Safety Data Sheet
AP Lift 430 Part A

SECTION 1: Identification

Product identifier

Product name	AP Lift 430 Part A

Recommended use of the chemical and restrictions on use
Part A of two component, structural polyurethane foam.

Supplier's details

Name	Alchemy-Spetec
Address	4508 Bibb Blvd Tucker GA 30084
Telephone	(404) 618-0438

Emergency phone number(s)

Call CHEMTREC Day or Night
1-800-424-9300 / +1 703-527-3887

SECTION 2: Hazard identification

EMERGENCY OVERVIEW: (ERG CODE 171)

WARNING!
Toxic gases/fumes may be given off during burning or thermal decomposition. Closed container may forcibly rupture under extreme heat or when contents have been contaminated with water. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture. Causes respiratory tract irritation. May cause allergic respiratory reaction. Harmful if inhaled. Respiratory sensitizer. Lung damage and respiratory sensitization may be permanent. Causes skin irritation. May cause allergic skin reaction. Skin sensitizer. Animal tests and other research indicate that skin contact with MDI can play a role in causing isocyanate sensitization and respiratory reaction. Causes eye irritation. May cause lung damage.

Color: Dark brown, Black
Form: Liquid
Odor: Musty.

POTENTIAL HEALTH EFFECTS

Primary routes of entry
Skin Contact, Inhalation, Eye Contact.

Medical conditions that could be aggravated
Asthma, Respiratory Disorders, Skin Allergies, Eczema.

Exposure
Inhalation, Acute Inhalation

Diisocyanate vapors or mist at concentrations above the TLV or PEL can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the TLV or PEL with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the TLV or PEL may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g., fever, chills), has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

Chronic inhalation
As a result of previous repeated overexposures or a single large dose, certain individuals may develop sensitization to diisocyanates (asthma or asthma-like symptoms) that may cause them to react to a later exposure to diisocyanates at levels well below the TLV or PEL. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be immediate or delayed up to several hours after exposure. Extreme asthmatic reactions can be life threatening. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Sensitization can be permanent. Chronic verexposure to diisocyanates has also been reported to cause lung damage (including fibrosis, decrease in lung function) that may be permanent.

Skin, acute skin
Causes irritation with symptoms of reddening, itching, and swelling. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Cured material is difficult to remove. Contact with MDI can cause discoloration.

Chronic skin
Prolonged contact can cause reddening, swelling, rash, and, in some cases, skin sensitization. Animal tests and other research indicate that skin contact with MDI can play a role in causing isocyanate sensitization and respiratory reaction.

Eye, acute eye
Causes irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor or aerosol may cause irritation with symptoms of burning and tearing.

Chronic eye
Prolonged vapor contact may cause conjunctivitis.

Ingestion, acute ingestion

May cause irritation; Symptoms may include abdominal pain, nausea, vomiting, and diarrhea.

Carcinogenicity
No Carcinogenic substances as defined by IARC, NTP and/or OSHA.

SECTION 3: Composition/information on ingredients

Name	CAS NO.	% wt/wt
Polymeric Diphenylmethane Diisocyanate (pMDI)	9016-87-9	45 - 55%
4,4'-Diphenylmethane Diisocyanate (MDI)	101-68-8	35 - 45%
Diphenylmethane Diisocyanate (MDI) Mixed Isomers	26447-40-5	1 - 10%

SECTION 4: First-aid measures

Eyes
Immediately flush eyes gently with water for at least 15 minutes, while holding open upper and lower lids. Product will react with moisture in eye! Immediately seek medical attention.

Skin
Remove contaminated clothing. Blot or brush the product away, prior to washing the exposed area with water. The cured product on the skin is rarely a cause of irritation (If it does, seek medical attention). The process of trying to remove the cured product may cause irritation.

Ingestion
SEEK IMMEDIATE MEDICAL ATTENTION! DELAYED TREATMENT MAY RESULT IN FATALITY. Do Not Induce Vomiting. Rinse mouth out with water. Aspiration of material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal.

Inhalation
Move to an area free from further exposure. Get medical attention immediately. Administer oxygen or artificial respiration as needed. Asthmatic symptoms may develop and may be immediate or delayed up to several hours. Extreme asthmatic reactions can be life threatening.

SECTION 5: Fire-fighting measures

Flash point & method used
ASTM D93 390.2°F (199°C) Pensky-Martens Closed Cup

Extinguishing media
Dry Chemical, CO2, Foam or Water Fog

Special firefighting procedures
Do not scatter material with high pressure water streams. Firefighters should wear NFPA compliant structural firefighting protective equipment, including self-contained breathing apparatus and NFPA compliant helmet, hood, boots and gloves. Avoid contact with product. Decontaminate equipment and protective clothing prior to reuse. During a fire, isocyanate vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Exposure to heated diisocyanate can be extremely dangerous Closed container may forcibly rupture under extreme heat or when contents are contaminated with water (CO2 formed). Use cold-water spray to cool fire-exposed containers to minimize the risk of rupture. Large fires can be extinguished with large volumes of water applied from a safe distance, since reaction between water and hot diisocyanate can be vigorous.

Hazardous decomposition products
Fire or intense heat will decompose the product into CO2, CO, Hydrogen Cyanide, Oxides of Nitrogen, Isocyanates, Isocyanic Acid, and dense black smoke.

SECTION 6: Accidental release measures

Accidental release measures
Where exposure level is known, wear approved respirator suitable for the level of exposure. If exposure level is unknown, wear approved, positive pressure, self-contained respirator. In addition to the protective clothing in section 8, wear impermeable boots.

Clean-up procedures
Remove sources of ignition. Stop and contain / dam the spill. Absorb spill with inert material (vermiculite / diatomaceous earth). Shovel material into appropriate container for disposal.

SECTION 7: Handling and storage

Handling
Do not breathe vapors, mists, or dusts. Use adequate ventilation to keep airborne isocyanate levels below the exposure limits. Wear respiratory protection if material is heated, sprayed, used in a confined space, or if the exposure limit is exceeded. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent overexposure from inhalation. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must not be exposed to vapor or spray mist. Avoid contact with skin and eyes. Wear appropriate eye and skin protection. Wash thoroughly after handling. Do not breathe smoke and gases created by overheating or burning this material. Decomposition products can be highly toxic and irritating. Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected.

Storage
Keep in manufacturer’s sealed nitrogen packed pail. Maintain storage temperatures between 65°F to 86°F (18°C to 30°C).

SECTION 8: Exposure controls/personal protection

4,4’- Diphenylmethane Diisocyanate:
ACGIH PEL-TWA: 0.005 ppm

NIOSH Ceiling: 0.02ppm at 10 minutes
OSHA PEL (vacated) CEILING: 0.02 ppm, 0.2mg/m3

Engineering controls
Normal room ventilation is usually adequate under normal use. Local exhaust should be used to maintain levels below the TLV whenever MDI is heated, sprayed, or aerosolized. Standard reference sources regarding industrial ventilation (e.g., ACGIH Industrial Ventilation Manual) should be consulted for guidance about adequate ventilation. To ensure that published exposure limits have not been exceeded, monitoring for airborne diisocyanate should become part of the overall employee exposure characterization program.

Inhalation
Diisocyanate vapors or mist at concentrations above the TLV or PEL can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a preexisting, nonspecific bronchial hyper reactivity can respond to concentrations below the TLV or PEL with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the TLV or PEL may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g., fever, chills), has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

Chronic inhalation
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Respiratory protection
Airborne MDI concentrations greater than the ACGIH TLV-TWA (TLV) or OSHA PEL-C (PEL) can occur in inadequately ventilated environments when MDI is sprayed, aerosolized, or heated. In such cases, respiratory protection must be worn. The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134). The type of respiratory protection available includes (1) an atmosphere-supplying respirator such as a self-contained breathing apparatus (SCBA) or a supplied air respirator (SAR) in the positive pressure or continuous flow mode, or (2) an air-purifying respirator (APR). If an APR is selected then (a) the cartridge must be equipped with an end-of-service life indicator (ESLI) certified by NIOSH, or(b) a change out schedule, based on objective information or data that will ensure that the cartridges are changed out before the end of their service life, must be developed and implemented. The basis for the change out schedule must be described in the written respirator program. Further, if an APR is selected, the airborne diisocyanate concentration must be no greater than 10 times the TLV or PEL. The recommended APR cartridge is an organic vapor/particulate filter combination cartridge (OV/P100).

Eye protection
Safety goggles or face shield

Skin protection
Use gloves; wear protective clothing to prevent skin contact. In cured form, the product is difficult to remove from skin and hair.

Work hygienic practices
Use good hygiene practices when handling this material including changing and laundering of work clothes after use.

SECTION 9: Physical and chemical properties

Appearance	Blackish brown
Odor	Slightly musty odor
Odor threshold	No data available.
Physical state	Liquid
pH	Neutral
Melting point	<- 4°F (<- 20°C)
Flash point (cc)	390.2°F (199°C)
Evaporation rate	No data available.
Flammability	Non-flammable
Upper flammability limits	Not applicable
Lower flammability limits	Not applicable
Vapor pressure	< 0.0001 mm Hg @ 25°C
Bulk density	10.3 lbs/gal
Solubility (H2O)	None
Partition coefficient	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	200 cps @ 72°F

SECTION 10: Stability and reactivity

Stability
Contact with moisture or temperatures above 350° F (177° C) will cause polymerization.

Conditions to avoid (stability)
Will polymerize with heat and/or moisture.

Incompatibility (material to avoid)
Amines, Strong Bases, Alcohols, Copper Alloys, Liquid Chlorine. Water- until ready to react.

Hazardous decomposition or by-products
Fire or intense heat will decompose the product into CO2, CO, Hydrogen Cyanide, Oxides of Nitrogen, Isocyanates, Isocyanic Acid, and dense black smoke.

Hazardous polymerization
During normal polymerization CO2 is produced.

SECTION 11: Toxicological information

Toxicity note
Toxicity data based on polymeric MDI.

Acute oral toxicity
LD50: > 2,000 mg/kg (rat, Male/Female)

Acute inhalation toxicity
LC50: 490 mg/m3, vapor, 4 h (rat)

Skin irritation
Rabbit, Slightly irritating

Repeated dose toxicity
90 Days, inhalation: NOAEL: 1 mg/m3, (rat, Male/Female, 6 hrs/day 5 days/week) Irritation to lungs and nasal cavity.

2 years, inhalation: NOAEL: 0.2 mg/m3, (rat, Male/Female, 6 hrs/day 5 days/week) Irritation to lungs and nasal cavity.

Mutagenicity
Genetic Toxicity in Vitro:
Bacterial - gene mutation assay: negative (Salmonella typhimurium, Metabolic Activation: with/without)

Carcinogenicity
Rat, Male/Female, inhalation, 2 Years, 6 hrs/day 5 days/week. Exposure to a level of 6 mg/m3 polymeric MDI was related to the occurrence of lung tumors. This level is significantly over the TLV for MDI.

Developmental toxicity/teratogenicity
Rat, female, inhalation, gestation days 6-15, 6 hrs/day, NOAEL (teratogenicity): 12 mg/m3, NOAEL (maternal): 4 mg/m3. No Teratogenic effects observed at doses tested. Fetotoxicity seen only with maternal toxicity.

TOXICITY DATA FOR 4, 4'-DIPHENYLMETHANE DIISOCYANATE (MDI)

Acute inhalation toxicity
LC50: 369 mg/m3, 4 hrs (rat, Male/Female) LC50: > 2240 mg/m3, aerosol, 1 h (rat)

Acute dermal toxicity
LD50: > 10,000 mg/kg (rabbit)

Skin irritation
Rabbit, Draize Test, Slightly irritating

Eye irritation
Rabbit, Draize Test, Slightly Irritating

SENSITIZATION

Dermal
Sensitizer (guinea pig, Maximization Test (GPMT)) inhalation: sensitizer (Guinea pig)

Repeated dose toxicity
90 Days, inhalation: NOAEL: 0.3 mg/m3, (rat, Male/Female, 18 hrs/day, 5 days/week) Irritation to lungs and nasal cavity.

Mutagenicity
Genetic Toxicity in Vitro:
Ames: (Salmonella typhimurium, Metabolic Activation: with/without)
Positive and negative results were reported. The use of certain solvents which rapidly hydrolyze diisocyanates is suspected of producing the positive mutagenicity results. Genetic Toxicity in Vivo:
Micronucleus Assay: negative (mouse)

Carcinogenicity
Rat, Female, inhalation, 2 Years, 17 hrs/day, 5 days/week negative.

SECTION 12: Ecological information

Biodegradation
0 %, Exposure time: 28 Days

Bioaccumulation
Rainbow trout, Exposure time: 112 d, < 1 BCF
Does not bioaccumulate.

Acute and Prolonged Toxicity to Fish
LC0: > 1,000 mg/l (Zebra fish (Brachydanio rerio), 96 hrs) LC0: > 3,000 mg/l (Killifish (Oryzias latipes), 96 h)

Acute Toxicity to Aquatic Invertebrates
EC50: > 1,000 mg/l (Water flea (Daphnia magna), 24 hrs)

Toxicity to Aquatic Plants
NOEC: 1,640 mg/l, End Point: growth (Green algae (Scenedesmus subspicatus), 72 hrs)

Toxicity to Microorganisms
EC50: > 100 mg/l, (Activated sludge microorganisms, 3 hrs)

Additional Ecotoxicological Remarks
Ecotoxicity data based on polymeric MDI

Ecological Data for 4,4’-Diphenylmethane

Diisocyanate (MDI) Acute and Prolonged
Toxicity to Fish
LC50: > 500 mg/l (Zebra fish (Brachydanio rerio), 24 hrs)

Acute Toxicity to Aquatic Invertebrates
EC50: > 500 mg/l (Water flea (Daphnia magna), 24 hrs)

SECTION 13: Disposal considerations

Waste disposal method
Waste disposal should be in accordance with existing federal, state and local environmental control laws. Incineration is the preferred method.

Empty container precautions
Empty containers retain product residue; observe all precautions for product. Do not heat or cut empty container with electric or gas torch because highly toxic vapors and gases are formed. Do not reuse without thorough commercial cleaning and reconditioning. If container is to be disposed, ensure all product residues are removed prior to disposal. Dispose of per local, state and federal guidelines as required by your specific local. This product in its cured foam state is inert and non-toxic.

SECTION 14: Transport information

DOT
Class - Not regulated

IMDG
International Maritime Dangerous Goods Code: Class - Not regulated

IATA
Class - Not regulated

SECTION 15: Regulatory information

United States Federal Regulations

OSHA Hazcom Standard Rating
Hazardous

US. Toxic Substances Control Act
Listed on the TSCA Inventory.

US. EPA CERCLA Hazardous Substances (40 CFR 302)
Components

4,4'-Diphenylmethane Diisocyanate (MDI)	Reportable quantity: 5,000 lbs

SARA Section 311/312 Hazard Categories

Acute Health Hazard, Chronic Health Hazard

US. EPA Emergency Planning and Community Right-To-Know Act
(EPCRA) SARA Title III Section 302 Extremely Hazardous Substance
(40 CFR 355, Appendix A):
Components
None

US. EPA Emergency Planning and Community Right-To-Know Act
(EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) -
Supplier Notification Required:
Components
Polymeric Diphenylmethane Diisocyanate (pMDI)
4,4'-Diphenylmethane Diisocyanate (MDI)

US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261)
If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

State Right-To-Know Information
The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

This product contains a trace (ppm) amount of phenyl isocyanate (CAS# 103-71-9) and monochlorobenzene (CAS# 108-90-7) as impurities.

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

Weight %	Components CAS-No.	
45 - 55%	Polymeric Diphenylmethane Diisocyanate (pMDI)	9016-87-9
35 - 45%	4,4'-Diphenylmethane Diisocyanate (MDI)	101-68-8
1 - 10%	Diphenylmethane Diisocyanate (MDI) 26447-40-5 Mixed Isomers	

New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists:

Weight %	Components	CAS-No.

45 - 55%	Polymeric Diphenylmethane Diisocyanate (pMDI)	9016-87-9
35 - 45%	4,4'-Diphenylmethane Diisocyanate (MDI)	101-68-8

California Prop. 65:
To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

SECTION 16: Other information

NFPA 704M Rating

Health 2
Flammability 1
Reactivity 1
Other
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

HMIS Rating

Health 2*
Flammability 1
Physical Hazard 1
0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe * = Chronic Health Hazard

Further information/disclaimer

DISCLAIMER: The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of information for their particular purposes. In no event shall Alchemy-Spetec be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, whatsoever arising, even if Alchemy-Spetec has been advised of the possibility of such damages.

Safety Data Sheet
AP Lift 430 Part B

SECTION 1: Identification

Product identifier

Product name	AP Lift 430 Part B

Recommended use of the chemical and restrictions on use
Part B of two component, structural polyurethane foam.

Supplier's details

Name	Alchemy-Spetec
Address	4508 Bibb Blvd Tucker GA 30084
Telephone	(404) 618-0438

Emergency phone number(s)

Call CHEMTREC Day or Night
1-800-424-9300 / +1 703-527-3887

SECTION 2: Hazard identification

Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200)

- Eye damage/irritation, Cat. 2A
- Toxic to reproduction, Cat. 2

GHS label elements, including precautionary statements

Pictogram

Signal word **Warning**

Hazard statement(s)

H319	Causes serious eye irritation
H361	Suspected of damaging fertility or the unborn child

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P264	Wash skin thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

SECTION 3: Composition/information on ingredients

Mixtures

Hazardous components

Component	Concentration
Component 1 (trade secret)*	**1 – 5 % (weight)***
Component 2 (trade secret)*	**< 1 % (weight)***

Trade secret statement (OSHA 1910.1200(i))
*The specific chemical identities and/or actual concentrations or actual concentration ranges for one or more listed components are being withheld as trade secrets under the US regulation 29 CFR 1910.1200(i).

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	First aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.
If inhaled	If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility. Acute and delayed symptoms and effects: May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.
In case of skin contact	Wash with plenty of soap and water. Call a poison center or doctor if irritation develops or persists. Take off contaminated clothing and wash it before reuse. Acute and delayed symptoms and effects: Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching.
In case of eye contact	Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention/advice.

	Acute and delayed symptoms and effects: Causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.
If swallowed	Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Acute and delayed symptoms and effects: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Most important symptoms/effects, acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

SECTION 5: Fire-fighting measures

Suitable extinguishing media
Use water fog, carbon dioxide or dry chemical.

Specific hazards arising from the chemical
Fire or intense heat may decompose the product into carbon monoxide, carbon dioxide, and nitrogen oxides.

Special protective actions for fire-fighters
Do not scatter material with high pressure water streams. Firefighters should wear NFPA compliant structural firefighting protective equipment, including self-contained breathing apparatus and NFPA compliant helmet, hood, boots and gloves. Avoid contact with product. Decontaminate equipment and protective clothing prior to reuse. During a fire, irritating, highly toxic gases may be generated by thermal decomposition or combustion. Use cold-water spray to cool fire-exposed containers to minimize the risk of rupture.

Further information
Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. Keep upwind of spill. Spilled material may cause a slipping hazard. Ventilate area of leak or spill. Where exposure level is known, wear approved respirator suitable for the level of exposure. If exposure level is unknown, wear approved, positive pressure, self-contained respirator. In addition to the protective clothing in section 8, wear impermeable boots.

Environmental precautions
Prevent product from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up
Remove sources of ignition. Stop and contain / dam the spill. Absorb spill with inert material (vermiculite / diatomaceous earth). Shovel material into appropriate container for disposal.

SECTION 7: Handling and storage

Precautions for safe handling
Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for safe storage, including any incompatibilities
Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. If contamination with isocyanates is suspected, do not reseal container because of possible rupture due to pressure buildup. Always slowly vent container when opening to relieve any pressure buildup.

Ideal storage temperature is 65°F-75°F (18°C-24°C). Handling and storage should be in accordance with Local, State/Provincial or Federal regulations. Average shelf life is 2-3 months from date of manufacture. This product is hygroscopic. Containers should be tightly sealed to prevent moisture contamination. Do not expose to high temperatures for any length of time.

Specific end use(s)
See the technical data sheet on this product for further information.

SECTION 8: Exposure controls/personal protection

Control parameters

CAS: (not specified)
Component 2 (trade secret)*
ACGIH: 5 mg/m3 TLV® inhalation

Appropriate engineering controls
Use only with adequate ventilation. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. The odor and irritancy of this material are inadequate to warn of excessive exposure. Local exhaust ventilation may be necessary for some operations.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
Tightly fitting safety goggles. If splash hazard, wear face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Ensure that eyewash stations and/or safety showers are close to the workstation location if working with concentrated product.

Skin protection
Wear protective gloves. Consult manufacturer specifications for further information.

Body protection
Wear protective clothing. Clothing with full length sleeves and pants should be worn. Selection of additional items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection
Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply. Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2.

Environmental exposure controls
Do not let product enter drains.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Opaque to amber liquid
Odor	Faint odor
Odor threshold	No data available.
pH	No data available.
Melting point/freezing point	<32 °F (0°C)
Initial boiling point and boiling range	>300 °F (149°C)
Flash point	No data available.
Evaporation rate	No data available.
Flammability (solid, gas)	Non-flammable
Upper/lower flammability limits	No data available.
Upper/lower explosive limits	No data available.
Vapor pressure	No data available.
Vapor density	(AIR=1) >1.0
Relative density	No data available.
Solubility(ies)	Water: Moderate
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	No data available.
Explosive properties	No data available.
Oxidizing properties	No data available.

SECTION 10: Stability and reactivity

Reactivity
Contact with incompatible materials. Sources of ignition. Exposure to heat. React with isocyanates, including MDI, to polymerize.

Chemical stability
Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions
Can occur. Exposure to elevated temperatures can cause product to decompose and generate gas. This can cause pressure build-up and/or rupturing of closed containers. Polymerization can be catalyzed by: Strong bases. Water.

Conditions to avoid
Heat, flames and sparks. Incompatible products. Keep away from open flames, hot surfaces and sources of ignition.

Incompatible materials
Oxidizing agents and acids.

Hazardous decomposition products
Fire or intense heat will decompose the product into smoke, carbon monoxide, carbon dioxide and nitrogen oxide.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Likely Routes of Exposure: Eye contact. Skin contact. Inhalation. Ingestion.

Components:
Component 2
LD50 Oral - Rat - 3,000 mg/kg
LD50 Skin - Rabbit - > 2,000 mg/kg

Symptoms (including delayed and immediate effects):
Inhalation: May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.
Ingestion: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Skin corrosion/irritation
May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Serious eye damage/irritation
Causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

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 a carcinogen or potential 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
Suspected of damaging fertility or the unborn child

Component 2
Result: Suspected human reproductive toxicant. Suspected of damaging the unborn child. Musculoskeletal system. Specific Developmental Abnormalities: Cardiovascular (circulatory) system. Specific Developmental Abnormalities: Urogenital system.

STOT-single exposure
No data available.

STOT-repeated exposure
No data available.

Aspiration hazard
No data available.

SECTION 12: Ecological information

Toxicity
No data available on product

Persistence and degradability
No data available on product

Bioaccumulative potential
No data available on product

Mobility in soil
No data available.

Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects
No data available.

SECTION 13: Disposal considerations

Disposal of the product
Disposal should be in accordance with applicable Federal, State and local laws and regulations. Local regulations may be more stringent than State or Federal requirements.

Disposal of contaminated packaging
Dispose of as unused product.

Empty container precautions
Empty containers retain product residue; observe all precautions for product. Do not heat or cut empty container with electric or gas torch because highly toxic vapors and gases are formed. Do not reuse without thorough commercial cleaning and reconditioning. If container is to be disposed, ensure all product residues are removed prior to disposal. Dispose of per local, state and federal guidelines as required by your specific local.

SECTION 14: Transport information

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

New Jersey Right To Know Components
Common name: 2-ETHYLHEXANOIC ACID
CAS number: 149-57-5

Pennsylvania Right To Know Components
Common name: 2-ETHYLHEXANOIC ACID
CAS number: 149-57-5

California Prop. 65 Components
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
Ethylene glycol
CAS number: 107-21-1

Canadian Domestic Substances List (DSL)
Chemical name: 1H-Imidazole, 1,2-dimethyl-
CAS: 1739-84-0

Chemical name: Hexanoic acid, 2-ethyl-
CAS: 149-57-5

SECTION 16: Other information

Further information/disclaimer
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