SAFETY DATA SHEET

Sika® Duochem-8107 Part A

SECTION 1. IDENTIFICATION

Product name : Sika® Duochem-8107 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
Skin irritation : Category 2
Eye irritation : Category 2A
Skin sensitization : Category 1

GHS label elements
Hazard pictograms :

Signal Word : Warning
Hazard Statements : H226 Flammable liquid and vapor.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
Precautionary Statements:

**Prevention:**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
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.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/eye protection/face protection.

**Response:**
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
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.

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

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

**Hazardous ingredients**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>bisphenol-A-(epichlorhydrin) epoxy resin</td>
<td>25068-38-6</td>
<td>&gt;= 80 - &lt;= 90</td>
</tr>
<tr>
<td>acetonitrile</td>
<td>75-05-8</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>bisphenol-F-(epichlorhydrin) epoxy resin</td>
<td>9003-36-5</td>
<td>&gt;= 0 - &lt; 1</td>
</tr>
<tr>
<td>p-tert-butylphenyl 1-(2,3-epoxy)propyl ether</td>
<td>3101-60-8</td>
<td>&gt;= 0 - &lt; 1</td>
</tr>
</tbody>
</table>
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.
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: Immediately flush eye(s) with plenty of water.
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.
Obtain medical attention.

Most important symptoms and effects, both acute and delayed:
irritant effects
sensitizing effects
Allergic reactions
Excessive lachrymation
Erythema
Dermatitis
See Section 11 for more detailed information on health effects and symptoms.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.

Notes to physician: Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Alcohol-resistant foam
Carbon dioxide (CO2)
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.
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 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).

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.
- Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
- 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.
- 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.
- Observe label precautions.
- Store in accordance with local regulations.
SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>acetonitrile</td>
<td>75-05-8</td>
<td>TWA</td>
<td>20 ppm 34 mg/m³</td>
<td>CA AB OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>20 ppm</td>
<td>CA BC OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEV</td>
<td>60 ppm 101 mg/m³</td>
<td>CA QC OEL</td>
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<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>40 ppm 67 mg/m³</td>
<td>CA QC OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>20 ppm</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

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

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. Wash thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance**: paste
- **Color**: white
- **Odor**: epoxy-like
- **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. 29 °C (84 °F) Method: Tag 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**: 1.175 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
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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.
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.

Product:
Acute oral toxicity  : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method
Acute inhalation toxicity  : Acute toxicity estimate: > 40 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: Calculation method
Acute dermal toxicity  : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Ingredients:
bisphenol-A-(epichlorhydrin) epoxy resin:
Acute oral toxicity  : LD50 Oral (Rat): > 5,000 mg/kg
Acute dermal toxicity : LD50 Dermal (Rabbit): > 20,000 mg/kg
p-tert-butylphenyl 1-(2,3-epoxy)propyl ether:
Acute oral toxicity  : LD50 Oral (Rat): > 5,000 mg/kg
Acute inhalation toxicity  : LC50 (Rat): 3,466 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Acute dermal toxicity : LD50 Dermal (Rabbit): 6,000 mg/kg
Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/eye irritation
Causes serious eye irritation.

Respiratory or skin sensitization
Skin sensitization: May cause an allergic skin reaction.
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
Not classified based on available information.

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:**

**bisphenol-A-(epichlorhydrin) epoxy resin:**

- **Toxicity to fish:** LC50 (Oncorhynchus mykiss (rainbow trout)): 2 mg/l
  Exposure time: 96 h

- **Toxicity to daphnia and other aquatic invertebrates:** EC50 (Daphnia magna (Water flea)): 1.8 mg/l
  Exposure time: 48 h

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available
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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.

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 1133
Proper shipping name: ADHESIVES

Class: 3
Packing group: III
Labels: 3

International Regulations

IATA-DGR

UN/ID No.: UN 1133
Proper shipping name: Adhesives
Class: 3
Packing group: III
Labels: Flammable Liquids
Packing instruction (cargo aircraft): 366
Packing instruction (passenger aircraft): 355

IMDG-Code

UN number: UN 1133
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Proper shipping name : ADHESIVES
Class : 3
Packing group : III
Labels : 3
EmS Code : F-E, S-D
Marine pollutant : yes

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 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

ADR  Accord européen relatif au transport international des marchandises
DNA L  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 dosis (the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals)
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<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date:</th>
<th>SDS Number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3</td>
<td>12/13/2016</td>
<td>100000004150</td>
</tr>
</tbody>
</table>

- **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
- **SVHC**: Substances of Very High Concern
- **vPvB**: Very persistent and very bioaccumulative

CA / Z8
SECTION 1. IDENTIFICATION

Product name : Sika® Duochem-8107 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
Skin corrosion : Category 1B
Serious eye damage : Category 1
Skin sensitization : Sub-category 1A
Reproductive toxicity : Category 1B

GHS label elements
Hazard pictograms :

Signal Word : Danger

Hazard Statements : H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
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.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face 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.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage:
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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines</td>
<td>68410-23-1</td>
<td>&gt;= 60 - &lt; 70</td>
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</tbody>
</table>
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<table>
<thead>
<tr>
<th>Substance Description</th>
<th>CAS Number</th>
<th>Concentration Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatty acids, C18-unsatd., dimers, compds. with polyethylenepolyamine-tall-oil fatty acid reaction products</td>
<td>64754-99-0</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>triethylenetetramine</td>
<td>112-24-3</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>2,4,6-tris(dimethylaminomethyl)phenol</td>
<td>90-72-2</td>
<td>&gt;= 2 - &lt; 5</td>
</tr>
<tr>
<td>Dibutylphthalate</td>
<td>84-74-2</td>
<td>&gt;= 2 - &lt; 5</td>
</tr>
<tr>
<td>2-piperazin-1-ylethylamine</td>
<td>140-31-8</td>
<td>&gt;= 2 - &lt; 5</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>100-51-6</td>
<td>&gt;= 2 - &lt; 5</td>
</tr>
<tr>
<td>4,4’-isopropylidenediphenol</td>
<td>80-05-7</td>
<td>&gt;= 1 - &lt; 2</td>
</tr>
</tbody>
</table>

**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. 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, sensitizing effects, toxic effects for reproduction. Allergic reactions, Dermatitis. See Section 11 for more detailed information on health effects and symptoms. May cause an allergic skin reaction. Causes serious eye damage. May damage fertility or the unborn child. 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 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 not be employed in any process in which this mixture is being used. Smoking, eating and drinking should be prohibited in the application area. Pregnant women or women of child-bearing age should not be exposed to this product. Follow standard hygiene measures when handling chemical products.
Conditions for safe storage:
- Store in original container.
- Keep container tightly closed in a dry and 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

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
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</thead>
<tbody>
<tr>
<td>triethylenetetramine</td>
<td>112-24-3</td>
<td>TWA</td>
<td>0.5 ppm</td>
<td>CA ON OEL</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>3 mg/m³</td>
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<tr>
<td>Dibutylphthalate</td>
<td>84-74-2</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>CA AB OEL</td>
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<td>TWA</td>
<td>5 mg/m³</td>
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<td></td>
<td></td>
<td>TWAEV</td>
<td>5 mg/m³</td>
<td>CA QC OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

#### 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 workplace.
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: strap
Color: black
Odor: amine-like
Odor Threshold: No data available
pH: alkaline
Melting point/range / Freezing point: No data available
Boiling point/boiling range: No data available
Flash point: > 101 °C (214 °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: 0.0133322 hpa (0.010 mmHg)
Relative vapor density: No data available
Density: 1.007 g/ml (23 °C (73 °F) (1))
Solubility(ies)
   Water solubility: insoluble
Partition coefficient: n-octanol/water: No data available
Autoignition temperature: No data available
Decomposition temperature: No data available
Viscosity
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.
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
Not classified based on available information.

Product:
Acute oral toxicity: Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method
Acute inhalation toxicity: Acute toxicity estimate: > 10 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method
Acute dermal toxicity: Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Ingredients:
triethylenetetramine:
Acute oral toxicity: LD50 Oral (Rat): 1,716 mg/kg
Acute dermal toxicity: LD50 Dermal (Rabbit): 1,465 mg/kg

2-piperazin-1-ylethylamine:
Acute oral toxicity: LD50 Oral (Rabbit): ca. 2,097 mg/kg
Acute dermal toxicity: LD50 Dermal (Rabbit): ca. 866 mg/kg

Benzyl alcohol:
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Acute oral toxicity: LD50 Oral (Rat): 1,620 mg/kg
Acute inhalation toxicity: LC50 (Rat): > 4.178 mg/l
  Exposure time: 4 h
  Test atmosphere: dust/mist

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: Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.
  IARC Not applicable
  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:**

**Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines:**
Toxicity to fish (Chronic toxicity): LC50 (Oncorhynchus mykiss (rainbow trout)): 1 - 10 mg/l
  Exposure time: 96 d

**triethylenetetramine:**
Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
  Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia): 10 - 100 mg/l
  Exposure time: 48 h
Toxicity to algae: EC50 (Pseudokirchneriella subcapitata (green algae)): 10 -
2,4,6-tris(dimethylaminomethyl)phenol:
Toxicity to algae: EC50 (Scenedesmus capricornutum (fresh water algae)): > 10 - 100 mg/l
Exposure time: 72 h

2-piperazin-1-ylethylamine:
Toxicity to fish: LC50 (Fish): > 100 mg/l
Exposure time: 96 h

Benzyl alcohol:
Toxicity to fish: LC50 (Fish): > 100 mg/l
Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 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
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TDG (road/train)
UN number : UN 2735
Proper shipping name : POLYAMINES, LIQUID, CORROSIVE, N.O.S.
(3,6-diazaoctanethylenediamin, 2-piperazin-1-ylethylamine)
Class : 8
Packing group : II
Labels : 8

International Regulations

IATA-DGR
UN/ID No. : UN 2735
Proper shipping name : Polyamines, liquid, corrosive, n.o.s.
(3,6-diazaoctanethylenediamin, 2-piperazin-1-ylethylamine)
Class : 8
Packing group : II
Labels : Corrosives
Packing instruction (cargo aircraft) : 855
Packing instruction (passenger aircraft) : 851

IMDG-Code
UN number : UN 2735
Proper shipping name : POLYAMINES, LIQUID, CORROSIVE, N.O.S.
(3,6-diazaoctanethylenediamin, 2-piperazin-1-ylethylamine)
Class : 8
Packing group : II
Labels : 8
EmS Code : F-A, S-B
Marine pollutant : yes

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 lists
No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

Revision Date : 12/20/2016
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 dosis (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

SVHC
Substances of Very High Concern

vPvB
Very persistent and very bioaccumulative

CA / Z8