**SECTION 1 IDENTIFICATION**

<table>
<thead>
<tr>
<th>Information</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product Name</strong></td>
<td>DerbiFlash Top Coat – Component 1</td>
</tr>
<tr>
<td><strong>Product Identifier</strong></td>
<td>100% Solids Aliphatic Flashing Mastic *BASE</td>
</tr>
<tr>
<td><strong>Recommended Use</strong></td>
<td>Roofing Membrane Flashing/Waterproofing</td>
</tr>
<tr>
<td><strong>Restrictions</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Distributor</strong></td>
<td>DERBIGUM Americas, Inc</td>
</tr>
<tr>
<td><strong>Address</strong></td>
<td>4821 Chelsea Avenue, Kansas City, MO 64130</td>
</tr>
<tr>
<td><strong>Phone Number</strong></td>
<td>(800) 727-9872</td>
</tr>
<tr>
<td><strong>Emergency Number</strong></td>
<td>(800) 424-9300 (CHEMTREC)</td>
</tr>
</tbody>
</table>

**SECTION 2 HAZARDS**

<table>
<thead>
<tr>
<th>GHS Classification</th>
<th>This product is not considered hazardous by the 2017 OSHA Hazard Communication Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hazard Pictographs</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Signal Word</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Hazard Statements</strong></td>
<td>Not required</td>
</tr>
<tr>
<td><strong>Precautionary Statements</strong></td>
<td>P201 - Obtain special instructions before use</td>
</tr>
<tr>
<td></td>
<td>P202 - Do not handle until all safety precautions have been read and understood</td>
</tr>
<tr>
<td></td>
<td>P210 - Keep away from open flames. - NO SMOKING</td>
</tr>
<tr>
<td></td>
<td>P233 - Keep container tightly closed</td>
</tr>
<tr>
<td></td>
<td>P240 - Ground/bond container and receiving equipment</td>
</tr>
<tr>
<td></td>
<td>P241 - Use explosion-proof electrical/ventilating/lighting/... equipment</td>
</tr>
<tr>
<td></td>
<td>P242 - Use only non-sparking tools</td>
</tr>
<tr>
<td></td>
<td>P243 - Take precautionary measures against static discharge</td>
</tr>
<tr>
<td></td>
<td>P260 - Do not breathe fume, gas, vapors</td>
</tr>
<tr>
<td></td>
<td>P261 - Avoid release to the environment</td>
</tr>
<tr>
<td></td>
<td>P264 - Wash hands, forearms and face thoroughly after handling</td>
</tr>
<tr>
<td></td>
<td>P270 - Do not eat, drink or smoke when using this product</td>
</tr>
<tr>
<td></td>
<td>P273 - Avoid release into the environment</td>
</tr>
<tr>
<td></td>
<td>P280 - Wear protective gloves and clothing</td>
</tr>
<tr>
<td><strong>Response</strong></td>
<td>P301+P310 - If swallowed: Immediately call a Poison Center or doctor/physician. Do not induce vomiting. Collect Spillage.</td>
</tr>
<tr>
<td></td>
<td>P303+P361+P353 - If on skin (or hair), Take off immediately all contaminated clothing. Rinse skin with water/shower</td>
</tr>
<tr>
<td></td>
<td>P303+P340 - If inhaled, remove person to fresh air and keep comfortable for breathing</td>
</tr>
<tr>
<td></td>
<td>P305+P351+P338 - If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing</td>
</tr>
<tr>
<td></td>
<td>P308+P313 - If exposed or concerned, get medical advice/attention</td>
</tr>
<tr>
<td></td>
<td>P314 - Get medical advice/attention if you feel unwell</td>
</tr>
<tr>
<td></td>
<td>P370+P378 - In case of fire: Use carbon dioxide (CO2), foam, dry extinguishing powder to extinguish</td>
</tr>
<tr>
<td></td>
<td>P403+P235 - Store in well-ventilated place. Keep cool</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>P405 - Store locked up</td>
</tr>
</tbody>
</table>


**SECTION 2 HAZARDS**

**Disposal**
Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

**Hazards not otherwise Classified**
Prolonged or repeated contact may dry skin and cause irritation. May form flammable explosive vapor-air mixture. This material is a static accumulator. Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapor mixtures can occur. Possibility of organ or organ system damage from prolonged exposure.

**SECTION 3 COMPOSITION**

**Chemical Composition**

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS NUMBER</th>
<th>Percent by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castor Oil</td>
<td>8001-79-4</td>
<td>35 - 45</td>
</tr>
<tr>
<td>Proprietary Component A</td>
<td>Trade Secret</td>
<td>10 - 20</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>40 - 50</td>
</tr>
<tr>
<td>Di-isononylphthalate</td>
<td>28553-12-0</td>
<td>&lt; 5</td>
</tr>
</tbody>
</table>

**Note:** The above components and their percentages are provided for health and safety purposes, ONLY. This document should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

**SECTION 4 FIRST AID MEASURES**

**General**
If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get on skin, clothing, or in eyes.

**First-Aid, Eyes**
Flush eye with copious quantities of water. Get medical attention if irritation persists.

**First-Aid, Skin**
Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.

**First-Aid, Inhalation**
Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that gas or vapor is 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.

**First-Aid, Ingestion**
Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. 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.
## SAFETY DATA SHEET
DERBIFLASH TOP COAT – COMPONENT 1

### SECTION 4 FIRST AID MEASURES

| **Symptoms, Acute and delayed** | If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever. Auditory system effects may include temporary hearing loss and/or ringing in the ears. Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing. Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/ cracked appearance. Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters. |
| **Notes to Physician** | If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position. |
| **Specific Treatments** | Treat symptomatically and supportively. |
| **Protection of First-Aiders** | No action shall be taken involving any personal risk or without suitable training. If it is suspected that gas or vapor is 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. |

### SECTION 5 FIRE FIGHTING MEASURES

| **Fire Hazard** | Flammable |
| **Flash Point** | Not Available |
| **Extinguishing Media** | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| **Firefighting instruction** | CAUTION: Use of water spray when fighting fire may be inefficient. |
| **Protection Gear** | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. |

### SECTION 6 ACCIDENTAL RELEASE MEASURES

| **Personal Precautions** | 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
| **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. |
| **For Emergency Responders** | If specialized 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.” |
| **Method and Materials for Containment & Clean Up** | Prevent further leakage or spillage if safe to do so. Cover liquid spill with sand, earth or other non-combustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Pick up and transfer to properly labeled containers. Soak up with inert absorbent material. |
**SECTION 7 HANDLING AND STORAGE**

**Handling**
Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

**Storage**
Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

**SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**Eye**
Wear safety glasses with side shields (or goggles) and a face shield.

**Skin**
Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent). The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Rubber, nitrile or neoprene to prevent skin contact. Wear chemical resistant gloves such as polyvinyl alcohol. If splashing is likely, wear impervious clothing and boots to prevent repeated or prolonged skin contact. Contact your supplier of PPE for additional instruction on proper use. Additionally, Viton and Safety 4H (Canada) to prevent skin contact.

**Respiratory**
Avoid inhalation of gases, vapors, mists or dusts. Use a properly fitted, air-purifying or supplied-air 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. If an air purifying respirator is appropriate, use one equipped with cartridges rated for organic vapors.

**Ventilation**
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. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Hygienic Practices**
Wash hands before eating. Remove contaminated clothing and wash before re-use. Use only in a well ventilated area. Follow all SDS/label precautions even after container is emptied because they may retain product residues. Avoid prolonged or repeated contact with skin. Avoid breathing vapors from heated material. Avoid contact with eyes, skin, and clothing.

**Occupational Exposure Limits**

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS NUMBER</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>NIOSH REL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>10 mg/m$^3$ TWA</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
</tbody>
</table>

mppcf = Millions of particles per cubic foot of air

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State**
Liquid

**Appearance**
White

**Odor**
Like vegetable oil

**Odor Threshold**
No data available

**Specific Gravity**
1.0 - 1.5 (AVG)

**pH**
No data available
SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity</td>
<td>High Viscosity Liquid</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash Point</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>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Heavier than air</td>
</tr>
<tr>
<td>Density (lb/gal)</td>
<td>11 - 12 (AVG)</td>
</tr>
<tr>
<td>Percent Volatile by Weight</td>
<td>0</td>
</tr>
<tr>
<td>Percent Solids by Volume</td>
<td>100</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Insoluble</td>
</tr>
<tr>
<td>VOC (lb/gal)</td>
<td>0 (AVG)</td>
</tr>
</tbody>
</table>

SECTION 10 STABILITY AND REACTIVITY

Stability: This product is stable under normal storage conditions.

Reactivity: No information.

Conditions to Avoid: Heat, sparks and open flames.

Incompatibility: Strong oxidizing agents.

Hazardous Decomposition: Hazardous decomposition products are not expected to form during normal storage. Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulfur oxides and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

SECTION 11 TOXICOLOGICAL INFORMATION

Effect of overexposure Inhalation: Harmful if inhaled. Headaches, dizziness, nausea, decreased blood pressure, changes in heart rate and cyanosis may result from over-exposure to vapor or skin exposure. Prolonged inhalation may be harmful.

Effect of overexposure Skin Contact: Causes skin irritation. Allergic reactions are possible. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

Effect of overexposure Eye Contact: Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes.

Effect of overexposure Ingestion: This material may be harmful or fatal if swallowed. Irritating to mouth, throat and stomach.

Primary Route(s) of Entry: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

STOT Single Exposure: Target organ; Central nervous system, respiratory system, may cause drowsiness or dizziness, narcotic effect

STOT Repeated Exposure: Target organ; liver, kidney, central nervous system and ears
SECTION 11 TOXICOLOGICAL INFORMATION

Carcinogenicity
None listed

Acute Toxicity Values

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS NUMBER</th>
<th>ORAL LD50 (mg/kg)</th>
<th>DERMAL LD50 (mg/kg)</th>
<th>VAPOR LC50 (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>5,000 (rat)</td>
<td>N/A</td>
<td>6.82, 4 Hours (rat)</td>
</tr>
</tbody>
</table>

SECTION 12 ECOLOGICAL INFORMATION

Eco toxicity
This product may cause adverse environmental effects if used improperly or release to the environment through a spill. Employ best management practices to prevent this material from entering storm sewer systems, waterways or otherwise impacting plant and animal species.

Environmental Transport
No Data

Environment Degradation
No Data

Soil Absorption/Mobility
No Data

SECTION 13 DISPOSAL CONSIDERATIONS

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. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14 TRANSPORT INFORMATION

Environments Hazards
No Information

DOT Shipping Name
Paint

Transport Hazard Class
III

Packing Group
III

UN Number
UN-1263

Additional Information
DOT: Packages sizes shipped in quantities less than the product reportable quantity are not subject to the RQ transportation requirements.

SECTION 15 REGULATORY INFORMATION

TSCA Inventory
All components are either listed on the US TSCA Inventory, or are not regulated under TSCA

DSL Inventory
This item is listed on the Canadian DSL

Sara 313
None present

Sara 311/312 Categories
Fire Hazard, Acute Health Hazard, Chronic Health Hazard
CERCLA
None present

CA Proposition 65
This product can expose you to chemicals including Titanium Dioxide (CAS #13463-67-7) and Di-isononylphthalate (CAS #28553-12-0) which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Right to Know States

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS NUMBER</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
<th>RI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caster Oil</td>
<td>8001-79-4</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Di-isononylphthalate</td>
<td>28553-12-0</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

SECTION 16 OTHER INFORMATION

This material has been defined as a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>HEALTH</th>
<th>FIRE</th>
<th>REACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA Rating</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Reason for revision: Solvent Change & updated hazard information

The information and recommendations contained herein are to the best of DERBIGUM’s knowledge and belief, accurate and reliable as of the date issued. DERBIGUM does not warrant or guarantee their accuracy or reliability, and DERBIGUM shall not be liable for any loss or damage arising out of the use thereof.

The information and recommendations are offered for the users consideration and examination, and it is the user’s responsibility to satisfy itself that they are suitable and complete for its particular use. It is also the users responsibility to make certain that it is relying upon the most recent, updated, information and recommendations available from DERBIGUM.

The Environmental Information included, as well as the Hazardous Material Identification System (HMIS) and National Fire Protection Association (NFPA) ratings, have been included by DERBIGUM in order to provide additional health and hazard classification information. The ratings recommended are based upon the criteria supplied by the developers of these rating systems, together with DERBIGUM’s interpretation of the available data.
SECTION 1 IDENTIFICATION

Product Name: DerbiFlash Top Coat – Component 2
Product Identifier: 100% Solids Polyurethane Flashing Mastic *Catalyst
Recommended Use: Roofing Membrane Flashing/Waterproofing
Restrictions: None
Distributor: DERBIGUM Americas, Inc
Address: 4821 Chelsea Avenue
Kansas City, MO 64130
Phone Number: (800) 727-9872
Emergency Number: (800) 424-9300 (CHEMTREC)

SECTION 2 HAZARDS

GHS Classification
- Acute Toxicity - Inhalation - Category 4
- Skin Sensitizer – Category 1
- Respiratory Sensitizer – Category 1
- STOT - Single Exposure - Category 3

Hazard Pictographs

Signal Word: Danger

Hazard Statements
- H317 - May cause allergic skin reaction
- H334 - May cause allergic or asthmatic symptoms or breathing difficulties if inhaled
- H335 - May cause respiratory irritation
- H372 - Causes damage to organs through prolonged or repeated exposure

Precautionary Statements
- P201 - Obtain special instructions before use
- P202 - Do not handle until all safety precautions have been read and understood
- P210 - Keep away from open flames. - NO SMOKING
- P233 - Keep container tightly closed
- P240 - Ground/bond container and receiving equipment
- P241 - Use explosion-proof electrical/ventilating/lighting/... equipment
- P242 - Use only non-sparking tools
- P243 - Take precautionary measures against static discharge
- P260 - Do not breathe fume, gas, vapors
- P261 - Avoid release to the environment
- P264 - Wash hands, forearms and face thoroughly after handling
- P270 - Do not eat, drink or smoke when using this product
- P273 - Avoid release into the environment
- P280 - Wear protective gloves and clothing
**SECTION 2 HAZARDS**

**Response**

P301+P310 - If swallowed: Immediately call a Poison Center or doctor/physician. Do not induce vomiting. Collect Spillage.

P303+P361+P353 - If on skin (or hair), Take off immediately all contaminated clothing. Rinse skin with water/shower

P303+P340 - If inhaled, remove person to fresh air and keep comfortable for breathing

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

P314 - Get medical advice/attention if you feel unwell

P370+P378 - In case of fire: Use carbon dioxide (CO2), foam, dry extinguishing powder to extinguish

P403+P235 - If exposed or concerned, get medical advice/attention

P405 - Store locked up

**Storage**

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste

**Hazards not otherwise Classified**

Prolonged or repeated contact may dry skin and cause irritation. May form flammable explosive vapor-air mixture. This material is a static accumulator. Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapor mixtures can occur. Possibility of organ or organ system damage from prolonged exposure.

**SECTION 3 COMPOSITION**

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS NUMBER</th>
<th>PERCENT BY WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethylene Diisocyanate Oligomers</td>
<td>28182-81-2</td>
<td>90 - 100</td>
</tr>
<tr>
<td>Hexamethylene Diisocyanate</td>
<td>822-06-0</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

*Note:* The above components and their percentages are provided for health and safety purposes, ONLY. This document should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

**SECTION 4 FIRST AID MEASURES**

**General**

If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get on skin, clothing, or in eyes.

**First-Aid, Eyes**

Flush eye with copious quantities of water. Get medical attention if irritation persists.

**First-Aid, Skin**

Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.

**First-Aid, Inhalation**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that gas or vapor is 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.
**SECTION 4 FIRST AID MEASURES**

**First-Aid, Ingestion**
Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. 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.

**Self Protection**
Use personal protective equipment as required

**Symptoms, Acute and delayed**
If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever. Auditory system effects may include temporary hearing loss and/or ringing in the ears. Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing. Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance. Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters.

**Notes to Physician**
If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position.

**Specific Treatments**
Treat symptomatically and supportively.

**Protection of First-Aiders**
No action shall be taken involving any personal risk or without suitable training. If it is suspected that gas or vapor is 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

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**SECTION 5 FIRE FIGHTING MEASURES**

**Fire Hazard**
Flammable

**Flash Point**
Not Available

**Extinguishing Media**
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Firefighting instruction**
CAUTION: Use of water spray when fighting fire may be inefficient.

**Protection Gear**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

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**SECTION 6 ACCIDENTAL RELEASE MEASURES**

**Personal Precautions**
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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**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.
**SECTION 6 ACCIDENTAL RELEASE MEASURES**

For Emergency Responders: If specialized 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.”

Method and Materials for Containment & Clean Up: Prevent further leakage or spillage if safe to do so. Cover liquid spill with sand, earth or other non-combustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Pick up and transfer to properly labeled containers. Soak up with inert absorbent material.

**SECTION 7 HANDLING AND STORAGE**

Handling: Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

Storage: Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

**SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**Eye**
Wear safety glasses with side shields (or goggles) and a face shield.

**Skin**
Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent). The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Rubber, nitrile or neoprene to prevent skin contact. Wear chemical resistant gloves such as polyvinyl alcohol. If splashing is likely, wear impervious clothing and boots to prevent repeated or prolonged skin contact. Contact your supplier of PPE for additional instruction on proper use. Additionally, Viton and Safety 4H (Canada) to prevent skin contact.

**Respiratory**
Avoid inhalation of gases, vapors, mists or dusts. Use a properly fitted, air-purifying or supplied-air 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. If an air purifying respirator is appropriate, use one equipped with cartridges rated for organic vapors.

**Ventilation**
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. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Hygienic Practices**
Wash hands before eating. Remove contaminated clothing and wash before reuse. Use only in a well ventilated area. Follow all SDS/label precautions even after container is emptied because they may retain product residues. Avoid prolonged or repeated contact with skin. Avoid breathing vapors from heated material. Avoid contact with eyes, skin, and clothing.

**Occupational Exposure Limits**

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS NUMBER</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>NIOSH REL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethylene Diisocyanate Oligomers</td>
<td>822-06-0</td>
<td>0.034 mg/m³ TWA</td>
<td>0.034 mg/m³ TWA</td>
<td>0.140 mg/m³ CEIL 0.035 mg/m³ TWA</td>
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</table>
## SECTION 9 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>Color</td>
<td>Clear</td>
</tr>
<tr>
<td>Odor</td>
<td>Misc</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.1 (AVG)</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
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<tr>
<td>Viscosity</td>
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<tr>
<td>Boiling Point</td>
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</tr>
<tr>
<td>Freezing Point</td>
<td>No data available</td>
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<tr>
<td>Flash Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
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</tr>
<tr>
<td>Decomposition Temperature</td>
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<tr>
<td>Flammability (solid, gas)</td>
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<tr>
<td>Evaporation Rate</td>
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<tr>
<td>Vapor Density</td>
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<tr>
<td>Density (lb/gal)</td>
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<tr>
<td>Percent Volatile by Weight</td>
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<tr>
<td>Percent Solids by Volume</td>
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<tr>
<td>Solubility in Water</td>
<td>Reacts</td>
</tr>
<tr>
<td>VOC (lb/gal)</td>
<td>0 (AVG)</td>
</tr>
</tbody>
</table>

## SECTION 10 STABILITY AND REACTIVITY

**Stability**
- This product is stable under normal storage conditions.

**Reactivity**
- Water, alcohols, amines, bases, protic solvents, strong acids

**Conditions to Avoid**
- Heat, sparks and open flames

**Incompatibility**
- Strong oxidizing agents

**Hazardous Decomposition**
- Hazardous decomposition products are not expected to form during normal storage. Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulfur oxides and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

## SECTION 11 TOXICOLOGICAL INFORMATION

**Effect of overexposure Inhalation**
- Harmful if inhaled. Headaches, dizziness, nausea, decreased blood pressure, changes in heart rate and cyanosis may result from over-exposure to vapor or skin exposure. Prolonged inhalation may be harmful.

**Effect of overexposure Skin Contact**
- Causes skin irritation. Allergic reactions are possible. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

**Effect of overexposure Eye Contact**
- Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes.
SECTION 11 TOXICOLOGICAL INFORMATION

Effect of overexposure
- This material may be harmful or fatal if swallowed. Irritating to mouth, throat and stomach.

Ingestion
- Primary Route(s) of Entry: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact
- STOT Single Exposure: No Additional Information
- STOT Repeated Exposure: Liver, kidney, central nervous system
- Carcinogenicity: None listed

Acute Toxicity Values

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS NUMBER</th>
<th>ORAL LD50 (mg/kg)</th>
<th>DERMAL LD50 (mg/kg)</th>
<th>VAPOR LC50 (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethylene Disocyanate Oligomers</td>
<td>822-06-0</td>
<td>2,500 (rat)</td>
<td>2,000 (rabbit)</td>
<td>0.390, 4 hours (rat)</td>
</tr>
</tbody>
</table>

SECTION 12 ECOLOGICAL INFORMATION

Eco toxicity
- This product may cause adverse environmental effects if used improperly or release to the environment through a spill. Employ best management practices to prevent this material from entering storm sewer systems, waterways or otherwise impacting plant and animal species.

Environmental Transport
- No Data

Environment Degradation
- No Data

Soil Absorption/Mobility
- No Data

SECTION 13 DISPOSAL CONSIDERATIONS

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. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14 TRANSPORT INFORMATION

Environments Hazards
- No Information

DOT Shipping Name
- Not regulated

Transport Hazard Class
- Not regulated

Packing Group
- Not regulated

UN Number
- Not regulated

Additional Information
- DOT: Packages sizes shipped in quantities less than the product reportable quantity are not subject to the RQ transportation requirements.
 SECTION 15 REGULATORY INFORMATION

TSCA Inventory
All components are either listed on the US TSCA Inventory, or are not regulated under TSCA

DSL Inventory
This item is listed on the Canadian DSL

Sara 313
Hexamethylene Diisocyanate

Sara 311/312 Categories
Fire Hazard, Acute Health Hazard, Chronic Health Hazard

CERCLA
Diphenylmethane Diisocyanate

CA Proposition 65
This product may contain chemicals known to the state of California to cause cancer, birth defects, and/or other reproductive harm.

Right to Know States

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS NUMBER</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
<th>RI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethylene Diisocyanate Oligomers</td>
<td>28182-81-2</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Hexamethylene Diisocyanate</td>
<td>822-06-0</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

 SECTION 16 OTHER INFORMATION

This material has been defined as a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>HEALTH</th>
<th>FIRE</th>
<th>REACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA Rating</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

Reason for revision: Solvent Change & updated hazard information

The information and recommendations contained herein are to the best of DERBIGUM’s knowledge and belief, accurate and reliable as of the date issued. DERBIGUM does not warrant or guarantee their accuracy or reliability, and DERBIGUM shall not be liable for any loss or damage arising out of the use thereof.

The information and recommendations are offered for the users consideration and examination, and it is the user’s responsibility to satisfy itself that they are suitable and complete for its particular use. It is also the users responsibility to make certain that it is relying upon the most recent, updated, information and recommendations available from DERBIGUM.

The Environmental Information included, as well as the Hazardous Material Identification System (HMIS) and National Fire Protection Association (NFPA) ratings, have been included by DERBIGUM in order to provide additional health and hazard classification information. The ratings recommended are based upon the criteria supplied by the developers of these rating systems, together with DERBIGUM’s interpretation of the available data.