

AP Fill 420 - Part A

Part A of two component, highly expansive polyurethane foam.

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: AP Fill 420 - Part A
MANUFACTURER: Alchemy-Spetec
ADDRESS: 4508 Bibb Blvd, Tucker, GA 30084
PHONE: (404) 618-0438
FAX: (678) 805-4783
WEBSITE: www.alchemy-spetec.com
FOR EMERGENCY: Call CHEMTREC Day or Night
1-800-424-9300 / +1 703-527-3887

SECTION 2: HAZARDS 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 asth-

ma-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 (ERG CODE 171)

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 FIRE FIGHTING 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 (ERG CODE 171)

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: 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 overexposure to diisocyanates has also been reported to cause

lung damage (including fibrosis, decrease in lung function) that may be permanent.

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: Not available
PHYSICAL STATE: Liquid
pH: Neutral
MELTING PT: <- 4°F (<- 20°C)
FLASH POINT (CC): 390.2°F (199°C)
EVAPORATION RATE: Not 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: Not available
AUTO-IGNITION TEMPERATURE: Not available
DECOMPOSITION TEMPERATURE: Not known
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

Land transport (DOT)

Proper Shipping Name: Other regulated substances, liquid, n.o.s. (contains 4,4'-Diphenylmethane Diisocyanate (MDI))

Hazard Class or Division: 9

UN/NA Number: NA3082

Packaging Group: III

Hazard Label(s): Class 9

RSPA/DOT Regulated Components: 4,4'-Diphenylmethane Diisocyanate (MDI)

Reportable Quantity: 11,111 lb

IMDG International Maritime Dangerous Goods Code: Class - Not regulated

IATA: Class - Not regulated

Additional Transportation Information

When in individual containers of less than the Product RQ, this material ships as non-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

PREPARATION INFORMATION:

March, 2016

This SDS is on a three year review cycle. If the date on this sheet is older than three years please contact Alchemy-Spetec for an updated SDS.

DISCLAIMER:

All information appearing herein is based on manufacturer and/ or recognized technical sources. While the information is believed accurate Alchemy-Spetec makes no representations as to the accuracy or sufficiency of the information.



AP Fill 420 - Part B

Part B of two component, highly expansive polyurethane foam.

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: AP Fill 420 - Part B
 MANUFACTURER: Alchemy-Spetec
 ADDRESS: 4508 Bibb Blvd, Tucker, GA 30084
 PHONE: (404) 618-0438
 FAX: (678) 805-4783
 WEBSITE: www.alchemy-spetec.com
 FOR EMERGENCY: Call CHEMTREC Day or Night
 1-800-424-9300 / +1 703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

OSHA/HCS Status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR1910.1200).

EMERGENCY OVERVIEW: Danger!
IRRITATING TO EYES AND SKIN.
HARMFUL IF SWALLOWED.
RESPIRATORY TRACT IRRITATION.

Irritating to eyes and skin. Irritating to respiratory system. Do not breathe vapor or mist. Do not ingest. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS NO.	% Vol.
Polyether Polyol	Proprietary Mixture	TS
Catalyst	TS	TS

SECTION 4: FIRST AID MEASURES

EYES:

Immediately flush eyes gently with water for at least 15 minutes, while holding open upper and lower lids. Immediately seek medical attention.

SKIN:

Remove contaminated clothing. Wash exposed area with warm soapy water. Contaminated clothing should be laundered before reusing.

INGESTION:

Rinse out mouth. Give plenty of water to victim if conscious. Do not induce vomiting. Seek immediate medical attention.

INHALATION:

Remove affected person immediately to fresh air. Seek medical attention immediately if symptoms develop.

SECTION 5: FIRE-FIGHTING MEASURES

FLASH POINT: Not established.

EXTINGUISHING MEDIA: Dry Chemical, CO₂, Foam or Water Fog

SPECIAL FIRE FIGHTING PROCEDURES: Do not scatter material with high pressure water streams.

HAZARDOUS DECOMPOSITION PRODUCTS: Fire or intense heat may decompose the product into carbon monoxide, carbon dioxide, and nitrogen oxides.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.

ENVIRONMENTAL PRECAUTIONS:

Contain the spilled material then cover with a loose, absorbent material such as oil dry, vermiculite, sawdust or Fuller's earth. Shovel waste material into proper waste containers. Wash all contaminated areas with hot soapy water thoroughly. Ventilate area to remove vapors. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Waste material may be incinerated or disposed of under local, state and federal regulations controlling environmental protection.

METHODS FOR CLEANING UP:

If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contained material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

SECTION 7: HANDLING AND STORAGE

GENERAL: 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.

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 ventila-

tion. 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.

STORAGE: 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.

SPECIAL SENSITIVITY: This product is hygroscopic. Containers should be tightly sealed to prevent moisture contamination. Do not expose to high temperatures for any length of time.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

PREVENTIVE MEASURES: Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.

ENGINEERING CONTROLS: Use local exhaust ventilation to maintain airborne concentrations below the TVL. Suitable respiratory equipment should be used in cases of insufficient ventilation or where operational procedures demand it. For guidance on engineering control measures refer to publications such as the ACGIH current edition of 'Industrial Ventilation, a manual of Recommended Practice.

EYE PROTECTION: Liquid chemical goggles or full face shield. No contact lenses should be worn. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

SKIN PROTECTION: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Cover as much exposed skin as possible with appropriate clothing. If skin creams are used, keep the area covered by the cream to a minimum.

RESPIRATORY PROTECTION: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

HANDS: Chemical-resistant, impervious gloves such as natural rubber or polyvinyl alcohol complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

WORK HYGIENIC PRACTICES: Follow the usual precautionary measures for handling chemicals. Keep away from food and beverages. Immediately remove all soiled and contaminated clothing. Avoid contact with eyes, skin and clothing. Wash hands after use. Wash all contaminated clothing and shoes before reuse. Wash hands after use, before eating, drinking, smoking, or using the toilet.

There is no TLV established for this product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Opaque to amber liquid
ODOR: Faint Odor
PHYSICAL STATE: Liquid
SOLUBILITY (H₂O): Moderate
VAPOR DENSITY: (AIR=1) >1.0
BOILING POINT: >300 F
MELTING POINT: <32 F
FLASH POINT: Not known
VAPOR PRESSURE: Unknown

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Contact with moisture or high temperatures.

CONDITIONS TO AVOID (STABILITY): Ignition sources. Keep away from water if container is not sealed.

INCOMPATIBILITY (MATERIAL TO AVOID): Oxidizing agents and acids.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Fire or intense heat will decompose the product into smoke, carbon monoxide, carbon dioxide and nitrogen oxide.

SECTION 11: TOXICOLOGICAL INFORMATION

CARCINOGENICITY:
IARC: Group 3 (not classifiable as to its carcinogenicity in humans)
EPA: Group D
LD₅₀: (oral) >2,000 mg/kg (rat)

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Information unavailable

SECTION 13: DISPOSAL CONSIDERATIONS

Do not allow product to enter drains, sewers or waterways. Label all waste containers. Dispose of per local, state and federal regulations.

SECTION 14: TRANSPORT INFORMATION

DOT: Class - Not regulated
IMDG International Maritime Dangerous Goods Code: Class - Not regulated
IATA: Class - Not regulated

SAFETY DATA SHEET

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

HMIS CLASSIFICATION

HEALTH: 1 FLAMMABILITY:1 REACTIVITY: 0

NFPA HAZARD CLASSIFICATION:

HEALTH: 1 FIRE HAZARD: 1 INSTABILITY: 0

SECTION 16: OTHER INFORMATION

PREPARATION INFORMATION:

March, 2016

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