ALUMILITE

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

610 Foam "A" Side

Common Chemical Name: Urethane System Resin Component
Synonyms: N/A
Chemical Family: Not Applicable
Molecular Weight: Not Established
Formula: Mixture

Section 2 - Hazardous Ingredients

Chemical:	CAS	Amount
Catalyst	Proprietary	<5.0%
Dichlorofluoroethane (HCFC-141b)	1717-00-6	9.0%
Polyol	Proprietary	<40.0%
Surfactant	Proprietary	<2.0%

Section 3- Hazardous Identification

Color: Clear brown/gold
Form/Appearance: Liquid
Odor: Slight
Odor Intensity: Very slight

Nature of Hazard

Emergency Overview: Inhalation of high concentrations of HCFC 141B can cause drowsiness, unconsciousness, headache, respiratory depression and death from asphyxiation. Increased sensitivity of the heart to adrenalin, rapid heartbeat, irregular heartbeat, and depressed cardiac function may also occur.
Eye Contact: May cause irritation, reddening, & swelling.
Skin Contact: Can cause irritation, reddening, swelling, rash, scaling or blistering skin.
Inhalation: Can cause respiratory irritation.
Ingestion: Can cause gastric disturbances.

Section 4 – First Aid

Eye: Flush with large amounts of clean water for 15 minutes. 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, and get immediate medical attention.
Ingestion: If swallowed, dilute with water and immediately induce vomiting. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get medical attention.
Notes to Physicians: In treating persons suffering from toxic effects due to fluorocarbon compounds the use of epinephrine and similar drugs must be avoided because they produce cardiac arrhythmia.
Medical Condition: Individuals with preexisting diseases of the central nervous system, respiratory or cardiovascular

system may have increased susceptibility to excessive exposures.

Section 5 – Fire Fighting Measures

Extinguishing Media:	Use water, dry extinguishing media, carbon dioxide (CO2), or foam.
Fire Fighting Instructions:	Fire fighters should be equipped with positive pressure self-contained breathing apparatus.
Flash Point:	N/A
Fire & Explosion Hazards:	There are no known unusual fire or explosion hazards. Blowing Agent masks flash point.

Section 6 – Accidental Release Measures

General: Spills should be contained, solidified, and placed in suitable containers for disposal in a licensed facility. This material is not regulated by RCRA or CERCLA ("Superfund"). Wear appropriate respiratory protection and protective clothing and provide adequate ventilation during clean up.

Waste Disposal: Incinerate in a licensed facility. Do not discharge into waterways or sewer systems.

Section 7 – Handling and Storage

General:	Avoid excessive temperatures, low or high. Avoid moisture.
Storage:	Store in ventilated storage area between 70-80°F.

Section 8 – Exposure Controls & Personal Protection

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

Section 9 – Physical & Chemical Properties

Color:	Clear brown/gold
Form:	Liquid
Odor:	Slight
Odor Intensity:	Very Slight
Specific Gravity:	N/A
Bulk Density:	9.6 lb./gal.
Boiling Pt:	N/A
Freezing Pt:	N/A
Solubility:	Very Soluble
Vapor Pressure:	N/A
Vapor Density:	N/A
Evaporation Rate:	N/A
Viscosity:	868 cycles/sec@25°
pH:	7 SU

Section 10 – Stability & Reactivity

Stability:	Stable
Conditions to Avoid:	Exposure to moisture and temperatures >80°F.
Incompatibility:	Avoid moisture to protect product quality.
Hazardous Decomposition:	HC1, HF (from HCFC 141B), CO, and CO2.

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: Incinerate in a licensed facility. Do not discharge into waterways or sewer systems.
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

TSCA Inventory Status:
Listed on inventory: Yes
SARA – 313 listed chemicals:

Chemical	CAS	Amount
Diioscyanates	28	100.0%

RCRA Haz. Waste No.: N/A
CERCLA: No
Hazardous Rating: Health: 1 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: 7-5-06

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Section 1 – Product Information

610 Foam "B" Side

Common Chemical Name: Polymethylene Polyphenylisocyanate
Synonyms: Polymeric MDI
Chemical Family: Aromatic Isocyanates
Molecular Weight: Not Established

Section 2 - Hazardous Ingredients

Chemical:	CAS	Amount
4.4' Diphenylmethane Diisocyanate	101-68-8	42.0%
ACGIH TLV TWA	0.005 PPM	
OSHA PEL CEIL	0.02 PPM	
Polymeric MDI	9016-87-9	< 55.0%
MDI Mixed Isomers	26447-40-5	<5.0%

Section 3- Hazardous Identification

Color: Dark Brown
Form/Appearance: Liquid
Odor: Aromatic
Odor Intensity: Slight

Nature of Hazard

Emergency Overview: Acute or chronic overexposure to Isocyanates may cause sensitization in some individuals, resulting in allergic respiratory reactions including wheezing, shortness of breath and difficulty breathing.
Eye Contact: May result in conjunctival irritation and mild corneal opacity.
Skin Contact: May result in dermatitis, either irritative or allergic.
Inhalation: May cause respiratory irritation, breathlessness, chest discomfort and reduced pulmonary function.

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, and get immediate medical attention.
Ingestion: If swallowed, dilute with water. DO NOT INDUCE VOMITING! Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get medical attention immediately.
Notes to Physicians: There is no specific antidote to counteract the effects of MDI. Care should be supportive and treatment should be based on the judgment of the physician in response to the reaction of the patient.
Medical Conditions: Individuals who are sensitized to Isocyanates and those with preexisting lung diseases or conditions, including non-specific bronchial hyper reactivity or asthma, must avoid all exposure to Isocyanates.

Other: Medical supervision of all employees who handle or come into contact with MDI is recommended. Preemployment and periodic medical examinations with respiratory function tests are recommended. Persons with asthmatic conditions, chronic bronchitis, other chronic respiratory diseases, recurrent eczema or pulmonary sensitization should be excluded from working with MDI. Once a person is diagnosed as having pulmonary sensitization to MID, further exposure is not permissible.

Section 5 – Fire Fighting Measures

Extinguishing Media: Use water, dry extinguishing media, carbon dioxide (CO2), or foam.
Fire Fighting Instructions: Personnel engaged in fighting Isocyanates fires must be protected against nitrogen dioxide fumes as well as Isocyanates vapors. Fire fighters must wear self-contained breathing apparatus and turnout gear.
Flash Point: 220° C
Fire & Explosion Hazards: Reacts exothermically with water to form carbon dioxide gas, which may create excessive pressure in closed containers. Reacts exothermically with polyol and alcohols. Reacts exothermically and possibly violently with acids, amines and alkaline solutions.

Section 6 – Accidental Release Measures

General: Evacuate and ventilate spill area, dike spill to prevent entry into water system, wear full protective equipment including respiratory equipment during clean up.
Major Spill: If temporary control of Isocyanates vapor is required a blanket of protein foam or other suitable foam (available at most fire departments), may be placed over the spill. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal.
Minor Spill: Absorb the Isocyanates with an acceptable absorbent. Shovel into open containers. Do not make pressure tight. Move to a well-ventilated area (outside) and neutralize with a mixture of 90% water, 3-8% ammonia and 2-7% detergent. Add at 10 to 1 ratio. Let stand for 48 hours letting evolved CO2 escape. Proceed with final clean up of spill area.
Clean up: Decontaminate spill area using neutralizing solution and let stand for at least 10 minutes.
Waste Disposal: Incinerate or landfill in a licensed facility. Do not discharge into waterways or sewer systems.

Section 7 – Handling and Storage

General: Keep containers closed and store in well-ventilated area at 60-80°F. Outage of container should be filled with dry inert gas at atmospheric pressure to avoid reaction with moisture. Contamination by moisture or basic compounds can cause dangerous pressure buildup in closed containers.
Other: If bulging of drum occurs, transfer to well ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before resealing.

Section 8 – Exposure Controls & Personal Protection

Clothing: Rubber gloves, coveralls, hard hat, boots and rubber apron to avoid skin contact. Contaminated equipment or clothing should be cleaned after each use or disposed of.
Eyes: Wear fitted chemical goggles or face shield and safety glasses.
Respiration: For situations where the airborne concentrations may exceed the level for which and air purifying respirator is effective, or where the levels are unknown or immediately dangerous to life or health, select and use an appropriate positive pressure air-supplying respirator. When atmospheric levels may exceed the occupational exposure limit, approved air-purifying respirators equipped with an organic vapor sorbent and particulate filter can be used as long as appropriate precautions and change out schedules are in place.
Ventilation: Use local exhaust as necessary to maintain P.E.L.
Other: Eyewash fountains and safety showers must be easily accessible.

Section 9 – Physical & Chemical Properties

Color: Dark Brown
Form: Liquid
Odor: Aromatic
Odor Intensity: Slight
Specific Gravity: N/A
Bulk Density: 10.18 LB/GAL
Boiling Pt: 200°C@5mm HG

Freezing Pt: N/A
Solubility: Water reactive
Vapor Pressure: <0.00001mm Hg @ 20°C
Viscosity: 200 Centipoise @ 25°

Section 10 – Stability & Reactivity

Stability: Stable
Conditions to Avoid: Reaction with moisture may form CO2
Incompatibility: Water, alcohols and strong bases.
Hazardous Decompostion: CO, NOx, HCN, and MDI vapors.
Hazardous Polymerization: May Occur
Other: Avoid contamination with moisture and other products that react with Isocyanates. Contact with certain rubbers and plastics can cause imbrittlement of the material with subsequent loss in strength.

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: Incinerate or landfill in a licensed facility. Do not discharge into waterways or sewer systems.
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. Check with reconditioner to determine if they require them to be decontaminated. Drums destined for a scrap dealer or landfill must be decontaminated and punctured or crushed to prevent reuse.

Section 14 - Transportation Information

Bill of Lading Description:
< 793 gallons not regulated by the department of transportation.
> 793 gallons RQ, other regulated substances, liquid, NOS, (MDI), 9, NA3082, PG III

Section 15 - Regulatory Information

TSCA Inventory Status:
Listed on inventory: Yes
SARA – 313 listed chemicals:

Chemical	CAS	Amount
Diioscyanates	28	100.0%

RCRA Haz. Waste No.: N/A
CERCLA: Yes **Reportable Qty.:** 5000 lbs.
Hazardous Rating: Health: 2 Fire: 1 Reactivity: 1

For TSCA purposes this product is considered 100% CAS # 9016-87-9.

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

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