
Material Safety Data Sheets

Alumilite Corporation
315 E. North St.
Kalamazoo, MI 49007
269 488-4000

Emergency Telephone: Chemtrec 1-800-424-9300

Section 1 – Product Information

Amazing Crystal Clear “A” side

Common Chemical Name: Blend of Polyols

Synonyms: N/A

Chemical Family: Polyether Polyol

Molecular Weight: Not Established

Section 2 - Ingredients

| Chemical: | CAS | Amount |
|-----------------------------------|-------------|--------|
| Polyether Polyols | Proprietary | 50-60% |
| High Molecular Weight Plasticizer | Proprietary | 40-50% |

These products are not considered to be hazardous according to OSHA Hazard Communication Standard and contain no chemical subject to Sara title III Section 313 supplier notification requirements.

All products are not listed as Carcinogen in NTP, IARC, or OSHA 1910(z)

Section 3- Hazardous Identification

| | |
|-------------------------|-----------|
| Color: | Colorless |
| Form/Appearance: | Liquid |
| Odor: | Polyol |
| Odor Intensity: | Mild |

Nature of Hazard

Emergency Overview: Contact with eyes and skin may cause irritation. Inhalation may result in irritation.

Eye Contact: May cause irritation.

Skin Contact: Frequent or prolonged contact may irritate and cause dermatitis. Occasional brief contact with the liquid will not result in significant irritation. Skin contact may aggravate an existing dermatitis condition.

Inhalation: May cause respiratory irritation.

Ingestion: May cause gastric disturbances.

Section 4 – First Aid

Eye: Flush with large amounts of clean water for 15 minutes. If irritation persists, get medical attention.

Skin: Wash with soap and water. Get medical attention if irritation develops or persists. Wash clothing before reuse.

Inhalation: Remove to fresh air. Aid in breathing if necessary. If breathing is difficult, give oxygen and continue to monitor. Get immediate medical attention.

Ingestion: If swallowed, dilute with water and immediately induce vomiting. Do not give fluids if unconscious or having convulsions. Get medical attention immediately.

Section 5 – Fire Fighting Measures

Extinguishing Media: Water spray, foam, carbon dioxide, or dry chemical
Fire Fighting Instructions: Firefighters should be equipped with self-contained breathing apparatus and turn out gear. Use water spray to cool fire exposed surfaces and to protect personnel. Wear structural fire fighting gear.

Flash Point: > 260 F

Section 6 – Accidental Release Measures

General: Spills should be contained, solidified, and placed in suitable containers for disposal at a licensed facility.
Waste Disposal: Incinerate or bury in a licensed facility. Do not discharge into waterways or sewer systems without proper authority.

Section 7 – Handling and Storage

General: Avoid breathing mist or vapors and repeated or prolonged exposure with skin. Avoid eye contact. Do not drink.
Storage: Store and use in well ventilated area between 70-80F. Avoid excessive temperatures, low or high. Avoid moisture. Containers should be sealed tightly to prevent contamination from foreign materials.

Section 8 – Exposure Controls & Personal Protection

Clothing: Gloves, coveralls, apron, boots as necessary to prevent skin contact.
Eyes: Chemical goggles; also wear face shield if splashing hazard exists.
Respiration: Approved organic vapor mist respirator as necessary.
Ventilation: Use local exhaust to control vapors/mists.

Section 9 – Physical & Chemical Properties

Color: Colorless
Form: Liquid
Odor: Polyol
Odor Intensity: Mild
Specific Gravity: 1.01
Boiling Pt: Not Available
Freezing Pt: Not Available
Solubility: Partial

Section 10 – Stability & Reactivity

Stability: Stable
Conditions to Avoid: Exposure to moisture and temperatures above 130F
Incompatibility: Moisture, acids, and strong oxidizers

Section 11 – Toxicological Information

No applicable data for this section.

Section 12 – Ecological Information

No applicable data for this section.

Section 13 – Disposal Information

Waste Disposal: Dispose of in compliance with federal, state, or local environmental control regulations. Incinerate or bury in a licensed facility. Do not discharge into waterways or sewer systems without proper authority.
Container Disposal: Steel drums must be emptied (as defined by RCRA, Section 261.7 or state regulations that may be more stringent) and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer, or an approved landfill. Drums destined for a scrap dealer or landfill must be punctured or crushed to prevent reuse.

Section 14 - Transportation Information

Not regulated by the Department of Transportation

Section 15 - Regulatory Information

CERCLA: No
SARA Title III, Section 313: Not Listed
Section 311/312: N/A
Section 313: N/A
Hazardous Rating: Health 2 Fire 1 Reactivity 1

Section 16 - Other Information

No Data Available.

.....

To the best of our knowledge, the information contained herein is accurate. However Alumilite does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be handled with care. Although we have described herein all of the hazards to which we are currently aware, we cannot guarantee that these are the only hazards which exist. While the descriptions, designs, data, and information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. Further, you expressly understand and agree that the descriptions, designs, data, and information furnished by Alumilite hereunder are given gratis and Alumilite assumes no obligation or liability for the description, designs, data, and information given or results obtained, all such being given and accepted at your risk.

.....

Updated: 2-27-09

Material Safety Data Sheets

Alumilite Corporation
315 E. North St.
Kalamazoo, MI 49007
269 488-4000

Emergency Telephone: Chemtrec 1-800-424-9300

Section 1 – Product Information

Amazing Crystal Clear “B” side

Common Chemical Name: Aromatic Isocyanate

Synonyms: Modified MDI

Chemical Family: Aromatic Isocyanate

Molecular Weight: N/A

Section 2 - Ingredients

| Chemical: | CAS | Amount |
|--|-------------|---------|
| 4,4' Diphenylmethane Diisocyanate MDI | Proprietary | 80%-90% |
| 1,6 Hexamethylene based Polyisocyanate | Proprietary | 10%-20% |

All products are not listed as Carcinogen in NTP, IARC, or OSHA 1910(z)

Section 3- Hazardous Identification

| | |
|-------------------------|--------------------|
| Color: | Translucent Yellow |
| Form/Appearance: | Liquid |
| Odor: | Slightly Aromatic |
| Odor Intensity: | Mild |

Nature of Hazard

Emergency Overview: May cause skin, eye, and respiratory tract irritation. Harmful if inhaled; May cause allergic respiratory reaction; May cause lung damage; toxic gases/fumes are given off during burning or thermal decomposition.

Eye Contact: May cause irritation.

Skin Contact: Frequent or prolonged contact may irritate and cause dermatitis. Occasional brief contact with the liquid will not result in significant irritation. Skin contact may aggravate an existing dermatitis condition.

Acute Inhalation: MDI vapors or mist at concentrations above the TLV can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing running nose, sore throat, coughing, chest discomfort, shortness of breath, and reduced lung function.

Chronic Inhalation: As a result of previous repeated overexposures or a single large dose, certain individuals can develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath, or asthma attack, could be immediate or delayed (up to several hours after exposure). Similar to many non-specific asthmatic responses, there are reports that once sensitized and individual can experience these symptoms upon exposure to dust, cold air, or other irritants. Sensitization can be temporary or permanent.

Ingestion: Single dose oral toxicity is considered to be low. No hazards anticipated from swallowing small amounts incidental to normal handling operations.

Neither MDI nor polymeric MDI are listed by the NTP, IARC or regulated by OSHA as carcinogens.

Section 4 – First Aid

Eye: Holding eyelids open, flush with large amounts of clean water for 15 minutes. If irritation persists, get medical attention.

Skin: Wash with soap and water. Get medical attention if irritation develops or persists. Wash clothing before reuse.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and continue to monitor. Get immediate medical attention.

Ingestion: Do not induce vomiting! Do not give liquids! Get medical attention immediately.

Notes to Physician: Eyes: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Workplace vapors have produced reversible cornea epithelial edema impairing vision. Skin: This compound is a known skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burns. If burned, treat as thermal burn. Ingestion: Treat symptomatically. MDI has a very low oral toxicity. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of this compound. Respiratory: This compound is a known pulmonary sensitizer. Treatment is essentially symptomatic. An individual having a skin or pulmonary sensitization reaction to this material should be removed from exposure to any isocyanate.

Section 5 – Fire Fighting Measures

Extinguishing Media: Water spray, foam, carbon dioxide, or dry chemical
Fire Fighting Instructions: Firefighters should be equipped with self-contained breathing apparatus and turn out gear. Use water spray to cool fire exposed surfaces and to protect personnel. Wear structural fire fighting gear. During a fire, MDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. At temperatures greater than 400 F polymeric MDI can polymerize and decompose which can cause pressure build-up in closed containers.

Flash Point: >320 F

Autoignition Temp: N/A

Section 6 – Accidental Release Measures

General: Spills should be contained, ventilated, solidified, and placed in suitable containers for disposal at a licensed facility.

Waste Disposal: Incinerate or bury in a licensed facility. Do not discharge into waterways or sewer systems without proper authority.

Section 7 – Handling and Storage

General: Avoid breathing mist or vapors and repeated or prolonged exposure with skin. Avoid eye contact. Do not drink.

Storage: Store and use in well ventilated area between 70-80F. Avoid excessive temperatures, low or high. Avoid moisture.

Section 8 – Exposure Controls & Personal Protection

Clothing: Gloves, coveralls, apron, boots as necessary to prevent skin contact.

Eyes: Chemical goggles; also wear face shield if splashing hazard exists.

Respiration: Approved organic vapor mist respirator as necessary.

Ventilation: Use local exhaust to control vapors/mists.

Section 9 – Physical & Chemical Properties

Color: Clear liquid

Form: Liquid

Odor: Aromatic slightly musty odor

Odor Intensity: Mild

Specific Gravity: 1.05

Boiling Pt: Not Available

Freezing Pt: Not Available

Solubility: Partial

Section 10 – Stability & Reactivity

Stability: Stable

Conditions to Avoid: Exposure to temperatures above 400F

Incompatibility: Moisture, amines, strong bases, alcohols.

Hazardous Polymerization: Temperatures above 400 F and fire.

Section 11 – Toxicological Information

Acute Toxicity:

Oral: Greater than 10,000 mg/kg (rat)
Dermal: Greater than 6,200 mg/kg (rabbit)
Inhalation: 4 hour LC50 for polymeric MDI in rats ranges from 370 to 190 mg/m³. The 4 hour LC50 for monomeric MDI in rats was estimated to be between 172 and 187 mg/m³.
Eye: Slight to moderate irritation (rabbit)
Skin: Slight to moderate irritation (rabbit)
Sensitization: MDI has been shown to produce dermal sensitization in laboratory animals. Evidence of respiratory sensitization has also been observed in guinea pigs. In addition, there is some evidence suggestive of cross-sensitization between different types of diisocyanates.

Chronic Toxicity: In a combined chronic inhalation toxicity/oncogenicity study, rats were exposed to an aerosol of polymeric MDI for 6 hours per day, 5 days per week for one or two years. The exposure concentrations were 0, .2, 1, and 6 mg/m³. Microscopic examination of tissues revealed the effects of irritation to the nasal cavity and lungs in animals exposed to 1 and 6 mg/m³. The No Observable Effect Level (NOEL) was .2 mg/m³.

Section 12 – Ecological Information

Aquatic Toxicity: Greater than 500 mg/liter for Daphnia magna, Limnea Stagnalis, and Zebra fish for both polymeric and monomeric MDI.

Section 13 – Disposal Information

Waste Disposal: Incinerate or bury in a licensed facility. Do not discharge into waterways or sewer systems without proper authority.

Container Disposal: Steel drums must be emptied (as defined by RCRA, Section 261.7 or state regulations that may be more stringent) and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer, or an approved landfill. Drums destined for a scrap dealer or landfill must be punctured or crushed to prevent reuse. Do not heat or cut empty containers with electric or gas torch. Gases may be highly toxic.

Section 14 - Transportation Information

Technical Shipping Name: Methylene diphenyl diisocyanate solution
Freight Class Bulk: Methylene diphenyl diisocyanate solution
Freight Class Package: Chemicals, NOI (Isocyanate), NMFC 60000
Product Label: Product Label Establishment

Hazardous Class or Division: 9
UN/NA Number: NA 3080
Packing Group: III
Hazardous Substance: MDI (Methylene diphenyl diisocyanate)
DOT Product RQ lbs: 11,111 lbs
Hazard label: Class 9
Hazard Placard: Class 9

****When in individual containers of less than the product RQ (793 gallons), this material ships as NON-REGULATED***

IMO / IMDG Code (Ocean)

Hazardous Class Division Number: Non Regulated

ICAO / IATA (Air)

Hazardous Class Division Number: Non Regulated

Section 15 - Regulatory Information

This product is hazardous under the criteria of the Federal OSHA Hazardous Communication Standard 29 CFR 1910.1200

CERCLA: Reportable Quantity: Over 5,000 lbs
SARA Title III, Section 302: Not Listed
Section 311/312: Immediate Health Hazard, Delayed Health Hazard

Section 313:
Hazardous Rating: Health 2

Polymeric MDI
Fire 1 Reactivity 1

Section 16 - Other Information

No Data Available.

.....

To the best of our knowledge, the information contained herein is accurate. However Alumilite does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be handled with care. Although we have described herein all of the hazards to which we are currently aware, we cannot guarantee that these are the only hazards which exist. While the descriptions, designs, data, and information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. Further, you expressly understand and agree that the descriptions, designs, data, and information furnished by Alumilite hereunder are given gratis and Alumilite assumes no obligation or liability for the description, designs, data, and information given or results obtained, all such being given and accepted at your risk.

.....

Updated: 2-27-09