

## MATERIAL SAFETY DATA SHEET

Revised: 6/10

CHEMICAL FAMILY: POLYURETHANE

TRADE NAME: GNI Insul-Barrier

NFPA HAZARD RATINGS

Iso/Poly

H - 2/1

F - 0/0

R - 1/0

PP - 1/1

DEGREE OF HAZARD: 4 = EXTREME 3 = HIGH 2 = MODERATE 1 = SLIGHT 0 = INSIGNIFICANT

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### SECTION II - HAZARDOUS SUBSTANCES

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("A) COMPONENT) % BY WT TLV WEEL VAPOUR PRESSURE

ISO: 4,4' Diphenylmethane diisocyanate 50% .02ppm N/A .0003 Hg

CAS# 101-68-8\*

("B" COMPONENT)

POLY: 1,1 DICHLORO - 1 FLUOROETHANE 15 - 30% N/A 500 ppm 10mm Hg

CAS # 1717-006\* (@ 68F)

\* THIS CHEMICAL IS SUBJECT TO SARA TITLE III, SECTION 313 REPORTING

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### SECTION III - PHYSICAL DATA

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BOILING POINT: Iso: 646 Deg F WEIGHT PER GALLON: Iso: 10.3 lbs

Poly: Approx. 100 Deg F Poly 9.5 lbs.

% VOLATILE BY VOLUME: Iso Non-Volatile, Poly: 13 - 26%

VAPOUR DENSITY: Iso 8.5 (air = 1) EVAPORATION RATE (ether = 1): Iso:N/A

Poly: 4.0 Poly: Slower

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### SECTION IV - FIRE & EXPLOSION HAZARD DATA

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FLASH POINT: Non - Flammable Liquids.

EXTINGUISHING MEDIA: Foam, CO<sub>2</sub>, dry chemical, or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters must wear self-contained breathing apparatus and full protective clothing to prevent contact with toxic and/or irritating fumes. Do not spray pool fires directly; a stream of water directed into hot, burning liquid can cause frothing.

USUAL FIRE & EXPLOSION HAZARD: Contamination of the isocyanate component with water will generate carbon dioxide gas with possible pressure build up in confined areas. Incomplete combustion may produce carbon monoxide. Isocyanate combustion may release toxic and corrosive gases, and the container may rupture due to pressure rise. Polyfoam component will not explode from mechanical impact.

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### SECTION V - HEALTH HAZARD DATA

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THRESHOLD LIMIT VALUE: Iso: 0.00 - 3ppm

Polyol: N/A

EFFECTS OF OVEREXPOSURE: Skin contact may cause irritation. Eye contact causes irritation, redness, tearing and blurred vision.

EMERGENCY & FIRST AID: Eye contact; flush with water for at least 15 minutes and call a physician as soon as possible. Skin

contact; wash with soap and water and remove contaminated clothing. Ingestion; see a physician immediately.

PRIMARY ROUTES OF ENTRY: Dermal most likely.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: Repeated exposure can cause allergic reaction with development of occupational asthma. Long term repeated exposure to low vapour levels may cause chronically progressive pulmonary disease. Repeated skin contact can result in sensitization.

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## SECTION VI - REACTIVITY DATA

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STABILITY: Stable

INCOMPATIBILITY: The isocyanate component reacts with water, alcohol, carboxylic acids, amines, and ammonia. Polyol; avoid contact to strong alkalis and oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Incomplete burning may produce nitrogen oxides, hydrogen cyanide, hydrogen fluorine, hydrogen chlorine, carbon monoxide and/or carbon dioxide.

HAZARDOUS POLYMERIZATION: The isocyanate component reacts slowly with water to produce carbon dioxide gas.

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## SECTION VII - SPILL OR LEAK PROCEDURES

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STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: In enclosed areas, cleanup personnel must wear self-contained breathing apparatus. Cover spills with sawdust or other absorbent material to minimize spreading of the material before collecting. The isocyanate component must be neutralized with an equal volume of a 6% ammonia solution in water and allowed to react for 10 min. Collect into open containers and add more ammonia solution. Cover loosely to vent carbon dioxide gas generated.

WASTE DISPOSAL METHOD: Dispose in accordance with local, state and federal regulations.

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## SECTION VIII - SPECIAL PROTECTION INFORMATION

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RESPIRATORY PROTECTION: Use self-contained breathing apparatus in confined spaces.

VENTILATION (Local Exhaust): Mechanical

PROTECTIVE GLOVES: Chemical resistant plastic or rubber gloves.

EYE PROTECTION: Safety goggles or face shield.

OTHER PROTECTIVE EQUIPMENT: Eye bath & safety shower should be available.

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## SECTION IX - SPECIAL PRECAUTIONS & TOXICOLOGICAL PROPERTIES

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SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING & STORING: Keep containers closed and store in cool dry place away from direct sunlight.

TOXICOLOGICAL PROPERTIES: The international Isocyanate Institute is currently sponsoring a lifetime study on polymeric MDI in rats for carcinogenicity. Monomeric MDI is positive for mutagenicity in the Ames assay. Oral LD50 (rats) is greater than 15800 mg/kg. Dermal LD50 (rabbits) is greater than 7900 mg/kg. Inhalation LC50 (rats - 2 hr) is greater than 400 mg/M3 on dust of monomeric MDI. Harmful or fatal if swallowed. Vapour harmful. May cause skin or eye irritation. The 14 lb blowing agent in the polyol component is not currently known to be a mutagen, carcinogen, or to cause birth defects, but long term medical studies are still under investigation. Until this information is available, appropriate care must be used when handling these products.

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