

SAFETY DATA SHEET

Sikalastic® Resoflex Part A



Version
1.3

Revision Date:
12/13/2016

SDS Number:
10000005109

SECTION 1. IDENTIFICATION

Product name : Sikalastic® Resoflex Part A

Manufacturer or supplier's details

Company name : Sika Canada Inc.
601, avenue Delmar
Pointe-Claire, QC H9R 4A9
Canada
www.sika.ca

Telephone : (514) 697-2610 / 1 (800) 933-7452

Telefax : (514) 694-2792

Health and Safety Services's
e-mail address : ehs@ca.sika.com

Emergency telephone : CANUTEC (collect) (613) 996-6666 (24 hours)

Recommended use of the chemical and restrictions on use

For further information, refer to product data sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 3

Reproductive toxicity : Category 1B

GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H226 Flammable liquid and vapor.
H360 May damage fertility or the unborn child.

Precautionary Statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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P233 Keep container tightly closed.
 P240 Ground and bond container and receiving equipment.
 P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
 P242 Use non-sparking tools.
 P243 Take action to prevent static discharges.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Warning : Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.

Other hazards

None known.

Supplemental information

If product is in liquid or paste form, physical or health hazards listed related to dust are not considered significant. However, product may contain substances that could be potential hazards if caused to become airborne due to grinding, sanding or other abrasive processes.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**Hazardous ingredients**

| Chemical name | CAS-No. | Concentration (% w/w) |
|-----------------------|----------|-----------------------|
| n-butyl acetate | 123-86-4 | >= 10 - < 20 |
| 2-ethoxyethyl acetate | 111-15-9 | >= 0 - < 1 |

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
 Consult a physician.
 Show this material safety data sheet to the doctor in attendance.

If inhaled : Move to fresh air.

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| | |
|---|--|
| | Consult a physician after significant exposure. |
| In case of skin contact | : Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. If symptoms persist, call a physician. |
| In case of eye contact | : Remove contact lenses. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist. |
| If swallowed | : Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting without medical advice. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. |
| Most important symptoms and effects, both acute and delayed | : toxic effects for reproduction See Section 11 for more detailed information on health effects and symptoms. May damage fertility or the unborn child. |
| Notes to physician | : Treat symptomatically. |

SECTION 5. FIRE-FIGHTING MEASURES

| | |
|--|---|
| Suitable extinguishing media | : Alcohol-resistant foam Carbon dioxide (CO ₂) Dry chemical |
| Unsuitable extinguishing media | : Water |
| Further information | : Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |
| Special protective equipment for fire-fighters | : In the event of fire, wear self-contained breathing apparatus. |

SECTION 6. ACCIDENTAL RELEASE MEASURES

| | |
|---|---|
| Personal precautions, protective equipment and emergency procedures | : Use personal protective equipment. Remove all sources of ignition. Deny access to unprotected persons. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. |
| Environmental precautions | : Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities. Local authorities should be advised if significant spillages |

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cannot be contained.

Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Use explosion-proof equipment. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Take precautionary measures against electrostatic discharges.

Advice on safe handling : Do not breathe vapors or spray mist.
Avoid exceeding the given occupational exposure limits (see section 8).
Do not get in eyes, on skin, or on clothing.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharge.
Open drum carefully as content may be under pressure.
Pregnant women or women of child-bearing age should not be exposed to this product.
Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).
Follow standard hygiene measures when handling chemical products.

Conditions for safe storage : Store in original container.
Keep in a well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
Store in accordance with local regulations.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Ingredients with workplace control parameters

| Ingredients | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|-----------------|----------|-------------------------------|--|-----------|
| n-butyl acetate | 123-86-4 | TWA | 150 ppm 713 mg/m ³ | CA AB OEL |
| | | STEL | 200 ppm 950 mg/m ³ | CA AB OEL |
| | | TWA | 20 ppm | CA BC OEL |
| | | TWAEV | 150 ppm 713 mg/m ³ | CA QC OEL |
| | | STEV | 200 ppm 950 mg/m ³ | CA QC OEL |

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|---------------------------------|-----------|----------------------------|---------------------|-----------|
| | | TWA | 150 ppm | ACGIH |
| | | STEL | 200 ppm | ACGIH |
| 2-methoxy-1-methylethyl acetate | 108-65-6 | TWA | 50 ppm | CA BC OEL |
| | | STEL | 75 ppm | CA BC OEL |
| | | TWA | 50 ppm 270 mg/m3 | CA ON OEL |
| zinc oxide | 1314-13-2 | TWA (Respirable) | 2 mg/m3 | CA AB OEL |
| | | STEL (Respirable) | 10 mg/m3 | CA AB OEL |
| | | TWA (Respirable) | 2 mg/m3 | CA BC OEL |
| | | STEL (Respirable) | 10 mg/m3 | CA BC OEL |
| | | TWAEV (Fumes) | 5 mg/m3 | CA QC OEL |
| | | TWAEV (total dust) | 10 mg/m3 | CA QC OEL |
| | | STEV (Fumes) | 10 mg/m3 | CA QC OEL |
| | | TWA (Respirable fraction) | 2 mg/m3 | ACGIH |
| | | STEL (Respirable fraction) | 10 mg/m3 | ACGIH |
| 2-ethoxyethyl acetate | 111-15-9 | TWA | 5 ppm 27 mg/m3 | CA AB OEL |
| | | TWA | 5 ppm | CA BC OEL |
| | | TWAEV | 5 ppm 27 mg/m3 | CA QC OEL |
| | | TWA | 5 ppm | ACGIH |

Biological occupational exposure limits

| Ingredients | CAS-No. | Control parameters | Biological specimen | Sampling time | Permissible concentration | Basis |
|-----------------------|----------|---------------------|---------------------|----------------------------------|---------------------------|-----------|
| 2-ethoxyethyl acetate | 111-15-9 | 2-Ethoxyacetic acid | Urine | End of shift at end of work-week | 100 mg/g Creatinine | ACGIH BEI |

Engineering measures

: Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits.

Personal protective equipment

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| Respiratory protection | : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used. |
| Hand protection | |
| Remarks | : 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. |
| Eye protection | : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary. |
| Skin and body protection | : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. |
| Hygiene measures | : Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Remove respiratory and skin/eye protection only after vapors have been cleared from the area. Remove contaminated clothing and protective equipment before entering eating areas. |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--------------------------------------|--|
| Appearance | : liquid |
| Color | : various |
| Odor | : characteristic |
| Odor Threshold | : No data available |
| pH | : not determined |
| Melting point/range / Freezing point | : No data available |
| Boiling point/boiling range | : No data available |
| Flash point | : ca. 40 °C (104 °F) Method: Tag closed cup |
| Evaporation rate | : No data available |

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|--|----------------------------------|
| Flammability (solid, gas) | : No data available |
| Upper explosion limit | : 7.5 %(V) |
| Lower explosion limit | : 1.2 %(V) |
| Vapor pressure | : 12.4989 hpa (9.375 mmHg) |
| Relative vapor density | : No data available |
| Density | : 1.199 g/ml (23 °C (73 °F) ()) |
| Solubility(ies) | |
| Water solubility | : not determined |
| Partition coefficient: n-octanol/water | : No data available |
| Autoignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Viscosity | |
| Viscosity, dynamic | : No data available |
| Viscosity, kinematic | : not determined |
| Explosive properties | : No data available |
| Molecular weight | : No data available |

SECTION 10. STABILITY AND REACTIVITY

| | |
|------------------------------------|---|
| Reactivity | : No dangerous reaction known under conditions of normal use. |
| Chemical stability | : The product is chemically stable. |
| Possibility of hazardous reactions | : Stable under recommended storage conditions. Vapors may form explosive mixture with air. |
| Conditions to avoid | : Heat, flames and sparks. |
| Incompatible materials | : No data available |

No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Ingredients:

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Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 23.4 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Acute dermal toxicity : LD50 Dermal (Rabbit): > 5,000 mg/kg

2-ethoxyethyl acetate:

Acute oral toxicity : LD50 Oral (Rat): 2,900 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): 10,300 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.

Respiratory sensitization: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC Group 2B: Possibly carcinogenic to humans

titanium dioxide 13463-67-7

NTP Not applicable**Reproductive toxicity**

May damage fertility or the unborn child.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Ingredients:****n-butyl acetate:**

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 647.7 mg/l

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Exposure time: 72 h

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects**Product:**

Additional ecological information : Do not empty into drains; dispose of this material and its container in a safe way.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION**Domestic regulation****TDG (road/train)**

UN number : UN 1139
Proper shipping name : COATING SOLUTION

Class : 3
Packing group : III
Labels : 3

International Regulations**IATA-DGR**

UN/ID No. : UN 1139
Proper shipping name : Coating solution
Class : 3
Packing group : III
Labels : Flammable Liquids
Packing instruction (cargo) : 366

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aircraft)
Packing instruction (passenger aircraft) : 355

IMDG-Code

UN number : UN 1139
Proper shipping name : COATING SOLUTION

Class : 3
Packing group : III
Labels : 3
EmS Code : F-E, S-E
Marine pollutant : no

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

Not applicable for product as supplied.

SECTION 15. REGULATORY INFORMATION

Canadian PBT Chemicals : This product contains the following components on the DSL that are classified as Persistent, Bioaccumulative and/or Toxic (PBT) under CEPA:
Naphtha (petroleum), hydrotreated heavy

Canadian lists

No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

Revision Date : 12/13/2016
Prepared by : R & D of Sika Canada Inc.

Notice to Reader:

The information contained in this Material Safety Data Sheet applies only to the actual Sika Canada product identified and described herein. This information is not intended to address, nor does it address the use or application of the identified Sika product in combination with any other material, product or process. All of the information set forth herein is based on technical data regarding the identified product that Sika believes to be reliable as of the date hereof. Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's current Product Data Sheet, product label and Material Safety Data Sheet for each Sika product, which are available at web site and/or telephone number listed.

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All sales of Sika products are subject to its current terms and conditions of sale available at www.sika.ca or 514-697-2610.

Full text of other abbreviations

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| | |
|--------|--|
| ADR | Accord européen relatif au transport international des marchandises Dangereuses par Route |
| CAS | Chemical Abstracts Service |
| DNEL | Derived no-effect level |
| EC50 | Half maximal effective concentration |
| GHS | Globally Harmonized System |
| IATA | International Air Transport Association |
| IMDG | International Maritime Code for Dangerous Goods |
| LD50 | Median lethal dose (the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals) |
| LC50 | Median lethal concentration (concentrations of the chemical in air that kills 50% of the test animals during the observation period) |
| MARPOL | International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 |
| OEL | Occupational Exposure Limit |
| PBT | Persistent, bioaccumulative and toxic |
| PNEC | Predicted no effect concentration |
| REACH | Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency |
| SVHC | Substances of Very High Concern |
| vPvB | Very persistent and very bioaccumulative |

CA / Z8

SAFETY DATA SHEET

Sikalastic® Resoflex Part B



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1.1

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SECTION 1. IDENTIFICATION

Product name : Sikalastic® Resoflex Part B

Manufacturer or supplier's details

Company name : Sika Canada Inc.
601, avenue Delmar
Pointe-Claire, QC H9R 4A9
Canada
www.sika.ca

Telephone : (514) 697-2610 / 1 (800) 933-7452

Telefax : (514) 694-2792

Health and Safety Services's
e-mail address : ehs@ca.sika.com

Emergency telephone : CANUTEC (collect) (613) 996-6666 (24 hours)

Recommended use of the chemical and restrictions on use

For further information, refer to product data sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Inhalation) : Category 2
Skin corrosion : Category 1C
Serious eye damage : Category 1
Respiratory sensitization : Category 1
Skin sensitization : Category 1
Specific target organ system-
ic toxicity - single exposure : Category 3 (Respiratory system)

GHS label elements

Hazard pictograms :



Signal Word : Danger

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| | |
|--------------------------|--|
| Hazard Statements | : H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H330 Fatal if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. |
| Precautionary Statements | : Prevention: P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. P264 Wash skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing must not be allowed out of the workplace. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P284 In case of inadequate ventilation wear respiratory protection. Response: P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor. P362 + P364 Take off contaminated clothing and wash it 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 to an approved waste disposal plant. |

Other hazards

None known.

Supplemental information

If product is in liquid or paste form, physical or health hazards listed related to dust are not considered significant. However, product may contain substances that could be potential hazards if caused to become airborne due to grinding, sanding or other abrasive processes.

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10000004333**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS****Hazardous ingredients**

| Chemical name | CAS-No. | Concentration (% w/w) |
|---|------------|-----------------------|
| Aliphatic polyisocyanate | 28182-81-2 | >= 60 - < 70 |
| 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate | 4098-71-9 | >= 30 - < 40 |
| hexamethylene-di-isocyanate | 822-06-0 | >= 0 - < 1 |

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
- If inhaled : Move to fresh air.
Consult a physician after significant exposure.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Keep eye wide open while rinsing.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : Health injuries may be delayed.
corrosive effects
irritant effects
sensitizing effects
Asthmatic appearance
Cough
Respiratory disorder
Allergic reactions
Headache
Dermatitis
See Section 11 for more detailed information on health effects and symptoms.

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May cause an allergic skin reaction.
Causes serious eye damage.
Fatal if inhaled.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
Causes severe burns.

Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Deny access to unprotected persons.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Avoid formation of aerosol.
Avoid exceeding the given occupational exposure limits (see section 8).
Do not get in eyes, on skin, or on clothing.
For personal protection see section 8.
Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should

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not be employed in any process in which this mixture is being used.

Smoking, eating and drinking should be prohibited in the application area.

Provide sufficient air exchange and/or exhaust in work rooms.
Follow standard hygiene measures when handling chemical products.

Conditions for safe storage : Prevent unauthorized access.
Store in original container.
Keep in a well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
Store in accordance with local regulations.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

| Ingredients | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---|------------|----------------------------------|--|-----------|
| Aliphatic polyisocyanate | 28182-81-2 | TWA | 0.005 ppm | CA ON OEL |
| | | C | 0.02 ppm | CA ON OEL |
| 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate | 4098-71-9 | TWA | 0.005 ppm 0.05 mg/m ³ | CA AB OEL |
| | | TWA | 0.005 ppm | CA BC OEL |
| | | C | 0.01 ppm | CA BC OEL |
| | | TWAEV | 0.005 ppm 0.045 mg/m ³ | CA QC OEL |
| hexamethylene-di-isocyanate | 822-06-0 | TWA | 0.005 ppm | CA ON OEL |
| | | C | 0.02 ppm | CA ON OEL |
| | | TWA | 0.005 ppm | CA ON OEL |
| | | C | 0.02 ppm | CA ON OEL |
| | | TWA | 0.005 ppm | ACGIH |
| | | TWA | 0.005 ppm 0.03 mg/m ³ | CA AB OEL |
| | | TWA | 0.005 ppm | CA BC OEL |
| | | C | 0.01 ppm | CA BC OEL |
| | | TWAEV | 0.005 ppm 0.034 mg/m ³ | CA QC OEL |
| | | TWA | 0.005 ppm | CA ON OEL |
| | | C | 0.02 ppm | CA ON OEL |
| | | TWA | 0.005 ppm | ACGIH |

Biological occupational exposure limits

| Ingredients | CAS-No. | Control parameters | Biological specimen | Sampling time | Permissible concentration | Basis |
|-----------------------------|----------|--------------------|---------------------|---------------|---------------------------|-----------|
| hexamethylene-di-isocyanate | 822-06-0 | 1,6-Hexameth- | Urine | End of shift | 15 µg/g creatinine | ACGIH BEI |

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| | | | | | | |
|--|--|--------------------|--|--|--|--|
| | | ylene dia- mine | | | | |
|--|--|--------------------|--|--|--|--|

Engineering measures : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protective equipment

Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection

Remarks : 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.

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Hygiene measures : Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product.
Remove contaminated clothing and protective equipment before entering eating areas.
Wash thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : light yellow
clear

Odor : musty

Odor Threshold : No data available

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| | | |
|--|---|---------------------------------------|
| pH | : | not determined |
| Melting point/range / Freezing point | : | No data available |
| Boiling point/boiling range | : | No data available |
| Flash point | : | 155 °C (311 °F) Method: closed cup |
| Evaporation rate | : | No data available |
| Flammability (solid, gas) | : | No data available |
| Upper explosion limit | : | No data available |
| Lower explosion limit | : | No data available |
| Vapor pressure | : | 0.01 hpa (0.01 mmHg) |
| Relative vapor density | : | No data available |
| Density | : | 1.101 g/ml (23 °C (73 °F) ()) |
| Solubility(ies) Water solubility | : | slightly soluble |
| Partition coefficient: n-octanol/water | : | No data available |
| Autoignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Viscosity Viscosity, dynamic | : | No data available |
| Viscosity, kinematic | : | not determined |
| Explosive properties | : | No data available |
| Molecular weight | : | No data available |

SECTION 10. STABILITY AND REACTIVITY

| | | |
|------------------------------------|---|---|
| Reactivity | : | No dangerous reaction known under conditions of normal use. |
| Chemical stability | : | The product is chemically stable. |
| Possibility of hazardous reactions | : | Stable under recommended storage conditions. |

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Conditions to avoid : No data available

Incompatible materials : No data available

No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Fatal if inhaled.

Product:Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation methodAcute inhalation toxicity : Acute toxicity estimate: 0.09 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method**Ingredients:****Aliphatic polyisocyanate:**

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): > 7,000 mg/kg

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate:

Acute oral toxicity : LD50 Oral (Rat): 4,814 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0.031 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Dermal (Rat): > 7,000 mg/kg

hexamethylene-di-isocyanate:

Acute oral toxicity : LD50 Oral (Rat): 746 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0.124 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Acute dermal toxicity : LD50 Dermal (Rat): > 7,000 mg/kg

Skin corrosion/irritation

Causes severe burns.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

Skin sensitization: May cause an allergic skin reaction.

Respiratory sensitization: May cause allergy or asthma symptoms or breathing difficulties if in-

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haled.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC Not applicable**NTP** Not applicable**Reproductive toxicity**

Not classified based on available information.

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Ingredients:****Aliphatic polyisocyanate:**Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l
Exposure time: 96 h**Persistence and degradability**

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects**Product:**Additional ecological information : Do not empty into drains; dispose of this material and its container in a safe way.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
May be harmful to the environment if released in large quantities.
Water polluting material.

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SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

- Waste from residues : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION**Domestic regulation****TDG (road/train)**

- UN number : UN 2206
- Proper shipping name : ISOCYANATES, TOXIC, N.O.S.
(3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate)
- Class : 6.1
- Packing group : III
- Labels : 6.1

International Regulations**IATA-DGR**

- UN/ID No. : UN 2206
- Proper shipping name : Isocyanates, toxic, n.o.s.
(isophorone diisocyanate)
- Class : 6.1
- Packing group : III
- Labels : Toxic Substances
- Packing instruction (cargo aircraft) : 663
- Packing instruction (passenger aircraft) : 655

IMDG-Code

- UN number : UN 2206
- Proper shipping name : ISOCYANATES, TOXIC, N.O.S.
(isophorone diisocyanate)
- Class : 6.1
- Packing group : III
- Labels : 6.1
- EmS Code : F-A, S-A
- Marine pollutant : no

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

Not applicable for product as supplied.

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No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

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 Prepared by : R & D of Sika Canada Inc.

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Full text of other abbreviations

| | |
|--------|--|
| ADR | Accord européen relatif au transport international des marchandises Dangereuses par Route |
| CAS | Chemical Abstracts Service |
| DNEL | Derived no-effect level |
| EC50 | Half maximal effective concentration |
| GHS | Globally Harmonized System |
| IATA | International Air Transport Association |
| IMDG | International Maritime Code for Dangerous Goods |
| LD50 | Median lethal dose (the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals) |
| LC50 | Median lethal concentration (concentrations of the chemical in air that kills 50% of the test animals during the observation period) |
| MARPOL | International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 |
| OEL | Occupational Exposure Limit |
| PBT | Persistent, bioaccumulative and toxic |
| PNEC | Predicted no effect concentration |
| REACH | Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a |

SAFETY DATA SHEET

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SVHC
vPvB

European Chemicals Agency
Substances of Very High Concern
Very persistent and very bioaccumulative

CA / Z8