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SAFETY DATA SHEET

Section 1- IDENTIFICATION

COMPOSITION AIN		PRODUCT NAME Aluminum Nitride
SUPPLIER: Plasmaterials, Inc. 2268 Research Drive Livermore, CA 94550 Ph: 925-447-4030	RECOMMENDED USE: Laboratory Chemicals Scientific Research	EMERGENCY TELEPHONE NUMBERS US: 800-424-9300 International: 001-703-527-3887

Section 2- HAZARD(S) IDENTIFICATION

PHYSICAL HAZARDS: Substances and mixtures which, in contact with water, emit flammable gases:
 Category 3 (H261)

HEALTH HAZARDS: Not Classified **ENVIRONMENTAL HAZARDS:** Not Classified

LABEL ELEMENTS: Signal Word: Warning **OSHA DEFINED HAZARDS:** Not Classified



HAZARD STATEMENTS

-H261: In contact with water releases flammable gas

PRECAUTIONARY STATEMENTS

- P231: Handle under inert gas
- P232: Protect from moisture
- P280: Wear protective gloves/eye protection/face protection/ protective clothing
- P370+P378: In case of fire, use appropriate media to extinguish.
- P402: Store in a dry place
- P404: Store in a closed container
- P501: Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC):

-None identified.

Section 3- COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS-No	Molecular Weight
Aluminum Nitride	24304-00-5	40.99 g/mol

Section 4- FIRST AID MEASURES

GENERAL ADVICE: Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

INHALATION: Remove victim from exposure to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

SKIN CONTACT: Rinse skin with water/shower. Seek medical attention if irritation develops or persists.

EYE CONTACT: Flush eyes with plenty of water, lifting upper and lower lids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops or persists.

INGESTION: Rinse mouth with water. Never give anything by mouth to an unconscious person. If ingestion of a large amount does occur, call a poison center immediately.

MOST IMPORTANT SYMPTOMS/EFFECTS: Direct contact with eyes may cause temporary irritation

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED: Provide general supportive measures and treat symptomatically.

Section 5- FIREFIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical powder, water fog, alcohol resistant foam, carbon dioxide (CO2)	Unsuitable Extinguishing Media: Water
Specific Hazards Arising from the Chemical: Gases hazardous to health may be formed	
Protective Equipment & Precautions for Firefighters: As in any fire, Firefighters must wear full face, self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective clothing to prevent contact with skin and eyes.	
Fire Fighting Instructions: Do not get water inside container.	
Specific Methods: Use standard firefighting procedures and consider the hazards of other involved materials.	
General Fire Hazards: In contact with water releases flammable gas.	

Section 6- ACCIDENTAL RELEASE MEASURES

Personal Precautions: Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection see section 8.
Environmental Precautions: Avoid discharge into drains, water courses or onto the ground.
Methods for Containment & Clean Up: Stop the flow of the material, if this is without risk. Do not get water on spilled substance or inside containers. Following product recovery, flush area with water. Never return spills to original containers for re-use. For waste disposal, see Section 13.

Section 7- HANDLING AND STORAGE

Handling: Handle under inert gas. Protect from moisture. Provide adequate ventilation. Avoid prolonged exposure. Wear appropriate personnel protective equipment. Observe good industrial hygiene practices. Use care in handling and storage.
Storage: Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store away from incompatible materials. (see Section 10)

Section 8- EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

Component	CAS-No.	Value	Control Parameters	Basis
Aluminum Nitride	24304-00-5	TWA	1 mg/m3	USA.ACGIH Threshold Limit Values (TLV)
	Remarks	Respirable Fraction		

Biological Limit Values: No biological exposure limits noted for the ingredient(s)

Control Parameters: Follow standard monitoring procedures.

Personal Protective Equipment:

Eye/Face Protection: Wear safety glasses with side shields. Use equipment for eye protection tested and approved under appropriate standards such as NIOSH (US) or EN 166 (EU).

Skin and Body Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Wear suitable protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection: Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Thermal Hazards: Wear appropriate thermal protective clothing when necessary.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice. When using do not smoke. Keep away from food and drink. Wash thoroughly after handling and before eating, drinking and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Contaminated work clothing should not be allowed out of the workplace.

Section 9- PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid

Odor: No information available

Odor Threshold: No information available

pH: No information available

Melting Point/Range: No information available

Boiling Point/Range: No information available

Flash Point: No information available

Evaporation Rate: No information available

Flammability (solid,gas): No information available

Flammability or Exposure Limits:

Upper: No data available

Lower: No data available

Vapor Pressure: No information available

Vapor Density: No information available

Relative Density: No information available

Solubility (Water): No information available

Partition coefficient; n-octanol/water: No information available

Auto Ignition Temperature: No information available

Decomposition Temperature: No information available

Viscosity: No information available

Explosive Properties: No information available

Oxidizing Properties: No information available

Section 10- STABILITY AND REACTIVITY

Reactive Hazard: Stable and non-reactive under normal conditions of use, storage and transport

Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: No information available.

Conditions to Avoid: Exposure to moisture. Contact with incompatible products.

Incompatible Materials: Strong oxidizing agents

Hazardous Decomposition Products: No information available

Section 11- TOXICOLOGICAL INFORMATION

Information on likely Routes of Exposure:

Inhalation: Prolonged inhalation may be harmful.

Skin Contact: No adverse effects due to skin contact are expected

Eye Contact: Direct contact with eyes may cause temporary irritation

Ingestion: Expected to be a low ingestion hazard

Information on Toxicological Effects:

Acute Toxicity: No information available

Skin Corrosion/Irritation: Prolonged skin contact may cause temporary irritation.

Serious Eye Damage/Eye Irritation: Direct contact with eyes may cause temporary irritation.

Respiratory or Skin Sensitization: No data available

Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP or OSHA.

-IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen.

-NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen.

-OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.

Mutagenic Effects: No data available

Germ Cell Mutagenicity: No information available

Reproductive Effects: No information available

Specific Target Organ Toxicity – single exposure: No information available

Specific Target Organ Toxicity – repeated exposure: No information available

Aspiration Hazard: No information available

Chronic Effects: Prolonged inhalation may be harmful.

Additional Information: None

Section 12- ECOLOGICAL INFORMATION

Ecotoxicity: Not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and Degradability: No data available

Bioaccumulation/Accumulation: No data available

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

Mobility in soil: No data available

Other Adverse Effects: No data available

Section 13- DISPOSAL CONSIDERATIONS

Waste Disposal Methods: Collect and reclaim or dispose in sealed containers to a licensed disposal company. Dispose of contaminated packaging as unused product. Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 14- TRANSPORT INFORMATION

DOT:

UN-No: 3131

Proper Shipping Name: Water reactive solid, corrosive, n.o.s. (Aluminum Nitride Product)

Hazard Class: 4.3

Subsidiary Risk: 8

Label(s): 4.3,8

Packing Group: III

Special Provisions: IB8, IP4, T1, TP33

Packaging Exceptions: 151

Packaging Non-Bulk: 213

Packaging Bulk: 241

Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.

IATA:

UN-No: 3131

Proper Shipping Name: Water reactive solid, corrosive, n.o.s. (Aluminum Nitride Product)

Hazard Class: 4.3

Subsidiary Risk: 8

Packing Group: III

Environmental Hazards: No

ERG Code: 4CW

Passenger and Cargo Aircraft: Allowed

Cargo Aircraft Only: Allowed

Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.

IMDG:

UN-No: 3131

Proper Shipping Name: Water reactive solid, corrosive, n.o.s. (Aluminum Nitride Product)

Hazard Class: 4.3

Subsidiary Risk: 8

Packing Group: III

Environmental Hazards (Marine Pollutant): No

EmS: F-G, S-L

Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.

Section 15- REGULATORY INFORMATION

US Federal Regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt.D): Not regulated

U.S. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not Listed

CERCLA Hazardous Substance List (40 CFR 302.4): Not Listed

SARA 302 Extremely Hazardous Substance: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

SARA 313 (TRI Reporting): This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313

SARA 311/312 Hazardous Chemical: Yes

SARA Hazard Categories:

Immediate Hazard: No

Delayed Hazard: No

Fire Hazard: No

Pressure Hazard: No
Reactive Hazard: Yes
Safe Drinking Water Act (SWDA): Not regulated
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Not regulated
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Not regulated
US California Controlled Substances. CA Dept of Justice (California Health & Safety Code Section 11100): Not Listed
US California Proposition 65: This product is not known to contain any chemicals known to the State of California to cause cancer, birth defects or any other reproductive harm.
US Massachusetts RTK: Not regulated
US New Jersey RTK: Not regulated
US Pennsylvania RTK: Not regulated
US Rhode Island RTK: Not regulated

Section 16- OTHER INFORMATION

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, Plasmaterials, Inc. makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. Users should satisfy themselves that they have all current data relevant to their particular use.

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