CHEMLINE 3725 PART A

1 PRODUCT AND COMPANY IDENTIFICATION

Vendor Details: Polysource Industries, Inc
#1 - 19725 Telegraph Trail
Langley, BC V1M 3E6

Phone: (877) 986-8688

Emergency: CHEMTREC 800-262-8200 (24 HOUR SERVICE)

2 HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Health, Respiratory or skin sensitization, 1 Respiratory
Health, Acute toxicity, 3 Dermal
Health, Respiratory or skin sensitization, 1 Skin
Health, Skin corrosion/irritation, 2
Health, Serious Eye Damage/Eye Irritation, 2 A
Health, Specific target organ toxicity - Single exposure, 3
Health, Acute toxicity, 4 Oral
Health, Acute toxicity, 5 Inhalation

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: DANGER

GHS Hazard Pictograms:

GHS Hazard Statements:

H334 - May cause allergy or asthma symptoms of breathing difficulties if inhaled
H311 - Toxic in contact with skin
H317 - May cause an allergic skin reaction
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H302 - Harmful if swallowed
H333 - May be harmful if inhaled

GHS Precautionary Statements:

P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P284 - Wear respiratory protection.
P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor/physician.
P342+311 - Call a POISON CENTER or doctor/physician.

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Route of Entry: Eyes; Ingestion; Inhalation; Skin;

Target Organs: Respiratory system; Skin; Eyes;

Inhalation: Hexamethylene Diisocyanate (HDI) and homopolymers of HDI are odorless and toxic. Heating, spraying, foaming, or otherwise mechanically dispersing (drumming, venting or pumping)

operations may generate higher vapor or aerosol concentrations sufficient to cause irritation or other adverse effects. Excessive exposure may cause irritation of the eyes, upper respiratory tract and lungs. Severe overexposure may lead to pulmonary edema. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals. HDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Symptoms may include coughing, dryness of throat, headache, nausea, difficult breathing and a feeling of tightness in the chest. Effects may be delayed. Impaired lung function (decreased ventilator capacity) has been associated with overexposure to isocyanates. High vapor concentrations of xylene may cause dizziness, headaches, nausea, loss of balance and coordination, unconsciousness, coma or respiratory failure. Repeat excessive exposures of xylene may cause liver and kidney effects or damage.

Skin Contact: Slight irritation may develop following short contact periods with skin. Prolonged or repeated exposure can cause skin irritation, reddening, dermatitis, and in some individuals, sensitization. Skin contact may result in allergic skin reactions or respiratory sensitization, but is not expected to result in absorption of amounts sufficient to cause other adverse effects. May stain skin.

Eye Contact: As a liquid may cause severe irritation, inflammation, and/or damage to sensitive eye tissue. Symptoms include watering or discomfort of the eyes. Corneal injury is unlikely.

Ingestion: Xylene is moderately toxic if swallowed. Ingestion of xylene may cause irritation to the mouth, throat and gastro-intestinal tract. Pulmonary aspiration hazard if swallowed and/or vomiting occurs - can enter lungs and cause damage. HDI can result in irritation and corrosive action in the mouth, stomach tissue and digestive tract.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Ingredients

CAS#	%	Chemical Name
0	10-20%	Aliphatic isocyanate prepolymer blend
28182-81-2	40-70%	Hexamethylene diisocyanate homopolymer
822-06-0	0-.1%	Hexamethylene diisocyanate
64742-94-5	15-25%	Solvent Naphtha (Petroleum)

4 FIRST AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility immediately.

Skin Contact: Remove contaminated clothing immediately. Wash with large quantities of soap and water. Wash clothing before reuse. Seek medical attention if redness, burning or an itcing sensation develops or persisits after the area is washed.

Eye Contact: Flush eyes with plenty of water for at least 15 minutes. Materials containing isocyanates may react with the moisture of the eye forming a thick material, which may be difficult to wash from the eyes. Seek medical attention.

Ingestion: Do not induce vomiting or give liquids unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek medical attention. Small amounts, which accidentally enter mouth, should be rinsed out until taste of it is gone.

5 FIRE FIGHTING MEASURES

Flammability: OSHA - none; DOT - none
Flash Point: 235°F
Flash Point Method: COC
Burning Rate: N/A
Autoignition Temp: N/A
LEL: N/A
UEL: N/A

Use dry chemical, foam, carbon dioxide, or halogenated agents. If water is used, use very large quantities. The reaction

between water and hot isocyanate may be vigorous. If possible, contain fire run-off water.
Protective Equipment: Wear positive-pressure self-contained breathing apparatus with full-face mask and full protective clothing.
Unusual Hazards: A straight stream of water will spread fire. A vapor accumulation will flash and/or explode if ignited. Containers may burst explosively if overheated in fire. At temperatures greater than 400°F, Aliphatic Diisocyanates can polymerize and decompose which will cause pressure build-up in closed containers. Explosive rupture is possible. Water contamination will produce carbon dioxide. Do not reseal contaminated containers as pressure buildup may rupture the containers. Downwind personnel must be evacuated. May form peroxides of unknown stability.

6 ACCIDENTAL RELEASE MEASURES

Spill: Remove all ignition sources. Use non-sparking tools. Evacuate spill area. With adequate ventilation and appropriate personal protective equipment, cover the area with an inert absorbent material such as clay or vermiculite and transfer to metal waste containers. Saturate with water or decontamination solution below, but do not seal the container with the isocyanate mixture. Larger quantities of liquid may be transferred directly to drums for disposal. Decontaminate or discard all clean-up equipment.
NOTE: ISOCYANATES WILL REACT WITH WATER AND GENERATE CARBON DIOXIDE. THIS COULD RESULT IN THE RUPTURE OF ANY CLOSED CONTAINERS.
Clean up: The area should then be flushed with a decontamination solution. The decontamination solution is a 5-10% mixture of sodium carbonate and 0.5% liquid detergent in water solution or a 3-8% concentrated ammonium hydroxide and 0.5% liquid detergent in water. Use 10 parts decontamination solution to 1 part spilled material. If the ammonium hydroxide solution is used, ammonia will be evolved as a vapor. Use caution to avoid exposure to high concentrations of ammonia. Allow to stand for 48 hours letting evolved carbon dioxide to escape.

7 HANDLING AND STORAGE

Handling Precautions:
Handling: Use personal protective equipment when transferring material to or from drums, totes or other containers. The reaction of polyols and isocyanates generates heat. Contact of the reacting materials with skin or eyes can cause irritiation and may be difficult to remove from the affected areas. Immediately wash affected areas with plenty of water and seek medical attention. In addition, such contact increases the risk of exposure to isocyanate vapors. Do not smoke or use naked lights, open flames, space heaters, or other ignition sources near pouring, frothing or spraying operations.
Special Emphasis for Spray Applications: Inspect the application area from the potential to expose other persons or for overspray to drift onto buildings, vehicles or other property. When spraying building exteriors, persons entering or exiting the building as well as those inside could be exposed to polyisocyanates due to wind conditions, open windows or air intakes. Do not begin application work until these potential problems have been corrected.

Storage Requirements:
When stored between 15°C-30°C (60°F-85°F) in sealed containers, the typical shelf life is 6 months or more from the date of manufacture. Consult technical data sheet for shelf life requirements affecting performance quality. Open containers must be handled properly to prevent moisture pickup.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:
General/local ventilation typically control vapor levels very adequately. Uses requiring heating or spraying may require more ventilation or PPE.
Equipment: An eyewash station and safety shower or other drenching facilities are recommended in the work area.

Personal Protective Equipment:
HMIS PP, K | Full Face Respirator, Gloves, Full Suit, Boots

Personal protective equipment

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves 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.

Eye protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection: Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Hexamethylene diisocyanate homopolymer (28182-81-2) : no data available

Hexamethylene diisocyanate (822-06-0)

Components with workplace control parameters

TWA 0.0050 ppm USA. ACGIH Threshold Limit Values (TLV)
Upper Respiratory Tract irritation Respiratory sensitization

TWA 0.0050 ppm USA. NIOSH Recommended Exposure Limits
0.035 mg/m3
10 minute ceiling value

C 0.02 ppm USA. NIOSH Recommended Exposure Limits
0.14 mg/m3
10 minute ceiling value

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Non-pigmented liquid.		
Physical State:	Liquid	**Odor:**	Light Aromatic
Spec Grav./Density:	N/A	**Molecular Formula:**	N/A
Boiling Point:	>250°F	**Solubility:**	Not soluble in water.
Flammability:	Extremely flammable	**Flash Point:**	235°F
Evap. Rate:	<1	**Vapor Density:**	>1

10 STABILITY AND REACTIVITY

Chemical Stability: Stability: Polyisocyanates are highly reactive chemicals and should be handled and stored in a way to avoid exposure to many common substances, including water and moisture. Material is stable when stored in sealed containers under normal conditions. Avoid extended exposure over 110°F (45°C).
Reactivity: Reacts with water, acids, bases, alcohols, metal compounds. The reaction with water is very slow under 120°F (50°C), but is accelerated at higher temperatures and in the presence of alkalis, tertiary amines and metal compounds. Some reactions can be vigorous or even violent.

Conditions to Avoid: Avoid high temperatures, sparks, flame and extended exposure over 85°F (30°C).
Reacts with water, acids, bases, alcohols, metal compounds. The reaction with water is very slow under 120°F (50°C), but is accelerated at higher temperatures and in the presence of alkalis, tertiary amines and metal compounds. Some reactions can be vigorous or even violent.

Materials to Avoid: water, acids, bases, alcohols, metal compounds

Hazardous Polymerization: May occur with incompatible reactants especially strong bases, high temperatures and water. Possible evolution of carbon dioxide gas from overheating or exposure to contaminants may rupture closed containers.

11 TOXICOLOGICAL INFORMATION

Hexamethylene diisocyanate homopolymer (28182-81-2)

Information on toxicological effects

Acute toxicity:
Oral LD50 no data available
Inhalation LC50
Dermal LD50
Other information on acute toxicity

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: Eyes: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:
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 by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):
no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. Causes respiratory tract irritation. Ingestion May be harmful if swallowed. Skin May be harmful if absorbed through skin. Causes skin irritation. Eyes Causes eye irritation.

Signs and Symptoms of Exposure: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects: no data available

Additional Information:

RTECS: Not available

Hexamethylene diisocyanate (822-06-0)

Information on toxicological effects

Acute toxicity:
Oral LD50 LD50 Oral - mouse - 350 mg/kg
Inhalation LC50 LC50 Inhalation - rat - male - 1 h - 275 mg/m3
Dermal LD50 LD50 Dermal - rabbit - 596 mg/kg
Other information on acute toxicity no data available

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: May cause allergic respiratory reaction.

Germ cell mutagenicity: no data available

Carcinogenicity:
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 by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):
May cause respiratory irritation.

Specific target organ toxicity - repeated exposure (Globally Harmonized System):
no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be fatal if inhaled. Causes respiratory tract irritation. Ingestion Toxic if swallowed. Skin Toxic if absorbed through skin. Causes skin irritation. Eyes Causes eye irritation.

Signs and Symptoms of Exposure: Cough, Shortness of breath, Headache, Nausea, Vomiting, Lung irritation, Repeated exposure may cause asthma.

Synergistic effects: no data available

Additional Information:

RTECS: MO1740000

12 ECOLOGICAL INFORMATION

Hexamethylene diisocyanate homopolymer (28182-81-2)

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

Hexamethylene diisocyanate (822-06-0)

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

13 DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations. Disposal: Any disposal practice must be in compliance with all federal, state and local laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Waste characterization and disposal compliance are the responsibility solely of the party generating the waste or deciding to discard or dispose of the material.
Do not allow material to enter sewers, a body of water, or contact the ground. Refer to RCRA 40 CFR 261, and/or any other appropriate federal, state or local requirements for proper classification information.

14 TRANSPORT INFORMATION

Non DOT/Non RCRA regulated

15 REGULATORY INFORMATION

Component (CAS#) - CODES

Hexamethylene diisocyanate homopolymer (28182-81-2) TSCA

Solvent Naphtha (Petroleum) (64742-94-5) TSCA

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Regulatory CODE Descriptions
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RQ = Reportable Quantity
TSCA = Toxic Substances Control Act
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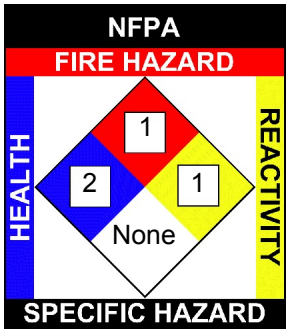
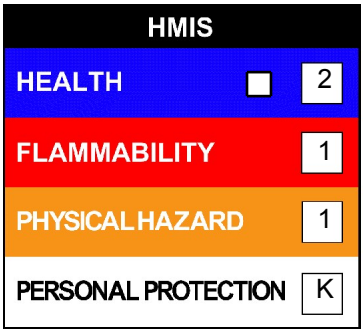
16 OTHER INFORMATION

NFPA: Health = 2, Fire = 1, Reactivity = 1, Specific Hazard = None
HMIS III: Health = 2, Fire = 1, Physical Hazard = 1
HMIS PPE: K - Full Face Respirator, Gloves, Full Suit, Boots





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