

SECTION 1. IDENTIFICATION

Product Identifier MME Universal Resin

Other Means of Identification

Hydrophobic polyurethane grout

Recommended Use Professional use only

Restrictions on Use None known

Supplier Identifier Multiurethanes Ltd.

5245 Creekbank Rd

Mississauga, ON L4W 1N3

Canada

Emergency Telephone

Number

1-800-663-6633

SECTION 2. HAZARD IDENTIFICATION

Classification

Skin Corrosion/Irritation Category 2

Serious Eye Damage/Eye

Irritation

Category 2A

Respiratory Sensitization Category 1

Skin Sensitization Category 1

<u>Carcinogenicity</u> Category 2

Specific Target Organ

<u>Toxicity - Single Exposure</u> (Respiratory Tract Irritation) Category 3

Specific Target Organ

<u>Toxicity - Repeated</u> <u>Exposure (Respiratory</u>

System)

Category 2



Label Elements

Hazard Pictograms





Signal Word DANGER

Hazard Statements

Causes serious eye irritation.

Causes skin irritation.

May cause allergy or asthma symptoms or breathing

difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of causing cancer. May cause respiratory irritation.

May cause damage to organs through prolonged or repeated

exposure (respiratory system).

Precautionary Statements

Prevention

Obtain special instructions before use.

Do not handle until all safety precautions have been read and

understood.

Wear appropriate protective equipment.

Avoid breathing fume/mist/vapours.

Use only outdoors or in a well-ventilated area.

Wash hands thoroughly after handling.

Response

IF ON SKIN: Wash with plenty of soap and water. If irritation or rash occurs, seek medical attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. Seek medical attention.

Storage

Keep container tightly closed and sealed until ready for use. Store in original container protected from sunlight in a dry, cool and well-ventilated area. Keep away from incompatibles.

Disposal

Dispose of material in accordance with all applicable federal, state/provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the sole responsibility of



the waste generator.

Other Hazards None known

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixture

Chemical Name	CAS No.	Concentration (% by weight)	Common Names / Synonyms	Other Identifiers
Isocyanic acid,	9016-87-9	30 - 60%	Not available	Not available
polymethylenepolyphenylene ester				
4,4'-Methylenediphenyl Diisocyanate	101-68-8	10 - 30%	Not available	Not available
Oxirane, 2-methyl-, polymer with oxirane	9003-11-6	5 – 10%	Not available	Not available

Notes

The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with the amended HPR as of April 2018 (Canada) and with paragraph (i) of §1910.1200 (US). There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

SECTION 4. FIRST-AID MEASURES

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or selfcontained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison centre or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.

Skin Contact

Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Get medical



attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye Contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.

Ingestion

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most Important Symptoms and Effects, Acute and Delayed

Causes serious eye irritation. Over-exposure symptoms may include pain, watering and redness. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Over-exposure symptoms may include respiratory tract irritation, coughing, wheezing, breathing difficulties, asthma. Causes skin irritation. May cause an allergic skin reaction. Over-exposure symptoms may include irritation, redness.

Indication of Immediate Medical Attention and Special Treatment Needed In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Treat symptomatically. If exposed or concerned, seek medical advice and attention.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media Use media suitable to the surrounding fire.

Unsuitable Extinguishing

None known

Media



Specific Hazards Arising from the Product

Decomposition products may include carbon dioxide, carbon monoxide and nitrogen oxides.

Special Protective Equipment and Precautions for Firefighters Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not get in eyes or on skin. Do not breathe fume/mist/vapours. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Use appropriate personal protective equipment.

Methods and Material for Containment and Cleaning Up

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant of proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

Notification Procedures

Not available

Environmental Precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Put on appropriate personal protective equipment (refer to section 8). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in



which this product is used. Avoid exposure – obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breath vapour or mist. Do no 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. Good housekeeping is needed during storage, transfer, handling, and use of this material. Handle in accordance with good industrial hygiene and safety procedures. Always wash hands immediately after handling this product.

Conditions for Safe Storage (including 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 (water, amines, strong bases, alcohols, copper alloys, aluminum) and food and drink. Store locked up. 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.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters – Occupational Exposure Limits

Chemical Name	<u>Type</u>	Exposure Limit Values	<u>Source</u>
Isocyanic acid,	8 hrs	0.07 mg/m ³ 8 hours	Province of Alberta (Canada,
polymethylenepolyphenylene ester	OEL	0.005 ppm 8 hours	06/2018)
Isocyanic acid,	TWA	0.005 ppm 8 hours	Province of British Columbia
polymethylenepolyphenylene ester			(Canada, 07/2018); Province of
			Ontario (Canada, 01/2018)
Isocyanic acid,	С	0.01 ppm	Province of British Columbia
polymethylenepolyphenylene ester			(Canada, 07/2018)
Isocyanic acid,	С	0.02 ppm	Province of Ontario (Canada,
polymethylenepolyphenylene ester			01/2018)
4,4'-Methylenediphenyl Diisocyanate	TWA	0.005 ppm 8 hours	ACGIH TLV (US, 03/2018);
			Province of British Columbia
			(Canada, 07/2018). Absorbed
			through skin. Inhalation
			sensitizer.; Province of Ontario
			(Canada, 01/2018); Province of
			Saskatchewan (Canada,
			07/2013)
4,4'-Methylenediphenyl Diisocyanate	TWA	0.05 mg/m ³ 10 hours	NIOSH REL (US, 10/2016)
		0.005 ppm 10 hours	



4,4'-Methylenediphenyl Diisocyanate	CEIL	0.2 mg/m ³ 10 minutes 0.02 ppm 10 minutes	NIOSH REL (US, 10/2016)
4,4'-Methylenediphenyl Diisocyanate	CEIL	0.02 ppm 0.2 mg/m ³	OSHA PEL (US, 05/2018)
4,4'-Methylenediphenyl Diisocyanate	8 hrs OEL	0.005 ppm 8 hours 0.05 mg/m ³ 8 hours	Province of Alberta (Canada, 06/2018)
4,4'-Methylenediphenyl Diisocyanate	O	0.01 ppm	Province of British Columbia (Canada, 07/2018). Absorbed through skin. Inhalation sensitizer.
4,4'-Methylenediphenyl Diisocyanate	TWAEV	0.005 ppm 8 hours 0.051 mg/m ³ 8 hours	Province of Quebec (Canada, 01/2014). Skin sensitizer.
4,4'-Methylenediphenyl Diisocyanate	STEL	0.015 ppm 15 minutes	Province of Saskatchewan (Canada, 07/2013)

Appropriate Engineering Controls

Use only adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual Protection Measures

Eye/Face Protection

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, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin Protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the cases of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. 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.

Respiratory Protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important



aspects of use.

<u>Hygiene Measures</u> Do not eat, drink, smoke or use cosmetics while working with

this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Ensure that eyewash stations and safety showers are in close proximity.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Brown to light brown liquid

Odour Slightly musty

Odour Threshold Not available

pH Not available

Melting Point / Freezing

Point

Not available

Initial Boiling Point and

Boiling Range

Not available

Flash Point Closed cup: > 93.33°C (> 200°F) [Pensky-Martens.] EPA 1010

Evaporation Rate

(BuAe = 1)

Not available

Flammability (solid, gas) Not available

Upper/Lower Flammability

or Explosive Limits

Not available

Vapour Pressure Not available

Vapour Density (air = 1) Not available

Relative Density

(water = 1)

1.131

Solubility in Water Insoluble in water. Reacts slowly with water to liberate carbon

dioxide.

Solubility (other) Not available



Partition Coefficient,

Not available

n-octanol / water (logKow)

Auto-ignition Temperature Not available

Decomposition Temperature

Not available

Viscosity Dynamic: 235 to 335 mPa·s (235 to 335 cP) @ 77°F

SECTION 10. STABILITY AND REACTIVITY

Reactivity Reacts with moisture and other materials that react with

isocyanate.

Chemical Stability The product is stable.

Possibility of Hazardous

Reactions

Under normal conditions of storage and use, hazardous

reactions will not occur.

Conditions to Avoid Avoid extreme heat, direct sunlight, and moisture.

Incompatible Materials Water, amines, strong bases, alcohols, copper alloys,

aluminum.

Hazardous Decomposition

Products

By heat and fire: carbon monoxide, oxides of nitrogen, hydrogen cyanide, carbon dioxide, dense black smoke,

isocyanate, isocyanic acid, other undetermined compounds.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicological Data – Acute Toxicity

Chemical Name	Result	<u>Species</u>	<u>Dose</u>	<u>Exposure</u>
Isocyanic acid,	LC50 Inhalation Vapor	Rat	490 mg/m ³	4 hours
polymethylenepolyphenylene ester				
Isocyanic acid,	LD50 Dermal	Rabbit	>9400 mg/kg	-
polymethylenepolyphenylene ester				
Isocyanic acid,	LD50 Oral	Rat	49 g/kg	-
polymethylenepolyphenylene ester				
4,4'-Methylenediphenyl Diisocyanate	LD50 Oral	Rat	9200 mg/kg	-
Oxirane, 2-methyl-, polymer with	LC50 Inhalation Vapor	Rat	320 mg/m ³	4 hours
Oxirane				
Oxirane, 2-methyl-, polymer with	LD50 Oral	Rat	5700 mg/kg	-
Oxirane				



Toxicological Data - Irritation/Corrosion

Chemical Name	<u>Result</u>	<u>Species</u>	<u>Score</u>	<u>Exposure</u>	<u>Observation</u>
Isocyanic acid, polymethylenepolyphenylene ester	Eyes – Mild irritant	Rabbit	-	100 mg	-
4,4'-Methylenediphenyl Diisocyanate	Eyes – Moderate	Rabbit	-	100 mg	-
	irritant				

Respiratory and/or Skin

Sensitization

No data available

Reproductive Toxicity No data available

Germ Cell Mutagenicity No data available

Aspiration Hazard No data available

Information on Likely **Routes of Exposure**

Inhalation Yes

Yes Skin Contact

Eye Contact Yes

Ingestion Yes

Signs and Symptoms of

Exposure

Inhalation

May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Adverse symptoms may include respiratory tract irritation, coughing.

wheezing and breathing difficulties, asthma.

Skin Contact

Causes skin irritation. May cause an allergic skin reaction. Adverse symptoms may include irritation, redness.

Eye Contact

Causes serious eye irritation. Adverse symptoms may include pain, irritation, watering, redness.

Ingestion

No known significant effects or critical hazards.

Potential Chronic Health Effects

May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.



Acute Toxicity

Route	ATE value
Inhalation (vapors)	30.65 mg/L
Inhalation (dusts and mists)	6.17 mg/L

Carcinogenicity

Suspected of causing cancer. Risk of cancer depends on

duration and level of exposure.

Chemical Name	IARC	<u>ACGIH</u>	<u>OSHA</u>
Isocyanic acid, polymethylenepolyphenylene ester	3	-	-
4,4'-Methylenediphenyl Diisocyanate	3	-	-

Specific Target Organ Toxicity - Single Exposure

<u>Name</u>	<u>Category</u>	Target Organs
4,4'-Methylenediphenyl Diisocyanate	Category 3	Respiratory tract irritation

Specific Target Organ Toxicity - Repeated Exposure

<u>Name</u>	<u>Category</u>	Target Organs
4,4'-Methylenediphenyl Diisocyanate	Category 2	Respiratory system

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity Not available

Persistence and Degradability Not available

Bioaccumulative Potential

<u>Chemical Name</u>	<u>LogPow</u>	<u>BCF</u>	<u>Potential</u>
4,4'-Methylenediphenyl Diisocyanate	4.51	200	Low

Mobility in Soil Not available

Other Adverse Effects No known significant effects or critical hazards.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal MethodsThe generation of waste should be avoided or minimized

wherever possible. Disposal of this product, solutions and any



by-products should comply with requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Technical Name (for N.O.S. entry)	Transport Hazard Class(es)	Packing Group
TDG	Not regulated	-	-	-	-
49 CFR/DOT	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	(4,4'- Methylenediphenyl Diisocyanate)	9	III
additional information	additional Non-bulk packages of this product are not regulated as hazardous materials in package sizes less				
IMDG	Not regulated	·-	-	-	-
ICAO/IATA	Not regulated	-	-	-	-
additional information	The environmentally hazardous substance mark may appear if required by other transportation regulations.				

Special Precautions

For transport within the user's premises, always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Environmental Hazards

Refer to section 12.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not available



SECTION 15. REGULATORY INFORMATION

Canadian Information

Canada inventory (DSL/NDSL)

All components are listed or exempted.

NPRI The following components are listed: Isocyanic acid,

polymethylenepolyphenylene ester; 4.4'-Methylenediphenyl

Diisocyanate

CEPA Toxic Substances The following components are listed: Isocyanic acid,

polymethylenepolyphenylene ester; 4,4'-Methylenediphenyl

Diisocyanate

US Information

United States Inventory

(TSCA 8b)

All components are listed or exempted.

Clean Water Act (CWA) 307 4,4'-Methylenediphenyl Diisocyanate

Clean Air Act Section 112 (b) Listed

Hazardous Air Pollutants

(HAPs)

Clean Air Act Section 602

Class I Substances

Not listed

Clean Air Act Section 602

Class II Substances

Not listed

DEA List I Chemicals

(Precursor Chemicals)

Not listed

DEA List II Chemicals

(Essential Chemicals)

Not listed

SARA 302/304 No products were found.

Not applicable SARA 304 RQ

Skin Corrosion/Irritation - Category 2 SARA 311/312

Serious Eye Damage/Eye Irritation – Category 2A

Respiratory Sensitization - Category 1

Skin Sensitization - Category 1 Carcinogenicity – Category 2

Specific Target Organ Toxicity (Single Exposure) (Respiratory

tract irritation) - Category 3



Specific Target Organ Toxcitiy (Repeated Exposure) (respiratory system) – Category 2

Chemical Name	<u>Classification</u>
Isocyanic acid,	Acute Toxicity (inhalation) – Category 4
polymethylenepolyphenylene ester	Serious Eye Damage/Eye Irritation – Category 2B
4,4'-Methylenediphenyl Diisocyanate	Acute Toxicity (inhalation) – Category 4
	Skin Corrosion/Irritation – Category 2
	Serious Eye Damage/Eye Irritation – Category 2A
	Respiratory Sensitization – Category 1
	Skin Sensitization – Category 1
	Carcinogenicity – Category 2
	Specific Target Organ Toxicity (Single Exposure) (Respiratory tract
	irritation) – Category 3
	Specific Target Organ Toxcitiy (Repeated Exposure) (respiratory
	system) – Category 2

SARA 313

	Product Name	CAS Number
Form R – Reporting	Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9
Requirements	4,4'-Methylenediphenyl Diisocyanate	101-68-8
Supplier Notification	Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9
	4,4'-Methylenediphenyl Diisocyanate	101-68-8

State Regulation The following components are listed: 4,4'-Methylenediphenyl

(Massachusetts) Diisocyanate

State Regulation (New York) The following components are listed: 4,4'-Methylenediphenyl

Diisocyanate

State Regulation (New The following components are listed: Isocyanic acid,

Jersey) polymethylenepolyphenylene ester; 4,4'-Methylenediphenyl

Diisocyanate

<u>State Regulation</u> The following components are listed: 4,4'-Methylenediphenyl

(Pennsylvania) Diisocyanate

State Regulation (California This product does not require a Safe Harbor warning under

Prop. 65) California Prop. 65.

International Information Not available

SECTION 16. OTHER INFORMATION

Date of Latest Revision May 21, 2020

Disclaimer The information provided in this document is correct to the

best of our knowledge, information and belief at the date of its

publication. This information is offered solely for the



consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition. This information is designed only as a general guidance and is not to be considered a warranty or quality specification. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified above.

END OF SAFETY DATA SHEET