

SAFETY DATA SHEET



F370 Urethane, Part A

Date Prepared : 05/18/2015
SDS No : SCC-F370A
Date Revised : 06/28/2016
Revision No : 1

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: F370 Urethane, Part A

PRODUCT DESCRIPTION: Urethane, Part A

PRODUCT CODE: F370A

PRODUCT FORMULATION NAME: F370 Urethane, Part A

CHEMICAL FAMILY: Polyurethane Isocyanate

MANUFACTURER

Sauereisen
 160 Gamma Drive
 Pittsburgh, PA 15238

Emergency Contact: John Kozak

Emergency Phone: (800)424-9300

Alternate Contact: Don Schubert

Customer Service: 412 963-0303

E-Mail: jakozak@sauereisen.com

24 HR. EMERGENCY TELEPHONE NUMBERS

Poison Control Center (Medical): 1-800-222-1222
 CHEMTREC (US Transportation): 1-800-424-9300
 CHEMTREC (Outside US): 1-703-527-3887

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Skin Irritation, Category 2
 Eye Irritation, Category 2B
 Respiratory Sensitization, Category 1B
 Acute Toxicity (Inhalation), Category 4

Environmental:

Acute Hazards to the Aquatic Environment, Category 3

GHS LABEL



Exclamation
mark

Health
hazard

SIGNAL WORD: DANGER

HAZARD STATEMENTS

H319: Causes serious eye irritation.

H315: Causes skin irritation.

H335: May cause respiratory irritation.

H402: Harmful to aquatic life.

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H332: Harmful if inhaled.

PRECAUTIONARY STATEMENTS

Prevention:

P273: Avoid release to the environment.

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
 P271: Use only outdoors or in a well-ventilated area.
 P285: In case of inadequate ventilation wear respiratory protection.
 P264: Wash ... thoroughly after handling.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P312: Call a POISON CENTER/doctor/...if you feel unwell.
 P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER/doctor/...
 P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313: If eye irritation persists: Get medical advice/attention.
 P302+P352: IF ON SKIN: Wash with plenty of water/...
 P321: Specific treatment (see ... on this label).
 P332+P313: If skin irritation occurs: Get medical advice/attention.
 P362: Take off contaminated clothing.

Storage:

P403+P233: Store in a well-ventilated place. Keep container tightly closed.
 P405: Store locked up.

Disposal:

P501: Dispose of contents/container in accordance with local/national regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS
Methylenediphenyl Diisocyanate	< 10	26447-40-5
benzene, 1,1'-methylenebis[4-isocyanato-, homopolymer	< 3	25686-28-6
Phosphoric Acid, Triethyl Ester	< 0.2	78-40-0
dibutyl maleate	< 45	105-76-0

4. FIRST AID MEASURES

EYES: Check for and remove all contact lenses. Flush eyes immediately with water or physiological saline for at least 15 minutes while lifting upper and lower lids. Do not use eye ointment. Seek medical attention.

SKIN: Wash promptly with soap and water. If soaked through clothing, promptly remove clothing and wash skin. Launder clothing before reuse. Discard saturated shoes and leather clothing. For severe exposures, get under safety shower after removing clothing. Do not apply greases or ointments. Seek medical attention for incidents of significant exposure or if effects apparent.

INGESTION: If swallowed, do not induce vomiting. Give large quantities of water. Seek medical attention immediately. Never give anything by mouth to an unconscious person.

INHALATION: If difficulty breathing, move to fresh air once. For acute overexposure, give oxygen if breathing is difficult. Apply artificial respiration if breathing has stopped. Seek Medical attention. Asthmatic symptoms may develop and may be immediate or delayed up to several hours. Consult a physician should this occur.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Liquids, aerosols, or vapors are irritating and can cause tearing, reddening or swelling. If left untreated, corneal damage can occur and injury is slow to heal. Damage is usually reversible.

SKIN: Isocyanates react with skin proteins and moisture and can cause irritation which may include reddening, swelling, rash, scaling or blistering. Cured material is difficult to remove.

SKIN ABSORPTION: Prolonged contact with Isocyanates can cause skin sensitization. Animal tests have indicated that respiratory sensitization can result from skin contact. This data reinforces the need to prevent direct skin contact with MDI.

INGESTION: Can result in irritation and corrosive action in the mouth, stomach tissue, and digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea.

INHALATION: MDI (Methylenediphenyl Diisocyanate) vapors or mist at concentrations above the TLV can irritate the mucous

membranes in the respiratory tracts (nose, throat and lungs), causing runny nose, sore throat, coughing , chest discomfort, shortness of breath, and reduced lung function.

ACUTE EFFECTS: Persons with a preexisting, nonspecific bronchial hyper reactivity can respond to concentrations below the TLV with similar symptoms as well as an asthma attack. Exposure well above the TLV may lead to bronchitis, bronchial spasms, and pulmonary edema (fluid in the lungs). These effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms (fever, chills) has also been reported. These symptoms can be delayed up to several hours after exposure.

CHRONIC EFFECTS: As a result of previous repeated overexposures or a single large dose, certain individuals develop isocyanate sensitization (Chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath, or asthma attack, could be immediate or delayed up to several hours after exposure. Similar to many non specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure persist for weeks and in severe cases for years. Overexposure to isocyanates has also been reported to cause lung damage (including decrease in lung function) which may be permanent. Sensitization can either be temporary or permanent.

NOTES TO PHYSICIAN: Medical conditions aggravated by exposure: Asthma, other respiratory disorders (Bronchitis, emphysema and bronchial hyperactivity), skin allergies, and eczema.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Water, carbon dioxide, dry chemical, and foam.

HAZARDOUS COMBUSTION PRODUCTS: Combustion products may be toxic.

EXPLOSION HAZARDS: Not sensitive to mechanical impact or static discharge

FIRE FIGHTING PROCEDURES: Full emergency equipment including self contained breathing apparatus should be worn.

FIRE FIGHTING EQUIPMENT: Toxic fumes will be evolved when this material is involved in a fire. Self-contained breathing apparatus should be available for fire fighters.

FIRE EXPLOSION: At temperatures above 400F (204 C) polymeric MDI can polymerize and decompose which can cause pressure build up in closed containers. Use cold water to cool fire exposed containers and prevent explosive rupture.

SENSITIVE TO STATIC DISCHARGE: None

SENSITIVITY TO IMPACT: None

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide and carbon dioxide, nitrogen oxides, traces of hydrogen cyanide, MDI vapors and various complex hydrocarbons or aerosols.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL:

Evacuate and ventilate spill area. Dike spill to prevent entry into water system. Absorb isocyanates with sawdust or other absorbent. Shovel into suitable unsealed containers. Transport to well-ventilated area (outside) and treat with neutralizing solution. Neutralizing solution: mixture of water (80%) with non-ionic surfactant tergitol tmn-10 (20%) or water (90%); concentrated ammonia (3-8%); detergent (2%). Add about 10 parts of neutralizer per part of isocyanate, with mixing. Allow to stand uncovered for 48 hours to let CO₂ escape. Clean-up: decontaminate floor with decontamination solution, letting stand for at least 15 minutes.

LARGE SPILL: Large quantities may be pumped into closed but not sealed containers for disposal.

SPECIAL PROTECTIVE EQUIPMENT: Wear full protective equipment, including respiratory equipment during clean-up.

7. HANDLING AND STORAGE

GENERAL PROCEDURES:

Avoid contact with eyes, skin, and clothing.

For industrial use only!

Harmful if inhaled.

Do not take internally.

May cause irritation.

Do not eat, drink or smoke when using this product.

Wear chemical splash goggles, gloves and protective clothing.

Avoid high ambient temperatures and humidity.

Wash thoroughly after handling.

STORAGE: Store in a cool, dry place.

- Keep container closed when not in use.
- Store away from direct heat and flame.
- Keep away from food and drinking water.
- DO NOT SMOKE where product is used or stored.
- Store in a well-ventilated place.

COMMENTS:

*This material is designed to be pumped, not sprayed, MDI becomes more hazardous when atomized (sprayed). The hazard data is derived from tests performed when the material is sprayed and should be considered, but may not apply to pumping operations. Internal hygiene studies have found MDI airborne levels to be less than 0.006 mg/m³.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)			
Chemical Name	EXPOSURE LIMITS		
	Type	ppm	mg/m ³
	OSHA PEL	TWA	.02
Methylenediphenyl Diisocyanate	ACGIH TLV	TWA	.005

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Liquid chemical goggles. Vapor resistant goggles should be worn if contact lenses are in use. In a splash hazard environment, chemical goggles should be used in combination with a full face shield.

SKIN: Suitable protective gloves (neoprene, butyl rubber, or viton). Clothing should be clean, long-sleeved workclothes. Synthetic apron. Boots. Wash thoroughly before eating, smoking, applying cosmetics, etc. Thoroughly launder work clothes before reuse. Safety shower nearby.

RESPIRATORY:

Concentrations greater than TLV can occur when MDI is used in a poorly ventilated area. In such cases, or whenever concentrations of MDI exceed the TLV, respiratory protection must be worn. A supplied air respirator or a positive pressure self-contained breathing apparatus is recommended. In situations where MDI is not sprayed or heated and a supplied air or self-contained apparatus is unavailable or its use impractical, at least an air purifying respirator equipped with an organic cartridge and a particulate filter must be worn. However, this should be permitted only for short periods of time (less than one hour) at relatively low concentrations (at or near the TLV). However, due to the poor warning properties of MDI, proper fit and timely replacement of filter elements must be insured. Observe OSHA Regulations for respirator usage (29 CFR Part 1910.134).

WORK HYGIENIC PRACTICES: Wash thoroughly after handling. Safety shower and eyewash station should be within direct access. Keep containers closed.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR: Musty

ODOR THRESHOLD: Not Available

APPEARANCE: Liquid

COLOR: Dark brown

pH: Not Established

PERCENT VOLATILE: Negligible

FLASH POINT AND METHOD: (425°F)

FLAMMABLE LIMITS: 0 to 0

VAPOR PRESSURE: Negligible

VAPOR DENSITY: 14.55

BOILING POINT: (406°F)

FREEZING POINT: (32°F)

MELTING POINT: (32°F)

SOLUBILITY IN WATER: Insoluble

EVAPORATION RATE: NA = Not Applicable

SPECIFIC GRAVITY: 1.15

10. STABILITY AND REACTIVITY

REACTIVITY: Yes

HAZARDOUS POLYMERIZATION: May occur. Conditions to avoid: moisture, and other isocyanate reactive materials or excessive temperatures above 400F may cause polymerization/

STABILITY: Not yet Known

CONDITIONS TO AVOID: Contamination with water and high temperatures.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, nitrogen oxides, traces of hydrogen cyanide, MDI vapors and various complex hydrocarbons/

INCOMPATIBLE MATERIALS: (Materials to Avoid) water, amines, strong bases and alcohols. Will cause some corrosion to copper alloys and aluminum.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

DERMAL LD₅₀: No data is available on the product itself.

Notes: Components:

Diphenylmethane-4,4'-Diisocyanate: LD50 (rabbit): 7,950 mg/kg

ORAL LD₅₀: No data is available on the product itself.

Notes: Components:

Diphenylmethane-4,4'-Diisocyanate: LD50, rat: 9,200 mg/kg

INHALATION LC₅₀: No data is available on the product itself.

Notes: Components:

Diphenylmethane-4,4'-Diisocyanate: LC50, rat: 178 mg/L 4 hours

2,2'-2,4' Diisocyanatodiphenylmethane: LC50, rat: 370 mg/L

PolymethylenePolyphenyl Isocyanate: LC50, rat: 490 mg/L

SERIOUS EYE DAMAGE/IRRITATION: Eye, Skin and Inhalation Irritant.

RESPIRATORY OR SKIN SENSITISATION: Skin and Respiratory sensitizer.

GERM CELL MUTAGENICITY: Monomeric MDI is positive in the Ames assay (with hepatic microsomal activation). However, it was negative in an invivo-invitro micronucleus assay.

GENERAL COMMENTS: The International Isocyanate Institute is sponsoring a lifetime inhalation study on polymeric MDI in rats. This study is currently underway.

12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY (ACUTE): LC 50, 24 hours greater than 500 mg/L for daphnia magna, limnea stagnalis and zebra fish. for both polymeric and monomeric MDI.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Material should be disposed of as hazardous waste in accordance with Federal, state and local environmental regulations. Dispose of containers with any amount of liquid material as hazardous waste.

Dilution followed by incineration is the preferred disposal method. Dilute 10:1 with a clean compatible and combustible solvent, e.g. #2 fuel oil or mineral oil, to reduce reactivity hazards during incineration, handling and transportation.

EMPTY CONTAINER: Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not Regulated

TECHNICAL NAME: NA = Not Applicable

PRIMARY HAZARD CLASS/DIVISION: Not Regulated

UN/NA NUMBER: NA

PACKING GROUP: NA

15. REGULATORY INFORMATION

UNITED STATES

DOT LABEL SYMBOL AND HAZARD CLASSIFICATION

R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.

R36/37/38: Irritating to eyes, respiratory system and skin.

S3/9/14: Keep in a cool, well-ventilated place away from...

See section 10 for list of incompatible materials

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S49: Keep only in the original container.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: Acute. Chronic. Reactive.

FIRE: No **PRESSURE GENERATING:** No **REACTIVITY:** Yes **ACUTE:** Yes **CHRONIC:** Yes

313 REPORTABLE INGREDIENTS: 4,4'-Diphenylmethane Diisocyanate * 101-68-8 * <45%

TITLE III NOTES: None above detection limits.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA RQ: 5000 lb (2270 kg) final RQ for Diphenylmethane Diisocyanate

TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS
Methylenediphenyl Diisocyanate	26447-40-5
benzene, 1,1'-methylenebis[4-isocyanato-, homopolymer	25686-28-6
Phosphoric Acid, Triethyl Ester	78-40-0
dibutyl maleate	105-76-0

TSCA STATUS: Components are included in the EPA Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CALIFORNIA PROPOSITION 65: Known to the State of California to cause cancer and reproductive toxicity and subject to warning and discharge requirements under the "Safe Drinking Act of 1986".

It has not been determined and cannot be ascertained that this product would not expose users to the listed chemicals at the very low level prescribed in the regulations. Therefore, it is the user's responsibility to determine if the percent of the hazardous / carcinogenic ingredients listed elsewhere in the SDS comply with State of California regulations.

CANADA

WHMIS HAZARD SYMBOL AND CLASSIFICATION



Toxic

R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.

R36/37/38: Irritating to eyes, respiratory system and skin.

S3/9/14: Keep in a cool, well-ventilated place away from...

See section 10 for list of incompatible materials

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S49: Keep only in the original container.

WHMIS CLASS: Class D, Division 2, Subdivision B: Materials cause other toxic effects, toxic material.

DOMESTIC SUBSTANCE LIST (INVENTORY): Components included on inventory

16. OTHER INFORMATION

PREPARED BY: John A Kozak **Date Revised:** 06/28/2016

REVISION SUMMARY: This SDS replaces the 05/18/2015 SDS. Revised: **Section 9:** (VOC).

HMIS RATING

HEALTH	*	3
FLAMMABILITY		1
PHYSICAL HAZARD		1
PERSONAL PROTECTION		G