



# CHEM SEMI-RIGID

## SECTION 1: IDENTIFICATION

<b>Product identifier</b>	CHEM SEMI-RIGID
<b>Other means of identification</b>	SOL-CHEM-SEMI-RIGID
<b>Product family</b>	Polyurethane Injection Resin Polyurethane
<b>Recommended use</b>	injection resin - for concrete.
<b>Manufacturer/Supplier Identifier</b>	BMQ SOLUTIONS, 1522 Boulevard des Laurentides, Laval, Qc, H7M 2N7, Marc Charlebois, 877-267-7249, www.lafarge.ca/en/bmq-solutions
<b>Supplier identifier</b>	BMQ SOLUTIONS, 1522 Boulevard des Laurentides, Laval, Qc, H7M 2N7, Marc Charlebois, 877-267-7249, www.lafarge.ca/en/bmq-solutions
<b>Supplier identifier</b>	des Laurentides, Laval, Qc, H7M 2N7, Marc Charlebois, 877-267-7249, www.lafarge.ca/en/bmq-solutions
<b>Emergency telephone number</b>	24HR/7Days 0225
<b>SDS number</b>	

## SECTION 2: HAZARDS IDENTIFICATION

Classified according to the Canadian Hazardous Products Regulations (WMIS 2015).

### Classification

Acute toxicity (inhalation) - category 4; Skin irritation - category 2; Eye irritation - category 2B; Respiratory sensitization - category 1; Skin sensitization - category 1; Carcinogenicity - category 2; Specific target organ toxicity - Single exposure - category 3; Specific target organ toxicity - Repeated exposures - category 2; Long-term hazards for the aquatic environment - category 3 **Label elements**



Danger

Causes severe eye irritation.

Causes skin irritation.

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

Can cause cutaneous allergy.

May irritate the respiratory tract.

May cause damage to organs (respiratory system) through repeated or prolonged exposure if inhaled.

Harmful to aquatic organisms; causes long-term harmful effects.

Precautionary statement(s):

Prevention:

Obtain instructions before use.

Do not handle until you have read and understood all safety precautions.

Do not breathe dust/fumes/gas/mist/vapours/spray.

Wash hands and skin thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be taken out of the workplace.

Wear safety gloves.

Use of personal protective equipment as required.

When ventilation of the room is insufficient, wear respiratory protection equipment.

Intervention:

~~In Case CONTACT WITH SKIN: Wash thoroughly with water and mild soap.~~

Remove person to fresh air and keep in a position where they can breathe comfortably. of 0601 Call a Poison Control Center or doctor if

SDS No. well.

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Preparation date June 1, 2016 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if the victim wears them and they can be easily removed. Continue rinsing.

IF exposed or suspected: Seek medical advice/Consult a doctor.

If irritation or rash occurs: Seek medical advice/Consult a doctor.

If eye irritation persists: Seek medical advice or consult a doctor.

In Case CONTACT WITH SKIN: Wash thoroughly with water and mild soap.

IF INHALED: Remove person to fresh air and keep in a position where they can breathe comfortably.

Call a Poison Control Center or doctor if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if the victim wears them and they can be easily removed. Continue rinsing.

IF exposed or suspected: Seek medical advice/Consult a doctor.

If irritation or rash occurs: Seek medical advice/Consult a doctor.

If eye irritation persists: Seek medical advice or consult a doctor.

Remove contaminated clothing and wash before reuse.

Storage:

Keep under lock and key.

Store in a well-ventilated area. Keep the container tightly closed.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Blend:

Chemical name	CAS number	%	Other identifiers
Polymer diphenylmethanediisocyanate 4,4'-	9016-87-9	<27	
methylenediphenyl diisocyanate	101-68-8	<22	
Methylenediphenyl diisocyanate (mixture of isomers)	26447-40-5	<6	

## SECTION 4: FIRST AID

### First aid measures

#### Inhalation

Remove to fresh air. Give artificial respiration if breathing has stopped.

#### Skin contact

Immediately  
remove contaminated clothing, shoes and contaminated leather items (e.g. watch straps, belts). Rinse gently and thoroughly with lukewarm water and mild soap for 5 minutes. Thoroughly wash clothing, shoes and leather items before reuse or dispose of them safely. In case of skin irritation, seek medical advice or consult a doctor. A soothing ointment can be applied after washing the skin.

#### Eye Contact

Immediately  
rinse contaminated eyes with lukewarm water, gently, for 15 to 20 minutes, while holding the eyelids open. If eye irritation persists, seek medical advice or consult a doctor.

#### Ingestion

Do not induce vomiting. If victim is conscious, give water or milk to drink. Never give anything by mouth to an unconscious person. In case of proven or suspected exposure, call a Poison Control Center or a doctor. If vomiting is unavoidable, prevent aspiration by holding the victim's head below the knee.

### Most important symptoms and effects, whether acute or delayed

In case of  
contact with eyes: vapor may cause laceration, conjunctivitis and corneal edema when absorbed into eye tissues may cause irritation moderate to severe. In case of contact with skin: skin sensitizer. May cause an allergic skin reaction in some people. If inhaled and/or swallowed: may cause serious irritation to the nose and throat.

### Immediate medical attention or special treatment

#### Target organs

Eyes, respiratory system, skin.

#### Health problems aggravated by exposure to the product

May cause skin sensitization asthma, dermatitis, eye disorders, respiratory disorders, skin allergies.

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## SECTION 5: MEASURES TO TAKE IN CASE OF FIRE

### Extinguishing Media

#### Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, suitable extinguishing foam, water spray or water mist. Use water to cool fire-exposed containers that are not leaking.

**Unsuitable extinguishing agents** None known.

### Specific Product Hazards

Flammable in the presence of open flames, sparks, excessive heat or electrostatic discharge. Closed containers may rupture violently if heated and may release their contents.

In the event of fire, gases dangerous to health may be formed. **Personal protective equipment and precautions for firefighters** Approach fire upwind to avoid

hazardous vapors or gases. Control vapors or gases with water spray or a fine mist of water. Review Section 6 (Accidental Release Measures) for important information on controlling leaks and spills. Use Bunker gear and a NIOSH-approved self-contained respiratory protection (SCBA) breathing apparatus should be available to firefighters.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency measures

Evacuate the area immediately. Isolate the danger zone. Do not allow unnecessary or unprotected personnel to enter. Use the personal protective equipment recommended in Section 8 of this safety data sheet, increase ventilation of the area or move the leaky container to a well-ventilated and safe area. Keep ignition producing equipment away from the area to prevent spread.

### Environmental precautions

If spill occurs in a building, prevent product from entering drains, ventilation systems and confined spaces.

### Methods and materials for containment and cleaning up

Review Section 7 (Handling) of this safety data sheet before cleaning up.

Minor leaks and spills: contain and absorb the spill with an absorbent that does not react with the spilled product. Contain spilled product to prevent runoff. Large leaks or spills: contain and recover contaminated water for proper disposal.

## SECTION 7: HANDLING AND STORAGE

### Safety Precautions for Handling

Use adequate ventilation and respiratory protection if dust or vapors are present to avoid release into the environment. DO NOT eat, drink or store food in the workplace. DO NOT smoke in the workplace. The following precautions are best practices: avoid breathing the product; avoid skin and eye contact; wash your hands after handling.

### Safe storage conditions

Avoid accumulation of dust. Store in an area with the following characteristics: cool, well ventilated. Store away from heat and flame isolated from incompatible materials (see Section 10: Stability and Reactivity). Store away from heat and flame and keep out of direct sunlight.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Settings

Chemical name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
4,4'-methylenediphenyl diisocyanate	0.051 mg/m <sup>3</sup>					
Methylenediphenyl diisocyanate (mixture of isomers)	0.005 ppm		0.2ppm			

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ACGIH® = American Conference of Governmental Industrial Hygienists.005 ppm TWA.051 mg/m<sup>3</sup> oSHA = United States Occupational Safety and Health Administration. C = Ceiling value.02 ppm.

#### Appropriate Engineering Controls Avoid

breathing vapors; use an enclosure with local exhaust ventilation, if applicable, to control the amount of product in the air. Concentrations above TLV may occur when MDI is used in a poorly ventilated area. In such cases, or whenever MDI concentrations exceed the TLV, respiratory protection should be worn. A supplied air respirator or positive pressure self-contained breathing apparatus is recommended. In situations where MDI is not sprayed or heated and a supplied air or self-contained device is unavailable or practical, a purifying air respirator equipped with an organic cartridge should at least be worn and a particulate filter should be worn. . However, this should only be permitted for short periods of time (less than an hour) at relatively low concentrations (at or near the TLV). However, due to the low warning properties of MDI, proper adjustment and timely replacement of filter elements must be ensured. Observe OSHA regulations for the use of a respirator (29 CFR Part 1910.134). Provide eyewash and emergency shower if there is risk of contact or splashing.

### Individual protection measures

**Eye and face protection** Wear chemical goggles and face shield if contact is possible.

**Skin protection** Wear impervious chemical protective clothing and self-contained breathing apparatus (SCBA).

Polychloroprene, Viton®/butyl rubber.

**Respiratory protection** Wear a NIOSH

approved air-purifying respirator equipped with N100, R100 or P100 filters. Concentrations above TLV may occur when MDI is used in a poorly ventilated area.

In such cases, or whenever MDI concentrations exceed the TLV, respiratory protection should be worn. A supplied air respirator or positive pressure self-contained breathing apparatus is recommended. In situations where MDI is not sprayed or heated and a supplied air or self-contained device is

unavailable or practical, be equipped with at least one purifying air respirator equipped with an organic cartridge and a particulate filter must be worn. However, this should only be permitted for short

periods of time (less than an hour) at relatively low concentrations (at or near the TLV). However, due to the low warning properties of MDI, proper adjustment and timely replacement of filter elements must be ensured.

Observe OSHA regulations for the use of a respirator (29 CFR Part 1910.134).

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Basic physical and chemical properties

<b>Appearance</b>	Dark brown.
<b>Smell</b>	Musty
<b>pH</b>	Not available
<b>Melting Point/Freezing Point</b>	Not available (merge); Not available (freezing)
<b>Initial boiling point and boiling range</b>	> 648°F (342°C)
<b>Flash point</b>	365°F (185°C)
<b>Upper/Lower Limits of Flammability or Explosibility</b>	Not available (superior); Not available (lower)
<b>Vapor pressure</b>	< 0.00001 mm Hg at 68 °F Not
<b>Vapor density</b>	available 1.116
<b>Relative density (water = 1)</b>	
<b>Solubility</b>	Insoluble in water; Slightly soluble in usual organic solvents.
<b>Decomposition temperature</b>	Not available
<b>Viscosity</b>	70 centipoise at 20°C (dynamic)

### Other information

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**Other information Physical**

<b>state</b>	Liquid
<b>Molecular formula</b>	Not available
<b>Molecular weight</b>	Not available
<b>Critical temperature</b>	Not available

**SECTION 10: STABILITY AND REACTIVITY****Reactivity**

Yes.

**Chemical stability**

Usually stable.

**Risk of hazardous reactions** Water

or moisture. Polymerizes in the presence of: Releases a significant amount of heat.

**Conditions to avoid**

Open flames, sparks, electrostatic discharge, heat and other sources of ignition. Water, water content or humidity. Temperatures above 400.0°F (204.4°C)

**Incompatible materials**

Alcohols (e.g. ethanol). Strong basic amines (e.g. sodium hydroxide), water, metals (e.g. aluminum). Copper alloys.

**Hazardous decomposition products**

When exposed to very high temperatures will release very toxic carbon monoxide and carbon dioxide; extremely dangerous hydrocyanic acid; nitrogen oxides. MDI steam.

**SECTION 11: TOXICOLOGICAL DATA****acute toxicity**

Chemical name	CL50	LD50 (oral)	LD50 (cutaneous)
Methylenediphenyl diisocyanate (mixture of isomers)	> 380 mg/m <sup>3</sup> (rat) (4 aerosol)	> 2000 mg/m <sup>3</sup> (rat)	> 9400 mg/kg (rabbit)

LC50 (Inhalation): 490 mg/m<sup>3</sup>, vapor, Rat 4 Hrs

**Skin Corrosion/Irritation**

There is limited evidence of very mild irritation.

**Serious Eye Damage/Eye Irritation** Animal

tests show slight irritation.

**Specific Target Organ Toxicity - Single Exposure****Inhalation**

Harmful based on limited evidence.

**Absorption through the skin**

May cause sensitization.

**Ingestion**

No information found.

**Specific target organ toxicity - Repeated exposure** May cause

dermatitis, irritation of the respiratory system. Cases of respiratory tract damage have been observed.

**Respiratory or skin sensitization** May

cause serious asthma-like symptoms (respiratory sensitization) based on information for very similar chemicals. Skin sensitizer. May cause an allergic reaction (skin sensitization) based on limited evidence.

**SECTION 12: ECOLOGICAL DATA Ecotoxicity**

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**SECTION 12: ECOLOGICAL DATA****Ecotoxicity**

May cause long-term adverse effects in the aquatic environment.

**Persistence and Degradation** Does

not degrade rapidly, based on quantitative testing.

**SECTION 13: DISPOSAL DATA****Disposal methods** Dispose of

contents and container in accordance with local, regional, national and international regulations.

**SECTION 14: TRANSPORT INFORMATION**

Not governed by the Canadian Transportation of Dangerous Goods Regulations.

**Special precautions** Not applicable **Transport**

in bulk under Annex II of MARPOL 73/78 and the IBC Code Not applicable

**SECTION 15: REGULATORY INFORMATION****SECTION 16: OTHER INFORMATION**

**NFPA Hazard Rating**

**Health - 2**

**Flammability - 1**

**Instability - 1 individual - Reacts with water**

**SDS prepared by**

BMQ SOLUTIONS

**Phone number** 877-267-7249

**Preparation date** June 1, 2016

**Date of most recent revised version** June 01, 2016

**Meaning of abbreviations**

ACGIH® = American Conference of Governmental Industrial Hygienists IARC = International Agency for Research on Cancer NIOSH = National Institute for

Occupational Safety and Health OSHA = United States Occupational Safety and Health Administration RTECS® = Registry of Toxic Effects of Chemical Substances

**References**

Database CHEMINFO data. Canadian Center for Occupational Health and Safety (CCOHS).

NIOSH Pocket Guide Database. National Institute for Occupational Safety and Health. Accessible through the Canadian Center for Occupational Health and Safety (CCOHS).

**Notice**

We believe the above information to be accurate. However, we decline all responsibility for the reliability and use of these

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