GELEST, INC.
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MATERIAL SAFETY DATA SHEET

NAME ON LABEL: DIISOBUTYLALUMINUM HYDRIDE 1M in heptane - OMAL021.2

CHEMICAL NAME: DIISOBUTYLALUMINUM HYDRIDE in heptane
SYNONYMS: DIBAL-H
CHEMICAL FAMILY: METAL ALKYL
FORMULA: C₈H₁₉Al
HMIS CODES HEALTH: 3 FLAMMABILITY: 4 REACTIVITY: 2

INGREDIENTS

IDENTITY CAS NO. % TLV OSHA PEL
DIISOBUTYLALUMINUM HYDRIDE 1191-15-7 18-21 2mg/m³ 2mg/m³
HEPTANE 142-82-5 79-82 400ppm 400ppm (STEL: 500ppm)

PHYSICAL DATA

Boiling Point: 98° - initial (heptane)
for pure compound: : 116-8°C
Specific Gravity: 0.73
Vapor Pressure, 22°: not determined
Vapor Density (air =1): >1
Solubility in water: reacts violently
% volatiles: NA
Evaporation rate: NA
Molecular Weight: 142.22
Other: NA
Appearance & Color: Clear liquid, fumes and may ignite in air

FIRE & EXPLOSION DATA

Flash Point, COC: 2°C (34°F)
Autoignition Temp.: not determined
Flammability Limits: not determined

Extinguishing Media: Dry chemical powder followed by sand or dolomite. Do not use water.
Special Fire Fighting Procedures: If material is ignited, allow to burn. Concentrate containment efforts to adjacent combustibles. Avoid eye and skin contact. Do not breathe fumes or inhale vapors.
Unusual Fire and Explosion Hazards: If exposed to elevated temperatures in air this product may ignite spontaneously. Container explosion may occur during fire conditions.

-1-(OMAL021.2)

Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose, LC: Lethal Concentration; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; HMIS: Hazardous Material information System; CAS No.: Chemical Abstract Service Registration Number
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ENVIRONMENTAL INFORMATION

Spill response: Cover with dry chemical extinguishing powder, lime, sand or soda ash. Do not use water. Remove sources of ignition. Remove combustible materials in the vicinity of the spill. Allow time for decomposition or fire to burn out, then sweep material and transfer to a suitable container for disposal.

Recommended Disposal: Incinerate. Follow all chemical pollution control regulations. This is a RCRA hazardous waste: 40 CFR 261.21 (i.e. ignitable) 40 CFR 261.23 (i.e. reactive)

HEALTH HAZARD DATA

Eye Contact: Will cause immediate or delayed severe burns to the eyes.

Skin contact: Will cause irritation and burns.

Inhalation: Direct respiratory contact is usually not possible, but will cause burns. Inhalation of combustion products can cause irritation. The solvent, heptane, is mildly toxic by inhalation.

Oral Toxicity: Not determined - presumed to be a poison.

Chronic Toxicity: There are no known chronic effects related to this compound. The solvent, heptane affects liver and kidney function.

Chronic Toxicity: not determined

Inhalation Toxicity (heptane) - human, TCLo: 1000ppm

SUGGESTED FIRST AID

EYES: In case of contact, immediately flush eyes with flowing water for at least 15 minutes. Get medical attention.

SKIN: Flush with water, then wash with soap and water.

INHALATION: Move exposed individual to fresh air. Administer oxygen if needed. Call a physician.

INGESTION: Never give fluids or induce vomiting if patient is unconscious or having convulsions. To conscious individual give one full cup of water to dilute ingested material. Get medical attention.

REACTIVITY DATA

Stability: Stable in sealed containers under dry inert atmosphere. The product can generate small amounts of hydrogen when exposed to alkalis and protic materials such as water and alcohol.

Conditions to avoid: Store away from alkalis, oxidizers, metal salts, water, chlorine, bromine. While this material is not classified as pyrophoric, spontaneous ignition can occur if exposed to air at elevated temperatures or dispersed on high surface area combustibles.

Hazardous decomposition products: Hydrogen, formaldehyde, carbon monoxide, organic acid vapors and aluminum oxides.

-2-(OMAL021.2)

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SPECIAL PROTECTION INFORMATION

Ventilation: Glove box or sealed system under inert atmosphere is required. Local exhaust is required. Mechanical is recommended.
Respiratory Protection: If exposure exceeds TLV, NIOSH approved organic vapor respirator.
Eye and Face Protection: Full face shield with chemical workers goggles.
Other Clothing and Equipment: Fire resistant gloves. Fire-resistant laboratory jacket or protective clothing. An eyewash and emergency shower should be available. Launder clothing before reuse.

OTHER PRECAUTIONS

For research and industrial use only.

Storage and Handling: Store in sealed containers under nitrogen or argon with <10ppm oxygen.

Laboratory and production areas must be equipped with special fire-extinguishing media for pyrophorics. Flammable and combustible materials should not be stored in or near working areas for pyrophorics.

TRANSPORTATION

DOT SHIPPING NAME: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE (DIISOBUTYLALUMINUM HYDRIDE)
DOT HAZARD CLASS: 4.3 SUB: 3
DOT LABEL: Spontaneously Combustible
DOT ID No: UN3399 PG: I

Air transport and UPS forbidden.

Prepared by safety and environmental affairs MSDS ISSUE DATE: OMAL021.2: 8/16/12
SUPERSEDES: 5/16/12

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