SECTION 1: Kit identification

1.1 Product identifier

Name: Hilti Crack Injection System CI 060
Product code: BU Chemicals

1.2 Details of the supplier of the Safety information for 2-Component-products

Hilti, Inc.
Legacy Tower, Suite 1000
75024 Plano - USA
T +1 9724035800
1-800-879-8000 toll free - F +1 918 254 0522

SECTION 2: General information

A SDS for each of these components is included. Please do not separate any component SDS from this cover page.

SECTION 3: Kit contents

Classification of the Product

GHS-US classification

Label elements

GHS-US labelling
Hazard pictograms (GHS-US)

Signal word (GHS-US) Danger
Hazard statements (GHS-US)
H302+H312 - Harmful if swallowed or in contact with skin
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H341 - Suspected of causing genetic defects
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US)
P260 - Do not breathe vapours
P273 - Avoid release to the environment
P280 - Wear eye protection, protective clothing, protective gloves
P302+P352 - IF ON SKIN: Wash with plenty of soap and 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
P308+P313 - IF exposed or concerned: Get medical advice/attention

Additional information
**Hilti Crack Injection System CI 060**

Safety information for 2-Component-products

<table>
<thead>
<tr>
<th>Name</th>
<th>General description</th>
<th>Quantity</th>
<th>Unit</th>
<th>GHS-US classification</th>
</tr>
</thead>
</table>
| CI 060, B |                     | 1        | pcs (pieces) | Acute Tox. 4 (Oral), H302  
Acute Tox. 4 (Dermal), H312  
Skin Corr. 1B, H314  
Eye Dam. 1, H318  
Skin Sens. 1, H317  
Aquatic Acute 1, H400  
Aquatic Chronic 1, H410 |
| CI 060, A |                     | 1        | pcs (pieces) | Skin Irrit. 2, H315  
Eye Irrit. 2, H319  
Skin Sens. 1, H317  
Muta. 2, H341  
Aquatic Chronic 2, H411 |

**SECTION 4: General advice**

No data available

**SECTION 5: Safe handling advice**

**Environmental precautions**

Avoid release to the environment

**Storage conditions**

Store locked up  
Store in a well-ventilated place  
Keep cool

**Precautions for safe handling**

Ensure good ventilation of the work station  
Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Do not get in eyes, on skin, or on clothing  
Wear personal protective equipment  
Avoid breathing vapours

**Methods for cleaning up**

Notify authorities if product enters sewers or public waters

For containment  
Collect spillage

**SECTION 6: First aid measures**

**First-aid measures after eye contact**

Rinse eyes with water as a precaution

**First-aid measures after ingestion**

Rinse mouth  
Call a poison center or a doctor if you feel unwell

**First-aid measures after inhalation**

Remove person to fresh air and keep comfortable for breathing

**First-aid measures after skin contact**

Wash skin with plenty of water  
Take off contaminated clothing  
If skin irritation or rash occurs: Get medical advice/attention

**First-aid measures general**

IF exposed or concerned: Get medical advice/attention  
Call a poison center or a doctor if you feel unwell

**Symptoms/injuries after skin contact**

May cause an allergic skin reaction

**Other medical advice or treatment**

Treat symptomatically

**SECTION 7: Fire fighting measures**

**Protection during firefighting**

Do not attempt to take action without suitable protective equipment  
Self-contained breathing apparatus  
Complete protective clothing

**Hazardous decomposition products in case of fire**

Toxic fumes may be released

**SECTION 8: Other information**

No data available
SECTION 1: Identification

1.1. Identification

Product form  Mixture
Name  CI 060, A
Product code  BU Chemicals

1.2. Relevant identified uses of the substance or mixture and uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Hilti, Inc.
Legacy Tower, Suite 1000
75024 Plano - USA
T +1 9724035800
1-800-879-8000 toll free - F +1 918 254 0522

Supplier
Hilti, Inc.
Legacy Tower, Suite 1000
75024 Plano - USA
T +1 9724035800
1-800-879-8000 toll free - F +1 918 254 0522

Department issuing data specification sheet
Hilti AG
Feldkircherstraße 100
9494 Schaan - Liechtenstein
T +423 234 2111 - F +423 234 2965
www.hilti.com

1.4. Emergency telephone number

Emergency number  Chem-Trec
Tel.: 1 800 424 9300 (USA, PR, Virgin Islands, Canada)
Tel.: 703 527 3887 (Other countries)
+1 918 8723000
1-800-879-8000 toll free

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification
Skin Irrit. 2  H315 - Causes skin irritation
Eye Irrit. 2A  H319 - Causes serious eye irritation
Skin Sens. 1  H317 - May cause an allergic skin reaction
Muta. 2   H341 - Suspected of causing genetic defects
Full text of H statements : see section 16

2.2. Label elements

GHS-US labelling
Hazard pictograms (GHS-US)

Signal word (GHS-US)  Warning
Hazard statements (GHS-US)
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
CI 060, A
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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Precautionary statements (GHS-US)

H319 - Causes serious eye irritation
H341 - Suspected of causing genetic defects
P273 - Avoid release to the environment
P280 - Wear eye protection, protective clothing, protective gloves
P302+P352 - If on skin: Wash with plenty of 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
P308+P313 - If exposed or concerned: Get medical advice/attention
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention

2.3. Other hazards
No additional information available

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance
Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
</table>
| Bisphenol-A-Epichlorhydrin Epoxy resin Average MW < 700 (CAS No) | (CAS No) 25068-38-6 | 60 - 80 | Skin Irrit. 2, H315  
Skin Sens. 1, H317  
Aquatic Chronic 2, H411  |
| 2,3-eoxypropyl o-tolyl ether (CAS No) | (CAS No) 2210-79-9 | 25 - 40 | Mut. 2, H341  
Skin Irrit. 2, H315  
Skin Sens. 1, H317  
Aquatic Chronic 2, H411  |

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion: Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after skin contact: Burns. May cause an allergic skin reaction.

Symptoms/injuries after eye contact: Serious damage to eyes.

Symptoms/injuries after ingestion: Burns.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Reactivity: The product is non-reactive under normal conditions of use, storage and transport.
5.3. Advice for firefighters
Protection during firefighting
Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Emergency procedures
Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe vapours.

6.1.2. For emergency responders
Protective equipment
Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions
Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment
Collect spillage.
Methods for cleaning up
Take up liquid spill into absorbent material.
Other information
Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections
For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling
Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Do not breathe vapours. Wear personal protective equipment.
Hygiene measures
Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions
Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>Control parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisphenol-A-Epichlorhydrin Epoxy resin Average MW &lt; 700 (25068-38-6)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>2,3-epoxypropyl o-tolyl ether (2210-79-9)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

8.2. Exposure controls
Appropriate engineering controls
Ensure good ventilation of the work station.
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---

### Personal protective equipment

- Gloves
- Protective clothing
- Protective goggles

### Skin and body protection

Wear suitable protective clothing.

### Respiratory protection

Wear respiratory protection.

### Environmental exposure controls

Avoid release to the environment.

---

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>mild</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>138 °C</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>0.0075 mm Hg</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>1.15 kg/l</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>&gt; 200 °C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>500 - 650 mPa.s</td>
</tr>
</tbody>
</table>

#### 9.2. Other information

No additional information available

---

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.
10.4. Conditions to avoid

Heat.

10.5. Incompatible materials


10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity  Not classified

<table>
<thead>
<tr>
<th>Substance</th>
<th>LD50 oral rat (mg/kg)</th>
<th>LD50 dermal rat (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisphenol-A-Epichlorhydrin Epoxy resin Average MW &lt; 700 (25068-38-6)</td>
<td>&gt; 2000 (Rat)</td>
<td>&gt; 2000 (Rat)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50 oral rat (mg/kg)</th>
<th>LC50 dermal rat (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,3-epoxypropyl o-tolyl ether (2210-79-9)</td>
<td>&gt; 5000 (Rat)</td>
<td>&gt; 2000 (Rat)</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation Causes skin irritation.
Serious eye damage/irritation Causes serious eye irritation.
Respiratory or skin sensitisation May cause an allergic skin reaction.
Germ cell mutagenicity Suspected of causing genetic defects.
Carcinogenicity Not classified
Reproductive toxicity Not classified
Specific target organ toxicity (single exposure) Not classified
Specific target organ toxicity (repeated exposure) Not classified
Aspiration hazard Not classified
Symptoms/injuries after skin contact Burns. May cause an allergic skin reaction.
Symptoms/injuries after eye contact Serious damage to eyes.
Symptoms/injuries after ingestion Burns.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general Toxic to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50 fish 1 (mg/l)</th>
<th>EC50 Daphnia 1 (mg/l)</th>
<th>LC50 fish 2 (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisphenol-A-Epichlorhydrin Epoxy resin Average MW &lt; 700 (25068-38-6)</td>
<td>1.2 (Oncorhynchus mykiss; Lethal)</td>
<td>1.1 - 2.8 (Daphnia magna; Locomotor effect)</td>
<td>2.3 (Oncorhynchus mykiss; Nominal concentration)</td>
</tr>
<tr>
<td>Threshold limit algae 1</td>
<td>&gt; 11 (Scenedesmus sp.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Threshold limit algae 2</td>
<td>4.2 (Scenedesmus sp.)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12.2. Persistence and degradability

2,3-epoxypropyl o-tolyl ether (2210-79-9)
Persistence and degradability

12.3. Bioaccumulative potential

Bisphenol-A-Epichlorhydrin Epoxy resin Average MW < 700 (25068-38-6)
BCF other aquatic organisms
13 - 31
Log Pow
>= 2.918 (Experimental value; EU Method A.8: Partition Coefficient; 25 °C)
Bioaccumulative potential
Low potential for bioaccumulation (BCF < 500).

2,3-epoxypropyl o-tolyl ether (2210-79-9)
Log Pow
2.16 (Estimated value)
Bioaccumulative potential
Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

Bisphenol-A-Epichlorhydrin Epoxy resin Average MW < 700 (25068-38-6)
Surface tension
0.0 587-0.0589,20 °C

12.5. Other adverse effects

Effect on the global warming
No known effects from this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste treatment methods
Dispose of contents/container in accordance with licensed collector’s sorting instructions.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

<table>
<thead>
<tr>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number</td>
<td>Not regulated for transport</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.2. UN proper shipping name</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>Dangerous for the</td>
<td>Dangerous for the</td>
<td>Dangerous for the</td>
<td>Dangerous for the</td>
</tr>
</tbody>
</table>
CI 060, A
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>environment : No</td>
<td>environment : No</td>
<td>environment : No</td>
<td>environment : No</td>
<td>environment : No</td>
</tr>
<tr>
<td>not restricted according ADR Special Provision SP375, IATA-DGR Special Provision A197 and IMDG-Code 2.10.2.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14.6. Special precautions for user

- Overland transport
- Transport by sea
  No data available
- Air transport
  No data available
- Inland waterway transport
  Carriage prohibited (ADN) No
  Not subject to ADN No
- Rail transport
  Carriage prohibited (RID) No

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

SECTION 15: Regulatory information

15.1. US Federal regulations

Bisphenol-A-Epichlorhydrin Epoxy resin Average MW < 700 (25068-38-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA TSCA Regulatory Flag XU - XU - indicates a substance exempt from reporting under the Inventory Update Reporting Rule, i.e., Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(C))

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Irrit. 2 H315
Eye Irrit. 2 H319
Skin Sens. 1 H317
Muta. 2 H341
Aquatic Chronic 2 H411

Full text of hazard classes and H-statements: see section 16

National regulations
No additional information available

15.3. US State regulations
No additional information available
SECTION 16: Other information

Revision date 08/24/2016

Full text of H-statements:

<table>
<thead>
<tr>
<th>H315</th>
<th>Causes skin irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H341</td>
<td>Suspected of causing genetic defects</td>
</tr>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
SECTION 1: Identification

1.1. Identification
Product form
Mixture
Name
CI 060, B
Product code
BU Chemicals

1.2. Relevant identified uses of the substance or mixture and uses advised against
No additional information available

1.3. Details of the supplier of the safety data sheet

Hilti, Inc.
Legacy Tower, Suite 1000
75024 Plano - USA
T +1 9724035800
1-800-879-8000 toll free - F +1 918 254 0522

Supplier
Hilti, Inc.
Legacy Tower, Suite 1000
75024 Plano - USA
T +1 9724035800
1-800-879-8000 toll free - F +1 918 254 0522

Department issuing data specification sheet
Hilti AG
Feldkircherstraße 100
9494 Schaan - Liechtenstein
T +423 234 2111
chemicals.hse@hilti.com

1.4. Emergency telephone number

Emergency number
Chem-Trec
Tel.: 1 800 424 9300 (USA, PR, Virgin Islands, Canada)
Tel.: 703 527 3887 (Other countries)
+1 918 8723000
1-800-879-8000 toll free

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification
Acute Tox. 4 (Oral) H302 - Harmful if swallowed
Acute Tox. 4 (Dermal) H312 - Harmful in contact with skin
Skin Corr. 1B H314 - Causes severe skin burns and eye damage
Skin Sens. 1 H317 - May cause an allergic skin reaction

Full text of H statements: see section 16

2.2. Label elements

GHS-US labelling
Hazard pictograms (GHS-US)

Signal word (GHS-US)
Danger
Hazard statements (GHS-US)
H302+H312 - Harmful if swallowed or in contact with skin
H314 - Causes severe skin burns and eye damage
CI 060, B
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Precautionary statements (GHS-US)
H317 - May cause an allergic skin reaction
P260 - Do not breathe vapours
P273 - Avoid release to the environment
P280 - Wear eye protection, protective clothing, protective gloves
P301+P312 - If swallowed: Call a doctor, a POISON CENTER if you feel unwell
P302+P352 - If on skin: Wash with plenty of 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

2.3. Other hazards
No additional information available

2.4. Unknown acute toxicity (GHS-US)
Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance
Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
</table>
| pentaethylenehexamine | (CAS No) 4067-16-7 | 60 - 80 | Acute Tox. 4 (Oral), H302  
Skin Corr. 1B, H314  
Skin Sens. 1, H317  
Aquatic Acute 1, H400  
Aquatic Chronic 1, H410 |
| Benzyl alcohol     | (CAS No) 100-51-6  | 10 - 25 | Acute Tox. 4 (Oral), H302  
Acute Tox. 4 (Dermal), H312  
Eye Irrit. 2A, H319 |

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures after inhalation
Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact
Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.

First-aid measures after eye contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion
Rinse mouth. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

<table>
<thead>
<tr>
<th>Symptoms/Injuries after skin contact</th>
<th>Burns. May cause an allergic skin reaction.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms/Injuries after eye contact</td>
<td>Serious damage to eyes.</td>
</tr>
<tr>
<td>Symptoms/Injuries after ingestion</td>
<td>Burns.</td>
</tr>
</tbody>
</table>

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
5.2. Special hazards arising from the substance or mixture
Reactivity
The product is non-reactive under normal conditions of use, storage and transport.

5.3. Advice for firefighters
Protection during firefighting
Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Emergency procedures
Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe vapours.

6.1.2. For emergency responders
Protective equipment
Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment
Collect spillage.

Methods for cleaning up
Take up liquid spill into absorbent material.

Other information
Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections
For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling
Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe vapours. Wear personal protective equipment.

Hygiene measures
Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions
Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>Control Parameter</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>pentaethylenehexamine (4067-16-7)</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Benzyl alcohol (100-51-6)</td>
<td>Not applicable</td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure controls
Appropriate engineering controls
Ensure good ventilation of the work station.
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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Personal protective equipment
Gloves. Protective clothing. Protective goggles.

Skin and body protection
Wear suitable protective clothing.

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental exposure controls
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Black</td>
</tr>
<tr>
<td>Odour</td>
<td>Amine-like</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>&gt; 13</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 60 °C</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>1.05 kg/l</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>110 - 120 Pa.s</td>
</tr>
</tbody>
</table>

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No additional information available
10.4. Conditions to avoid
Heat.

10.5. Incompatible materials

10.6. Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity
Oral: Harmful if swallowed. Dermal: Harmful in contact with skin.

<table>
<thead>
<tr>
<th></th>
<th>CI 060, B</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE US (oral)</td>
<td>1782.669 mg/kg bodyweight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>1222.222 mg/kg bodyweight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pentaethylenexamaine (4067-16-7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>1600 mg/kg (Rat)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>1600.000 mg/kg bodyweight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>1100.000 mg/kg bodyweight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benzyl alcohol (100-51-6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>1620 mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>&gt; 4178 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>1620.000 mg/kg bodyweight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>1100.000 mg/kg bodyweight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATE US (gases)</td>
<td>4500.000 ppmv/4h</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATE US (vapours)</td>
<td>11.000 mg/l/4h</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATE US (dust,mist)</td>
<td>1.500 mg/l/4h</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
Causes severe skin burns and eye damage.

pH: > 13

Serious eye damage/irritation
Not classified

pH: > 13

Respiratory or skin sensitisation
May cause an allergic skin reaction.

Germ cell mutagenicity
Not classified

Carcinogenicity
Not classified

Reproductive toxicity
Not classified

Specific target organ toxicity (single exposure)
Not classified

Specific target organ toxicity (repeated exposure)
Not classified

Aspiration hazard
Not classified

Symptoms/Injuries after skin contact
Burns. May cause an allergic skin reaction.

Symptoms/Injuries after eye contact
Serious damage to eyes.

Symptoms/Injuries after ingestion
Burns.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general
Very toxic to aquatic life with long lasting effects.
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Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>pentaethylenehexamine (4067-16-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
</tr>
<tr>
<td>180 mg/l (Poecilia reticulata)</td>
</tr>
<tr>
<td>Threshold limit algae 1</td>
</tr>
<tr>
<td>0.7 mg/l (Selenastrum capricornutum; Biomass)</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>pentaethylenehexamine (4067-16-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
</tr>
<tr>
<td>Not readily biodegradable in water.</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>pentaethylenehexamine (4067-16-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
</tr>
<tr>
<td>-1.6 (QSAR)</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
</tr>
<tr>
<td>Bioaccumulation: not applicable.</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming
No known effects from this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods
Dispose of contents/container in accordance with licensed collector’s sorting instructions.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

<table>
<thead>
<tr>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number</td>
<td>2735</td>
<td>2735</td>
<td>2735</td>
<td>2735</td>
</tr>
<tr>
<td>14.2. UN proper shipping name</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMINES, LIQUID, CORROSIVE, N.O.S. / POLYAMINES, LIQUID, CORROSIVE, N.O.S. (pentaethylenehexamine)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMINES, LIQUID, CORROSIVE, N.O.S. (pentaethylenehexamine)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amines, liquid, corrosive, n.o.s. (pentaethylenehexamine)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMINES, LIQUID, CORROSIVE, N.O.S. (pentaethylenehexamine)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMINES, LIQUID, CORROSIVE, N.O.S. (pentaethylenehexamine)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>III</td>
<td>III</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dangerous for the environment : No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dangerous for the environment : No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dangerous for the environment : No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dangerous for the environment : No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dangerous for the environment : No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CI 060, B
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<table>
<thead>
<tr>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>not restricted according ADR Special Provision SP375, IATA-DGR Special Provision A197 and IMDG-Code 2.10.2.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14.6. Special precautions for user

- Overland transport
  - Classification code (ADR) C7
  - Special provisions (ADR) 274
  - Limited quantities (ADR) 5l
  - Packing instructions (ADR) P001, IBC03, LP01, R001
  - Mixed packing provisions (ADR) MP19
  - Orange plates

  Tunnel restriction code (ADR) E

- Transport by sea
  - Special provisions (IMDG) 223, 274
  - Limited quantities (IMDG) 5 L
  - Packing instructions (IMDG) P001, LP01
  - EmS-No. (Fire) F-A
  - EmS-No. (Spillage) S-B
  - Stowage category (IMDG) A
  - MFAG-No 153

- Air transport
  - PCA packing instructions (IATA) 852
  - PCA max net quantity (IATA) 5L
  - Special provisions (IATA) A3

- Inland waterway transport
  - Classification code (ADN) C7
  - Special provisions (ADN) 274
  - Limited quantities (ADN) 5 L
  - Excepted quantities (ADN) E1
  - Carriage permitted (ADN) T
  - Equipment required (ADN) PP, EP
  - Number of blue cones/lights (ADN) 0
  - Carriage prohibited (ADN) No
  - Not subject to ADN No

- Rail transport
  - Special provisions (RID) 274
  - Limited quantities (RID) 5L
  - Packing instructions (RID) P001, IBC03, LP01, R001
  - Carriage prohibited (RID) No

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
SECTION 15: Regulatory information

15.1. US Federal regulations

Benzyl alcohol (100-51-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Acute Tox. 4 (Oral)  H302
Acute Tox. 4 (Dermal)  H312
Skin Corr. 1B  H314
Eye Dam. 1  H318
Skin Sens. 1  H317
Aquatic Acute 1  H400
Aquatic Chronic 1  H410
Full text of hazard classes and H-statements: see section 16

National regulations
No additional information available

15.3. US State regulations
No additional information available

SECTION 16: Other information

Revision date  08/24/2016

Full text of H-statements:

<table>
<thead>
<tr>
<th>H302</th>
<th>Acute Tox. 4 (Oral)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H312</td>
<td>Acute Tox. 4 (Dermal)</td>
</tr>
<tr>
<td>H314</td>
<td>Skin Corr. 1B</td>
</tr>
<tr>
<td>H318</td>
<td>Eye Dam. 1</td>
</tr>
<tr>
<td>H317</td>
<td>Skin Sens. 1</td>
</tr>
<tr>
<td>H400</td>
<td>Aquatic Acute 1</td>
</tr>
<tr>
<td>H410</td>
<td>Aquatic Chronic 1</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H312</td>
<td>Harmful in contact with skin</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H332</td>
<td>Hazard if inhaled</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.