b>
EXTINGUISHING MEDIA	<b>Flammable only as a fine dust powder</b>
SPECIAL FIRE FIGHTING PROCEDURES	<b>DO NOT WATER! Wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.</b>
UNUSUAL FIRE & EXPLOSION HAZARDS	<b>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.</b>



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### HEALTH HAZARD INFORMATION

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TOXICITY DATA **No specific data on this material**  
HMIS HAZARD RATING  
HEALTH: **1** FLAMMABILITY: **2** REACTIVITY: **1** PERSONAL PROTECTION: **J**

ROUTES OF ENTRY INHALATION: **Yes**  
INGESTION: **No**

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: **ND**

EFFECTS OF OVEREXPOSURE (acute and chronic):

INHALATION: **Has been reported to cause pulmonary fibrosis. May be mechanically irritating to lungs and upper respiratory tract, causing coughing and sneezing.**

DERMAL/EYE CONTACT: **Particles may cause mechanical irritation to the eyes and local irritation to the skin.**

OTHER (specify): **Ingestion in massive doses may cause gastrointestinal irritation. And may be toxic.**

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CARCINOGENICITY: **No** NTP: IARC MONOGRAPHS: OSHA REGULATE:

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EMERGENCY FIRST AID PROCEDURES:

INGESTION: **Induce vomiting. Seek medical attention.**

INHALATION: **Remove victim to fresh air, administer oxygen and seek medical attention.**

SKIN CONTACT: **Brush material off skin. Wash area with soap and water.**

EYE CONTACT: **Flush eyes with water for 15 minutes and seek medical attention.**

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### REACTIVITY DATA

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STABILITY	<b>Stable</b>
CONDITIONS CONTRIBUTING TO UNSTABILITY	<b>ND</b>
INCOMPATIBILITY (MATERIALS TO AVOID) especially for fine Aluminum (Al) powder.	<b>Some acids, bases, oxidizers,</b>
HAZARDOUS DECOMPOSITION PRODUCTS	<b>May release acrid smoke and irritating fumes</b>
HAZARDOUS POLYMERIZATION	<b>Will Not Occur</b>
CONDITIONS TO AVOID	<b>Incompatible materials, heat, flame and sparks.</b>



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### SAFE HANDLING AND USE

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STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

**Wearing full protective clothing, isolate the area and insure proper ventilation.  
Vacuum up spill and place container for proper disposal. Take care not to raise dust.**

WASTE DISPOSAL METHOD: **In accordance with local, state and federal regulations.**

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### SPECIAL PROTECTIVE INFORMATION

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RESPIRATORY PROTECTION (specify)	<b>NIOSH/MSHA approved respirator. Use dust and fume respirator where exposure limits may be reached.</b>
LOCAL EXHAUST	<b>Maintain below TLV</b>
MECHANICAL (general)	<b>Recommended</b>
SPECIAL	<b>ND</b>
OTHER PROTECTIVE EQUIPMENT	<b>Maintain sink, safety shower and eyewash fountain in the work area. Wear full protective clothing at all times.</b>
PROTECTIVE GLOVES	<b>Recommended</b>
EYE PROTECTION	<b>Safety glasses with side shields</b>

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### SPECIAL PRECAUTIONS

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PRECAUTIONS TO BE TAKEN IN HANDLING/STORAGE:

**Store in tightly closed containers in a cool, dry place. Wash hands and face thoroughly. Store away from incompatible materials.**

TRANSPORTATION REQUIREMENTS

DOT CLASS:	<b>Flammable Solid</b>
UN NUMBER:	<b>1396</b>
IMCO CLASS:	<b>4.3</b>
OTHER:	<b>SPC</b>
	<b>NONE</b>

### PRECAUTIONARY LABELING

THE ABOVE INFORMATION IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, SINCE DATA, SAFETY STANDARDS AND GOVERNMENT REGULATIONS ARE SUBJECT TO CHANGE THE CONDITIONS OF HANDLING AND USE, OR MISUSE ARE BEYOND OUR CONTROL, **ANGSTROM SCIENCES** MAKE NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR THE RELIANCE THEREON. USER SHOULD SATISFY HIMSELF THAT HE HAS ALL CURRENT DATA RELEVANT TO HIS PARTICULAR USE.

NA= NOT APPLICABLE

ND= NO DATA FOUND