Section 1. Identification

GHS product identifier : ARALDITE® AY 8683 US
Product code : 00070227
Other means of identification : Not available.
Product type : Isocyanate for adhesive systems
Material uses : Isocyanate for adhesive systems
Supplier's details : Huntsman Advanced Materials Americas LLC
P.O. Box 4980
The Woodlands, TX 77387
Non-Emergency phone: (800) 257-5547
e-mail address of person responsible for this SDS : MSDS@huntsman.com
Emergency telephone number (24h/7day) : Chemtrec: (800) 424-9300 or (703) 527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture : ACUTE TOXICITY: INHALATION - Category 3
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
RESPIRATORY SENSITIZATION - Category 1
SKIN SENSITIZATION - Category 1
AQUATIC TOXICITY (ACUTE) - Category 3
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 91.4%
Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 91.4%

GHS label elements
Hazard pictograms

Signal word : Danger
Hazard statements : Toxic if inhaled.
Causes serious eye irritation.
Causes skin irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Harmful to aquatic life.
Section 2. Hazards identification

Precautionary statements: Wear protective gloves. Wear eye or face protection. In case of inadequate ventilation wear respiratory protection. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician. If experiencing respiratory symptoms: Call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. Store locked up. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements:

Other hazards which do not result in classification: None known.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>cycloaliphatic diisocyanate prepolymer</td>
<td>60 - 100</td>
<td>119185-07-8</td>
</tr>
<tr>
<td>3-isocyanatomethyl-3,5,5-trimethylcyclohexylisocyanate</td>
<td>3 - 7</td>
<td>4098-71-9</td>
</tr>
<tr>
<td>Dicyclohexylmethane-4,4'-diisocyanate</td>
<td>1 - 3</td>
<td>5124-30-1</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

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

Skin contact: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Section 4. First aid measures

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

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

- **Eye contact**: Causes serious eye irritation.
- **Inhalation**: Toxic if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- **Skin contact**: Causes skin irritation. May cause an allergic skin reaction.
- **Eye contact**: Irritating to mouth, throat and stomach.

**Over-exposure signs/symptoms**

- **Eye contact**:
- **Inhalation**:
- **Skin contact**:
- **Ingestion**:

**Indication of immediate medical attention and special treatment needed, if necessary**

- **Notes to physician**: No specific treatment. Treat symptomatically. Call medical doctor or poison control center immediately if large quantities have been ingested.
- **Protection of first-aiders**:

See toxicological information (Section 11)

Section 5. Fire-fighting measures

**Flash point**: Closed cup: >149°C (>300.2°F)

**Extinguishing media**

- **Suitable extinguishing media**: Use an extinguishing agent suitable for the surrounding fire.
- **Unsuitable extinguishing media**: None known.

**Specific hazards arising from the chemical**: In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous thermal decomposition products**: 
Section 5. Fire-fighting measures

Decomposition products may include the following materials:
- carbon dioxide
- Carbon monoxide
- nitrogen oxides

Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling:

Protective measures: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene: 

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00070227
Section 7. Handling and storage

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities:

Store between the following temperatures: 2 to 40°C (35.6 to 104°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-isocyanatomethyl-3,5,5-trimethylcyclohexylisocyanate</td>
<td>ACGIH TLV (United States, 3/2012). TWA: 0.005 ppm 8 hours. NIOSH REL (United States, 6/2009). Absorbed through skin. TWA: 0.005 ppm 10 hours. TWA: 0.045 mg/m³ 10 hours. STEL: 0.02 ppm 15 minutes. STEL: 0.18 mg/m³ 15 minutes.</td>
</tr>
<tr>
<td>Dicyclohexylmethane-4,4'-diisocyanate</td>
<td>ACGIH TLV (United States, 3/2012). TWA: 0.005 ppm 8 hours. TWA: 0.054 mg/m³ 8 hours. NIOSH REL (United States, 6/2009). CEIL: 0.01 ppm CEIL: 0.11 mg/m³</td>
</tr>
</tbody>
</table>

Appropriate engineering controls: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Section 8. Exposure controls/personal protection

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

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

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Thermal hazards: Not available.

Section 9. Physical and chemical properties

Appearance

Physical state: Liquid.
Color: Clear, amber
Odor: Slight
Odor threshold: Not available.
pH: Not available.
Melting point/Freezing point: Not available.
Boiling/condensation point: Not available.
Flash point: Closed cup: >149°C (>300.2°F)
Evaporation rate: Not available.
Flammability (solid, gas): Not available.
Lower and upper explosive (flammable) limits: Not available.
Vapor pressure: Not available.
Vapor density: >1 [Air = 1]
Relative density: 1.02 to 1.06
Solubility in water: Reacts with water
Partition coefficient: n-octanol/water: Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Not available.
Section 10. Stability and reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid: No specific data.

Incompatible materials: No specific data.

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

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Endpoint</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-isocyanatomethyl-3,5, 5-trimethylcyclohexylisocyanate</td>
<td>OECD 403 Acute Inhalation Toxicity</td>
<td>LC50 Inhalation Dusts and mists</td>
<td>Rat - Male, Female</td>
<td>0.031 to 0.04 mg/l</td>
</tr>
<tr>
<td>Dicyclohexylmethane-4,4'- diisocyanate</td>
<td>OECD 401 Acute Oral Toxicity</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>4814 mg/kg</td>
</tr>
<tr>
<td></td>
<td>OECD 403 Acute Inhalation Toxicity</td>
<td>LC50 Inhalation Dusts and mists</td>
<td>Rat - Male, Female</td>
<td>0.33 to 0.434 mg/l</td>
</tr>
<tr>
<td></td>
<td>OECD 402 Acute Dermal Toxicity</td>
<td>LD50 Dermal</td>
<td>Rat - Male, Female</td>
<td>&gt;7000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>OECD 402 Acute Dermal Toxicity</td>
<td>LD50 Oral</td>
<td>Rat - Male, Female</td>
<td>18200 mg/kg</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>cycloaliphatic diisocyanate prepolymer</td>
<td>-</td>
<td>Not known</td>
<td>Skin - Irritant</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Not known</td>
<td>Eyes - Irritant</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Not known</td>
<td>Eyes - Irritant</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Not known</td>
<td>Respiratory - Irritant</td>
</tr>
<tr>
<td>3-isocyanatomethyl-3,5, 5-trimethylcyclohexylisocyanate</td>
<td>OECD 404 Acute Dermal Irritation/Corrosion</td>
<td>Rabbit</td>
<td>Skin - Irritant</td>
</tr>
<tr>
<td>Dicyclohexylmethane-4,4'-diisocyanate</td>
<td>OECD 405 Acute Eye Irritation/Corrosion</td>
<td>Rabbit</td>
<td>Eyes - Irritant</td>
</tr>
</tbody>
</table>

Conclusion/Summary

Skin:
Section 11. Toxicological information

**Eyes**: cycloaliphatic diisocyanate prepolymer No known significant effects or critical hazards.
3-isocyanatomethyl-3,5,5-trimethylcyclohexylisocyanate No known significant effects or critical hazards.
Dicyclohexylmethane-4,4'-diisocyanate Severely irritating to the skin.

**Respiratory**: cycloaliphatic diisocyanate prepolymer No known significant effects or critical hazards.
3-isocyanatomethyl-3,5,5-trimethylcyclohexylisocyanate Irritating to eyes.
Dicyclohexylmethane-4,4'-diisocyanate Irritating to eyes.

**Sensitization**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Route of exposure</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-isocyanatomethyl-3,5,5-trimethylcyclohexylisocyanate</td>
<td>No official guidelines</td>
<td>skin</td>
<td>Guinea pig</td>
<td>Sensitizing</td>
</tr>
<tr>
<td>Dicyclohexylmethane-4,4'-diisocyanate</td>
<td>No official guidelines</td>
<td>Respiratory</td>
<td>Human</td>
<td>Sensitizing</td>
</tr>
<tr>
<td></td>
<td>No official guidelines</td>
<td>Respiratory</td>
<td>Guinea pig</td>
<td>Sensitizing</td>
</tr>
<tr>
<td></td>
<td>OECD 406 Skin Sensitization</td>
<td>skin</td>
<td>Guinea pig</td>
<td>Sensitizing</td>
</tr>
</tbody>
</table>

**Mutagenicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dicyclohexylmethane-4,4'-diisocyanate</td>
<td>Experiment: In vitro Subject: Bacteria Metabolic activation: +/-</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>Experiment: In vitro Subject: Mammalian-Animal Metabolic activation: +/-</td>
<td>Negative</td>
</tr>
</tbody>
</table>

**Conclusion/Summary**: Dicyclohexylmethane-4,4'-diisocyanate Not mutagenic in a standard battery of genetic toxicological tests.

**Carcinogenicity**
Not available.

**Reproductive toxicity**
## Section 11. Toxicological information

### Product/ingredient name

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Species</th>
<th>Maternal toxicity</th>
<th>Fertility</th>
<th>Developmental effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dicyclohexylmethane-4,4' -diisocyanate</td>
<td>OECD 421 Reproduction/Developmental Toxicity Screening Test</td>
<td>Rat - Male, Female</td>
<td>Positive</td>
<td>Negative</td>
<td>Negative</td>
</tr>
</tbody>
</table>

### Teratogenicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Species</th>
<th>Result/Result type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dicyclohexylmethane-4,4' -diisocyanate</td>
<td>OECD 414 Prenatal Developmental Toxicity Study</td>
<td>Rat - Female</td>
<td>Negative - Inhalation</td>
</tr>
</tbody>
</table>

### Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-isocyanatomethyl-3,5,5-trimethylcyclohexylisocyanate</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
</tbody>
</table>

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

### Information on the likely routes of exposure

- Not available.

### Potential acute health effects

- **Eye contact**: Causes serious eye irritation.
- **Inhalation**: Toxic if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- **Skin contact**: Causes skin irritation. May cause an allergic skin reaction.
- **Ingestion**: Irritating to mouth, throat and stomach.

### Symptoms related to the physical, chemical and toxicological characteristics

- **Eye contact**: 
- **Inhalation**: 
- **Skin contact**: 
- **Ingestion**: 

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- **Potential immediate effects**: 
- **Potential delayed effects**: 

#### Long term exposure
Section 11. Toxicological information

Potential immediate effects:

Potential delayed effects:

Potential chronic health effects:

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Endpoint</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dicyclohexylmethane-4,4'-diisocyanate</td>
<td>OECD 413 Subchronic Inhalation Toxicity: 90-day Study</td>
<td>Sub-chronic NOEC Inhalation Dusts and mists</td>
<td>Rat - Male, Female</td>
<td>3 mg/m³</td>
</tr>
</tbody>
</table>

General:
Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity:
No known significant effects or critical hazards.

Mutagenicity:
No known significant effects or critical hazards.

Teratogenicity:
No known significant effects or critical hazards.

Developmental effects:
No known significant effects or critical hazards.

Fertility effects:
No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates
Not available.

Other information:
Not available.

Section 12. Ecological information

Toxicity:

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Endpoint</th>
<th>Exposure</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-isocyanatomethyl-3,5,5-trimethylcyclohexylisocyanate</td>
<td>-</td>
<td>Acute EC50</td>
<td>72 hours</td>
<td>Algae</td>
<td>118.7 mg/l</td>
</tr>
<tr>
<td></td>
<td>EU EC 88/302/EC DIN 38412 (Lumistox test)</td>
<td>Acute EC50</td>
<td>3 hours</td>
<td>Bacteria</td>
<td>263 mg/l</td>
</tr>
<tr>
<td></td>
<td>DIN 38412 (Lumistox test)</td>
<td>Acute EC50</td>
<td>24 hours</td>
<td>Daphnia</td>
<td>83.7 mg/l</td>
</tr>
<tr>
<td></td>
<td>OECD</td>
<td>Acute LC50</td>
<td>48 hours</td>
<td>Fish</td>
<td>1.8 mg/l</td>
</tr>
<tr>
<td></td>
<td>EU EC C.2 Acute Toxicity for Daphnia Inhibition Test</td>
<td>Chronic NOEC</td>
<td>21 days</td>
<td>Daphnia</td>
<td>3 mg/l</td>
</tr>
<tr>
<td></td>
<td>EU EC C.3 Algal Inhibition Test</td>
<td>Acute EgC50</td>
<td>48 hours Static</td>
<td>Daphnia</td>
<td>&gt;8.3 mg/l</td>
</tr>
<tr>
<td></td>
<td>EU EC C.1 Acute Toxicity for Fish</td>
<td>Acute LC50</td>
<td>72 hours Static</td>
<td>Algae</td>
<td>&gt;5 mg/l</td>
</tr>
<tr>
<td></td>
<td>EU EC C.3 Algal Inhibition Test</td>
<td>Chronic NOECr</td>
<td>96 hours Static</td>
<td>Algae</td>
<td>&gt;8.1 mg/l</td>
</tr>
</tbody>
</table>

Persistence and degradability
Section 12. Ecological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Period</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-isocyanatomethyl-3,5,5-trimethylcyclohexylisocyanate</td>
<td>EU Tested according to Directive 92/69/EEC EU</td>
<td>28 days</td>
<td>0 %</td>
</tr>
<tr>
<td>Dicyclohexylmethane-4,4'-diisocyanate</td>
<td>EU</td>
<td>28 days</td>
<td>0 %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-isocyanatomethyl-3,5,5-trimethylcyclohexylisocyanate</td>
<td>-</td>
<td>-</td>
<td>Not readily</td>
</tr>
<tr>
<td>Dicyclohexylmethane-4,4'-diisocyanate</td>
<td>-</td>
<td>-</td>
<td>Not readily</td>
</tr>
</tbody>
</table>

Bioaccumulative potential
Not available.

Mobility in soil
Not available.

Other adverse effects
No known significant effects or critical hazards.

Other ecological information
- BOD5: Not determined.
- COD: Not determined.
- TOC: Not determined.

Section 13. Disposal considerations

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

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

Proper shipping name
- DOT: Not regulated.
- TDG: Not regulated.
- IMDG: Not regulated.
- IATA: Not regulated.
Section 14. Transport information

<table>
<thead>
<tr>
<th>Regulatory information</th>
<th>UN number</th>
<th>Classes</th>
<th>PG*</th>
<th>Label</th>
<th>Additional information</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT Classification</td>
<td>Not regulated.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TDG Classification</td>
<td>Not regulated.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IMDG Classification</td>
<td>Not regulated.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IATA Classification</td>
<td>Not regulated.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

PG*: Packing group

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product

United States Regulations

TSCA 8(b) inventory: All components are listed or exempted.

TSCA 5(a)2 final significant new use rule (SNUR): No ingredients listed.

TSCA 5(e) substance consent order: No ingredients listed.

TSCA 12(b) export notification: No ingredients listed.

SARA 311/312: Immediate (acute) health hazard

Clean Air Act - Ozone Depleting Substances (ODS): This product does not contain nor is it manufactured with ozone depleting substances.

Product name

<table>
<thead>
<tr>
<th>Product name</th>
<th>Concentration %</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-isocyanatomethyl-3,5, 5-trimethylcyclohexylisocyanate</td>
<td>3 - 7</td>
</tr>
<tr>
<td>Dicyclohexylmethane-4,4'-diisocyanate</td>
<td>1 - 3</td>
</tr>
</tbody>
</table>

CERCLA Hazardous substances: No ingredients listed.

State regulations

PENNSYLVANIA - RTK: Dicyclohexylmethane-4,4'-diisocyanate, 3-isocyanatomethyl-3,5, 5-trimethylcyclohexylisocyanate
Section 15. Regulatory information

California Prop 65: This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

Canadian regulations
CEPA DSL: At least one component is not listed.

WHMIS Classes: Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Brazil Regulations
Classification system used: Norma ABNT-NBR 14725-2:2012

International lists:
Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): At least one component is not listed.
Japan inventory: All components are listed or exempted.
Korea inventory: At least one component is not listed.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): At least one component is not listed.
Philippines inventory (PICCS): At least one component is not listed.
Taiwan inventory (CSNN): Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.):

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical hazards</th>
<th>Personal protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.):

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.
Section 16. Other information

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of printing : 7/22/2014.
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Date of previous issue : 7/22/2014.
Version : 2.01

Indicates information that has changed from previously issued version.

Notice to reader

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.
SAFETY DATA SHEET

HARDENER HY 8683 US

Section 1. Identification

GHS product identifier : HARDENER HY 8683 US
Product code : 00070644
Other means of identification : Not available.
Product type : Liquid.
Material uses : Adhesive Hardener
Supplier's details : Huntsman Advanced Materials Americas LLC
P.O. Box 4980
The Woodlands, TX 77387
Non-Emergency phone: (800) 257-5547

e-mail address of person responsible for this SDS : MSDS@huntsman.com

Emergency telephone number (24h/7day) : Chemtrec: (800) 424-9300 or (703) 527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : ACUTE TOXICITY (oral) - Category 4
SKIN SENSITIZATION - Category 1
GERM CELL MUTAGENICITY - Category 2
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION (Fertility) - Category 1B
TOXIC TO REPRODUCTION (Unborn child) - Category 1B
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
AQUATIC HAZARD (ACUTE) - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 1

GHS label elements
Hazard pictograms :

Signal word : Danger
Hazard statements : Harmful if swallowed.
May cause an allergic skin reaction.
May damage fertility or the unborn child.
Suspected of causing genetic defects.
Suspected of causing cancer.
May cause damage to organs.
Causes damage to organs through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.

12/2/2014. 00070644
Section 2. Hazards identification

Precautionary statements: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Avoid release to the environment. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Collect spillage. Get medical attention if you feel unwell. IF exposed or if you feel unwell: Call a POISON CENTER or physician. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. Store locked up. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification: None known.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>diethyl methylene dianiline</td>
<td>30 - 60</td>
<td>19900-65-3</td>
</tr>
<tr>
<td>benzyl butyl phthalate</td>
<td>30 - 60</td>
<td>85-68-7</td>
</tr>
<tr>
<td>TALL OIL</td>
<td>0.1 - 1</td>
<td>8002-26-4</td>
</tr>
<tr>
<td>dibutyl phthalate</td>
<td>0.1 - 1</td>
<td>84-74-2</td>
</tr>
<tr>
<td>Rosin, Colophony</td>
<td>0.1 - 1</td>
<td>8050-09-7</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
# Section 4. First aid measures

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

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Harmful if swallowed.</td>
</tr>
</tbody>
</table>

#### Over-exposure signs/symptoms

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>No specific data.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Adverse symptoms may include the following: reduced fetal weight; increase in fetal deaths; skeletal malformations</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Adverse symptoms may include the following: irritation; redness; reduced fetal weight; increase in fetal deaths; skeletal malformations</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Adverse symptoms may include the following: reduced fetal weight; increase in fetal deaths; skeletal malformations</td>
</tr>
</tbody>
</table>

### Indication of immediate medical attention and special treatment needed, if necessary

<table>
<thead>
<tr>
<th>Notes to physician</th>
<th>No specific treatment. Treat symptomatically. Call medical doctor or poison control center immediately if large quantities have been ingested.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection of first-aiders</td>
<td>No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.</td>
</tr>
</tbody>
</table>

See toxicological information (Section 11)
### Section 5. Fire-fighting measures

<table>
<thead>
<tr>
<th><strong>Flash point</strong></th>
<th>Closed cup: &gt;93°C (&gt;199.4°F) [Estimated]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Extinguishing media</strong></td>
<td></td>
</tr>
<tr>
<td>Suitable extinguishing media</td>
<td>Use an extinguishing agent suitable for the surrounding fire.</td>
</tr>
<tr>
<td>Unsuitable extinguishing media</td>
<td>None known.</td>
</tr>
<tr>
<td><strong>Specific hazards arising from the chemical</strong></td>
<td>In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.</td>
</tr>
<tr>
<td><strong>Hazardous thermal decomposition products</strong></td>
<td>Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides</td>
</tr>
</tbody>
</table>

**Special protective actions for fire-fighters**: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters**: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

### Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel**: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders**: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions**: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

**Methods and materials for containment and cleaning up**: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
Section 7. Handling and storage

Precautions for safe handling

Protective measures:
Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene:
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities:
Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>dibutyl phthalate</td>
<td>ACGIH TLV (United States, 6/2013). TWA: 5 mg/m³ 8 hours. OSHA PEL (United States, 2/2013). TWA: 5 mg/m³ 8 hours.</td>
</tr>
</tbody>
</table>

Appropriate engineering controls:
If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls:
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures:
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Section 8. Exposure controls/personal protection

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

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

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Thermal hazards: Not available.

Section 9. Physical and chemical properties

Appearance

Physical state: Liquid.
Color: Blue.
Odor: Slight
Odor threshold: Not available.
pH: Not available.
Melting point/Freezing point: Not available.
Boiling/condensation point: Not available.
Flash point: Closed cup: >93°C (>199.4°F) [Estimated]
Evaporation rate: Not available.
Flammability (solid, gas): Not available.
Lower and upper explosive (flammable) limits: Not available.
Vapor pressure: Not available.
Vapor density: Not available.
Relative density: 1.035
Solubility in water: Slight
Partition coefficient: n-octanol/water: Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Not available.
Section 10. Stability and reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid: No specific data.

Incompatible materials: No specific data.

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

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Endpoint</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>diethyl methylene dianiline</td>
<td>-</td>
<td>LC50 Inhalation Dugs and mists</td>
<td>Rat - Male, Female</td>
<td>&gt;0.85 mg/l</td>
</tr>
<tr>
<td></td>
<td>OECD 402 Acute Dermal Toxicity</td>
<td>LD50 Dermal</td>
<td>Rat - Male, Female</td>
<td>2080 mg/kg</td>
</tr>
<tr>
<td></td>
<td>OECD 401 Acute Oral Toxicity</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>444 mg/kg</td>
</tr>
<tr>
<td>benzyl butyl phthalate</td>
<td>LC50 Inhalation Gas.</td>
<td>Rat</td>
<td>Rabbit</td>
<td>&gt;6.7 mg/l</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td></td>
<td>Rabbit</td>
<td>4170 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td></td>
<td>Rat</td>
<td>2330 mg/kg</td>
</tr>
<tr>
<td>dibutyl phthalate</td>
<td>LC50 Inhalation Dugs and mists</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;=15.68 mg/l</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td></td>
<td>Rabbit</td>
<td>&gt;20000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>No official guidelines</td>
<td></td>
<td>Rabbit</td>
<td>6279 mg/kg</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>diethyl methylene dianiline</td>
<td>EPA OPPTS OPPTS 870.2500 Acute Dermal Irritation</td>
<td>Rabbit</td>
<td>Skin - Non-irritant.</td>
</tr>
<tr>
<td></td>
<td>EPA OPPTS EPA OTS 798.4500 Acute Eye Irritation/ Corrosion</td>
<td>Rabbit</td>
<td>Eyes - Non-irritant.</td>
</tr>
<tr>
<td>dibutyl phthalate</td>
<td>OECD 404 Acute Dermal Irritation/Corrosion</td>
<td>Rabbit</td>
<td>Skin - Non-irritant.</td>
</tr>
</tbody>
</table>

Conclusion/Summary

Skin:
Section 11. Toxicological information

diethyl methylene dianiline: Non-irritating to the skin.
benzyl butyl phthalate: No additional information.
TALL OIL: No additional information.
dibutyl phthalate: Non-irritating to the skin.
Rosin, Colophony: No additional information.

Eyes:
diethyl methylene dianiline: Non-irritating to the eyes.
benzyl butyl phthalate: No additional information.
TALL OIL: No additional information.
dibutyl phthalate: Non-irritating to the eyes.
Rosin, Colophony: No additional information.

Respiratory:
diethyl methylene dianiline: No additional information.
benzyl butyl phthalate: No additional information.
TALL OIL: No additional information.
dibutyl phthalate: Non-irritating to the eyes.
Rosin, Colophony: No additional information.

Sensitization

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Route of exposure</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>diethyl methylene dianiline</td>
<td>-</td>
<td>skin</td>
<td>Human</td>
<td>Sensitizing</td>
</tr>
<tr>
<td>TALL OIL</td>
<td>-</td>
<td>skin</td>
<td>Guinea pig</td>
<td>Not sensitizing</td>
</tr>
<tr>
<td>dibutyl phthalate</td>
<td>-</td>
<td>skin</td>
<td>Guinea pig</td>
<td>Not sensitizing</td>
</tr>
</tbody>
</table>

Mutagenicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>dibutyl phthalate</td>
<td></td>
<td>Negative</td>
</tr>
</tbody>
</table>

Conclusion/Summary:
diethyl methylene dianiline: The weight of the scientific evidence indicates that this material is genotoxic.
dibutyl phthalate: Not mutagenic in a standard battery of genetic toxicological tests.

Carcinogenicity

12/2/2014.
Section 11. Toxicological information

### Conclusion/Summary

**dibutyl phthalate**

In accordance with column 2 of Annex VII - X of Regulation (EC) No 1907/2006, the test for this property of the substance does not need to be conducted.

### Carcinogenic class

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
<th>Result/Result type</th>
</tr>
</thead>
<tbody>
<tr>
<td>benzyl butyl phthalate</td>
<td>OECD 451 Carcinogenicity</td>
<td>Rat - Male, Female</td>
<td>9 to 10 mg/kg</td>
<td>103 weeks; 24 hours per day</td>
<td>Positive - Oral - LOAEL</td>
</tr>
<tr>
<td></td>
<td>Studies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Reproductive toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Species</th>
<th>Dose</th>
<th>Maternal toxicity</th>
<th>Fertility</th>
<th>Developmental effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>dibutyl phthalate</td>
<td>No official guidelines</td>
<td>Rat - Male, Female</td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
<td></td>
</tr>
</tbody>
</table>

### Teratogenicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Species</th>
<th>Result/Result type</th>
</tr>
</thead>
<tbody>
<tr>
<td>dibutyl phthalate</td>
<td>No official guidelines</td>
<td>Mouse</td>
<td>Positive - Oral</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rat - Male, Female</td>
<td>Positive - Oral</td>
</tr>
</tbody>
</table>

### Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,3'-diethyl-4,4'-diaminodiphenylmethane</td>
<td>Category 2</td>
<td>Oral</td>
<td>liver</td>
</tr>
</tbody>
</table>

### Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,3'-diethyl-4,4'-diaminodiphenylmethane</td>
<td>Category 1</td>
<td>Oral</td>
<td>liver</td>
</tr>
<tr>
<td></td>
<td>Category 2</td>
<td>Oral</td>
<td>kidneys</td>
</tr>
</tbody>
</table>

### Aspiration hazard

Not available.

**Information on the likely routes of exposure**

- **Eye contact:** No known significant effects or critical hazards.
- **Inhalation:** Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- **Skin contact:** May cause an allergic skin reaction.
- **Ingestion:** Harmful if swallowed.

### Symptoms related to the physical, chemical and toxicological characteristics

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Section 11. Toxicological information

### Potential chronic health effects

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Endpoint</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>diethyl methylene dianiline</td>
<td>OECD 408 Repeated Dose 90-Day Oral Toxicity Study in Rodents</td>
<td>Sub-chronic LOAEL Oral</td>
<td>Rat - Male, Female</td>
<td>7.5 to 8 mg/kg/d</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Sub-chronic NOAEL Dermal</td>
<td>Rat - Male, Female</td>
<td>3 mg/kg/d</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Sub-chronic LOAEL Oral</td>
<td>Rat - Male, Female</td>
<td>8 mg/kg</td>
</tr>
<tr>
<td>dibutyl phthalate</td>
<td>OECD 408 Repeated Dose 90-Day Oral Toxicity Study in Rodents</td>
<td>Sub-chronic NOAEL Oral</td>
<td>Rat - Male, Female</td>
<td>152 mg/kg/d</td>
</tr>
<tr>
<td></td>
<td>OECD 412 Repeated Dose Inhalation Toxicity: 28-day or 14-day Study</td>
<td>Sub-chronic NOEC Inhalation Dusts and mists</td>
<td>Rat - Male, Female</td>
<td>509 mg/m³</td>
</tr>
</tbody>
</table>

### General

Causes damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

### Carcinogenicity

Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

### Mutagenicity

Suspected of causing genetic defects.

### Teratogenicity

May damage the unborn child.
### Section 11. Toxicological information

**Developmental effects**: No known significant effects or critical hazards.

**Fertility effects**: May damage fertility.

#### Numerical measures of toxicity

##### Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>1008 mg/kg</td>
</tr>
<tr>
<td>Dermal</td>
<td>5429.5 mg/kg</td>
</tr>
</tbody>
</table>

**Other information**: Not available.

### Section 12. Ecological information

#### Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Endpoint</th>
<th>Exposure</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>diethyl methylene dianiline</td>
<td>OECD 202 Daphnia sp. Acute Immobilisation Test</td>
<td>Acute</td>
<td>EC50</td>
<td>48 hours Static</td>
<td>Daphnia</td>
</tr>
<tr>
<td></td>
<td>OECD 203 Fish, Acute Toxicity Test</td>
<td>Acute</td>
<td>LC50</td>
<td>96 hours Semi-static</td>
<td>Fish</td>
</tr>
<tr>
<td></td>
<td>OECD 211 Daphnia Magna Reproduction Test</td>
<td>Chronic</td>
<td>NOEC</td>
<td>21 days Semi-static</td>
<td>Daphnia</td>
</tr>
<tr>
<td>benzyl butyl phthalate</td>
<td>-</td>
<td>Acute</td>
<td>EC50</td>
<td>96 hours</td>
<td>Algae</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Acute</td>
<td>EC50</td>
<td>48 hours</td>
<td>Daphnia</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Acute</td>
<td>IC50</td>
<td>72 hours</td>
<td>Algae</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Acute</td>
<td>LC50</td>
<td>96 hours Flow-through</td>
<td>Fish</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Acute</td>
<td>LC50</td>
<td>96 hours Static</td>
<td>Fish</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Acute</td>
<td>LC50</td>
<td>96 hours Static</td>
<td>Fish</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Acute</td>
<td>LC50</td>
<td>96 hours Static</td>
<td>Fish</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Acute</td>
<td>EC50</td>
<td>48 hours</td>
<td>Daphnia</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Acute</td>
<td>EC50</td>
<td>72 hours</td>
<td>Algae</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Acute</td>
<td>LC50</td>
<td>96 hours Flow-through</td>
<td>Daphnia</td>
</tr>
<tr>
<td>TALL OIL</td>
<td>OECD 201 Alga, Growth Inhibition Test</td>
<td>Acute</td>
<td>EC50</td>
<td>48 hours</td>
<td>Daphnia</td>
</tr>
<tr>
<td></td>
<td>OECD 202 Daphnia sp. Acute Immobilisation Test</td>
<td>Acute</td>
<td>EC50</td>
<td>48 hours</td>
<td>Daphnia</td>
</tr>
<tr>
<td></td>
<td>OECD 203 Fish, Acute Toxicity Test</td>
<td>Acute</td>
<td>LC50</td>
<td>96 hours Static</td>
<td>Fish</td>
</tr>
<tr>
<td></td>
<td>No official guidelines</td>
<td>Acute</td>
<td>EC50</td>
<td>10 days Static</td>
<td>Algae</td>
</tr>
<tr>
<td></td>
<td>No official guidelines</td>
<td>Acute</td>
<td>EC50</td>
<td>24 hours Static</td>
<td>Bacteria</td>
</tr>
<tr>
<td></td>
<td>EPA OPPTS</td>
<td>Acute</td>
<td>EC50</td>
<td>48 hours Static</td>
<td>Daphnia</td>
</tr>
<tr>
<td></td>
<td>EPA OPPTS</td>
<td>Acute</td>
<td>LC50</td>
<td>96 hours Static</td>
<td>Daphnia</td>
</tr>
<tr>
<td></td>
<td>OECD 203 Fish,</td>
<td>Acute</td>
<td>LC50</td>
<td>96 hours</td>
<td>Fish</td>
</tr>
</tbody>
</table>

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### Section 12. Ecological information

<table>
<thead>
<tr>
<th>Acute Toxicity Test</th>
<th>Chronic</th>
<th>Dose</th>
<th>Chronic</th>
<th>Dose</th>
<th>Algae</th>
<th>Fish</th>
</tr>
</thead>
<tbody>
<tr>
<td>No official guidelines</td>
<td>NOEC</td>
<td>Static 10 days</td>
<td>NOEC</td>
<td>Chronic</td>
<td>NOECr</td>
<td></td>
</tr>
<tr>
<td>DIN DIN 38412 Part 27</td>
<td>NOEC</td>
<td>Static 30 minutes</td>
<td>NOEC</td>
<td>Static</td>
<td>NOECr</td>
<td></td>
</tr>
<tr>
<td>No official guidelines</td>
<td>NOEC</td>
<td>10 days</td>
<td>NOEC</td>
<td>99 days</td>
<td>0.39 mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;=10 mg/l</td>
<td></td>
<td></td>
<td>0.1 mg/l</td>
<td></td>
</tr>
</tbody>
</table>

#### Conclusion/Summary: BIS(2-ETHYLHEXYL) ADIPATE
The toxicity of the substance is above the water solubility limit.

### Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Period</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>benzyl butyl phthalate</td>
<td>OECD 301F Ready Biodegradability - Manometric Respirometry Test</td>
<td>28 days</td>
<td>&gt;60 %</td>
</tr>
<tr>
<td>TALL OIL</td>
<td>OECD 301D Ready Biodegradability - Closed Bottle Test</td>
<td>28 days</td>
<td>73 %</td>
</tr>
<tr>
<td></td>
<td>EPA OPPTS</td>
<td>28 days</td>
<td>60 %</td>
</tr>
<tr>
<td></td>
<td>EU EC C.4-C Biodegradation: Determination of the &quot;Ready&quot; Biodegradability: Carbon Dioxide Evolution Test</td>
<td>21 days</td>
<td>&gt;97 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td>28 days</td>
<td>81 %</td>
</tr>
</tbody>
</table>

#### Conclusion/Summary: dibutyl phthalate
Readily biodegradable

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>benzyl butyl phthalate</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
<tr>
<td>TALL OIL</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
<tr>
<td>dibutyl phthalate</td>
<td>Fresh water 2.7 days</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

### Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogPow</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>benzyl butyl phthalate</td>
<td>4.91</td>
<td>12</td>
<td>low</td>
</tr>
<tr>
<td>dibutyl phthalate</td>
<td>4.46</td>
<td>&lt;1</td>
<td>low</td>
</tr>
</tbody>
</table>

### Mobility in soil
Not available.

### Other adverse effects
No known significant effects or critical hazards.

### Other ecological information

- **BOD5**: Not determined.
- **COD**: Not determined.
- **TOC**: Not determined.
Section 13. Disposal considerations

Disposal methods: The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

Proper shipping name

DOT: Environmentally hazardous substance, liquid, n.o.s. (Diethyl methylene dianiline, Butyl benzyl phthalate). Marine pollutant

TDG: Environmentally hazardous substance, liquid, n.o.s. (Diethyl methylene dianiline, Butyl benzyl phthalate). Marine pollutant

IMDG: Environmentally hazardous substance, liquid, n.o.s. (Diethyl methylene dianiline, Butyl benzyl phthalate). Marine pollutant

IATA: Environmentally hazardous substance, liquid, n.o.s. (Diethyl methylene dianiline, Butyl benzyl phthalate)

<table>
<thead>
<tr>
<th>Regulatory information</th>
<th>UN number</th>
<th>Classes</th>
<th>PG*</th>
<th>Label</th>
<th>Additional information</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT Classification</td>
<td>UN3082</td>
<td>9</td>
<td>III</td>
<td><img src="image" alt="Label" /></td>
<td>Marine pollutants are only regulated for bulk and vessel shipments, per 49CFR171.4 (c) Exceptions. Except when all or part of the transportation is by vessel, the requirements of this subchapter specific to marine pollutants do not apply to non-bulk packagings transported by motor vehicle, rail car or aircraft.</td>
</tr>
</tbody>
</table>

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## Section 14. Transport information

<table>
<thead>
<tr>
<th>Classification</th>
<th>UN</th>
<th>Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDG Classification</td>
<td>3082</td>
<td>9 III</td>
<td>The product is not regulated as a dangerous good when transported by road or rail.</td>
</tr>
<tr>
<td>IMDG Classification</td>
<td>3082</td>
<td>9 III</td>
<td>The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.</td>
</tr>
<tr>
<td>IATA Classification</td>
<td>3082</td>
<td>9 III</td>
<td>The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.</td>
</tr>
</tbody>
</table>

**Emergency schedules (EmS)**
- F-A S-F

**Passenger and Cargo Aircraft**
- Quantity limitation: 450 L
- Packaging instructions: 964

**Cargo Aircraft Only**
- Quantity limitation: 450 L
- Packaging instructions: 964

PG*: Packing group

## Section 15. Regulatory information

**Safety, health and environmental regulations specific for the product**

**United States Regulations**
- **TSCA 8(b) inventory**: All components are listed or exempted.
- **TSCA 5(a)2 final significant new use rule (SNUR)**: No ingredients listed.
- **TSCA 5(e) substance consent order**: No ingredients listed.
- **TSCA 12(b) export notification**: No ingredients listed.
- **SARA 311/312**: Immediate (acute) health hazard
- **Delayed (chronic) health hazard**
Section 15. Regulatory information

Clean Air Act - Ozone Depleting Substances (ODS)

: This product does not contain nor is it manufactured with ozone depleting substances.

SARA 313

: No ingredients listed.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CERCLA Hazardous Substance</th>
<th>CERCLA Reportable Quantity (Lbs)</th>
<th>Product Reportable Quantity (Lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>benzyl butyl phthalate</td>
<td>30.3414</td>
<td>Listed</td>
<td>100</td>
<td>330</td>
</tr>
</tbody>
</table>

CERCLA Hazardous substances

State regulations

PENNSYLVANIA - RTK

: benzyl butyl phthalate, bis(2-ethylhexyl) adipate

California Prop 65

: WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Cancer</th>
<th>Reproductive</th>
</tr>
</thead>
<tbody>
<tr>
<td>benzyl butyl phthalate</td>
<td>No.</td>
<td>Yes.</td>
</tr>
<tr>
<td>dibutyl phthalate</td>
<td>No.</td>
<td>Yes.</td>
</tr>
</tbody>
</table>

Canadian regulations

CEPA DSL

: All components are listed or exempted.

WHMIS Classes

: Class D-2A: Material causing other toxic effects (Very toxic).
  Class D-2B: Material causing other toxic effects (Toxic).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Brazil Regulations

Classification system used


International lists

: Australia inventory (AICS): All components are listed or exempted.
  China inventory (IECSC): All components are listed or exempted.
  Japan inventory: At least one component is not listed.
  Korea inventory: At least one component is not listed.
  Malaysia Inventory (EHS Register): Not determined.
  New Zealand Inventory of Chemicals (NZIoC): At least one component is not listed.
  Philippines inventory (PICCS): All components are listed or exempted.
  Taiwan inventory (CSNN): Not determined.
Section 16. Other information

Hazardous Material : HARDENER HY 8683 US
Information System (U.S.A.)

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.)

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Date of issue : 12/2/2014.
Date of previous issue : No previous validation.
Version : 1

Indicates information that has changed from previously issued version.

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THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent

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Section 16. Other information

upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be
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