SAFETY DATA SHEET

Date issued : 08/26/2015
SDS number : SCC-088TA
Date revised : 06/28/2016
Revision number : 1

88T Fib-R-Thane Trowelable, Part A, Hardener

1. Identification

Product code: 88TGA
Product identifier: 88T Fib-R-Thane Trowelable, Part A, Hardener
Product description: Fib-R-Thane Part A Hardener
Chemical family: Aromatic Isocyanate

Manufacturer / Supplier

Sauereisen
160 Gamma Drive
Pittsburgh, PA 15238
Emergency contact: John Kozak
Emergency Phone: (800)444-8235
Alternate Contact: Pete Jansen
Customer Service: 412 963-0303
E-Mail: jakozak@sauereisen.com

Emergency telephone number (24 hour)

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

2. Hazard identification

Classification of the substance or mixture

Health hazards:

Skin Irritation, Category 2
Target Organ Toxicity (Single exposure), Category 3
Acute Toxicity (Inhalation), Category 4
Target Organ Toxicity (Repeated exposure), Category 1
Skin Sensitization, Category 1
Eye Irritation, Category 2B
Respiratory Sensitization, Category 1

Label elements

Exclamation mark

Health hazard

Signal word: DANGER

Hazard statement(s)

H332: Harmful if inhaled.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335: May cause respiratory irritation.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H320: Causes eye irritation.
H372: Causes damage to respiratory tract through prolonged or repeated exposure if inhaled

Precautionary statement(s)

Prevention:

P280: Wear protective gloves/protective clothing/eye protection/face protection.
P264: Wash ... thoroughly after handling.
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P285: In case of inadequate ventilation wear respiratory protection.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P272: Contaminated work clothing should not be allowed out of the workplace.

Response:

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.
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.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER/doctor/...
P314: Get medical advice/attention if you feel unwell.
P363: Wash contaminated clothing before reuse.

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	% w/w	CAS No.
Methylenediphenyl Diisocyanate	15 - 25	26447-40-5
Methylene Bisphenyl Isocyanate	40 - 50	101-68-8
Polymeric Isocyanates	30 - 40	9016-87-9

4. First-aid measures

Eye: 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 at 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.

Most important symptoms and effects, both acute and delayed

Eye: 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 mousture 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 lagre 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 ore 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 persits 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.

Indication of immediate medical attention and special treatment needed, if necessary: Eyes: Stain for evidence of corneal injury. If cornea is burned, isntill antibiotic/steroid preparation as needed. Vapors could produce reversible corneal epithelial edema, impairing vision.
Skin: Compound is a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn.
Ingestion: Treat symptomatically. Inducing vomiting is contraindicate because of the irritating nature of the compound.
Inhalation: Treat symptomatically. An individual having a dermal or pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate.

5. Fire-fighting measures

Suitable 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 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.

Sensitivity to static discharge: None

Sensitivity to mechanical 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 surfacant 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.

Conditions for safe 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 controls

Control parameters				
	Occupational exposure limit values			
Chemical name	**Type**		**ppm**	**mg/m³**
Methylenediphenyl Diisocyanate	**OSHA PEL**	**TWA**	.02	
	ACGIH TLV	**TWA**	.005	
Methylene Bisphenyl Isocyanate	**ACGIH TLV**	**TWA**	0.005	0.051

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

Individual protection measures, such as personal protective equipment

Eye / face protection: 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 protection - hand protection: 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 protection: 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).

Occupational hygiene practices: Wash thoroughly after handling. Safety shower and eyewash station should be within direct access. Keep containers closed.

9. Physical and chemical properties

Physical state: Liquid

Color: Dark brown

Odor: Musty

Odor threshold: Not Available

pH: Not Established

Melting point: (32°F)

Freezing point: < (32°F)

Initial boiling point and boiling range: (406°F)

Flash point: (390°F)

Evaporation rate (n-butyl acetate = 1): NA = Not Applicable

Lower explosion limit / flammability limit: NE

Upper explosion limit / flammability limit: NE

Vapor pressure: Negligible

Relative density: 1.24

Solubility: Insoluble

Percent volatiles: Negligible

10. Stability and reactivity

Reactivity: Yes

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

Chemical stability: Stable under normal conditions of use and storage.

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

Acute dermal toxicity LD_{50}: > 9400 mg/kg (rabbit)

Acute oral toxicity LD_{50}: > 2000 mg/kg (rat)

Acute inhalation toxicity LC_{50}: 370 -490 ppm / 4 hours (rat)

Serious eye damage / irritation: Eye, Skin and Inhallation Irritant.

Respiratory or skin sensitization: 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.

Reproductive toxicity: No Data Available

General comments: The International Isocyanate Institure is sponsoring a lifetime inhalation study on polymeric MDI in rats. This study is currently underway.

12. Ecological information

Aquatic toxicity, both acute and chronic: LC 50, 24 hours greater than 500 mg/L for daphnia magna, limnea stagnalis and zebra fish. for both polymeric and monomeric MDI.

Bioaccumulative potential: No data available. Contact Env. Dept.

Environmental data: No data available. Contact Env. Dept.

13. Disposal considerations

Disposal methods: 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 inceneration 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

USA Department of Transport Regulations (DOT)

UN proper shipping name: Not Regulated

Technical name: NA = Not Applicable

UN number: NA

Transport hazard class(es): Not Regulated

Packing group, if applicable: 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 Section 311/312 Hazard Categories

311/312 Health hazards: Acute. Chronic.

313 reportable ingredients: There are no listed chemicals above detection limits in this compound.

EPCRA Section 313 Toxic Chemicals

Chemical name	% w/w	CAS No.
Methylene Bisphenyl Isocyanate	40 - 50	101-68-8
Polymeric Isocyanates	30 - 40	9016-87-9

Title III notes:

4,4'-Diphenylmethane Diisocyanate CAS-No 101-68-8

Polymeric Diphenylmethane Diisocyanate CAS 9016-87-9

CERCLA Hazardous Substances and Reportable Quantities (RQ)

Chemical name	% w/w	CERCLA rq
Methylene Bisphenyl Isocyanate	40 - 50	5,000

TSCA (The Toxic Substances Control Act)

Chemical name	CAS No.
Methylenediphenyl Diisocyanate	26447-40-5
Methylene Bisphenyl Isocyanate	101-68-8
Polymeric Isocyanates	9016-87-9

Regulations

State regulations:

Massachusetts Right To Know Components

4,4'-Diphenylmethane Diisocyanate CAS-No 101-68-8

Polymeric Diphenylmethane Diisocyanate CAS 9016-87-9

Diphenylmethane Diisocyanate Mixed Isomers CAS26447-40-5

New Jersey Right To Know Components

4,4'-Diphenylmethane Diisocyanate CAS-No 101-68-8

Polymeric Diphenylmethane Diisocyanate CAS 9016-87-9

California Proposition 65: Known to the State of California to cause cancer or 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


Combustible Liquid

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

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL): Components included on inventory

16. Other information

Prepared by: John A Kozak **Date revised:** 06/28/2016

Revision summary: This SDS replaces the 08/24/2015 SDS. Revised: **Section 10:** Chemical stability.

HMIS rating

Health	3
Flammability	1
Physical hazard	1
Personal protection	H