SAFETY DATA SHEET

1. Identification

Product identifier: DEVCON® DFense Blok™ Surface Wetting Agent Resin

Other means of identification:

SKU#: 5601

Recommended use: Not available.

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer:

Company name: ITW Performance Polymers
Address: 30 Endicott Street, Danvers, MA 01923, United States
Telephone: Customer Service 978-777-1100
Website: www.itwperformancepolymers.com
E-mail: Not available.
Contact person: EHS Department
Emergency phone number:

- Chemtrec 800-424-9300
- International 703-527-3887

2. Hazard(s) identification

Physical hazards: Not classified.
Health hazards:

- Category 2 Skin corrosion/irritation
- Category 2A Serious eye damage/eye irritation
- Category 1 Sensitization, skin
Environmental hazards: Not classified.
OSHA defined hazards: Not classified.

Label elements

Signal word: Warning
Hazard statement: Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.
Precautionary statement:

- Prevention: Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear eye protection/face protection. Wear protective gloves.
- Response: If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
- Storage: Store away from incompatible materials.
- Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC): None known.
Supplemental information: None.

3. Composition/information on ingredients

Mixtures

Material name: DEVCON® DFense Blok™ Surface Wetting Agent Resin
Version #: 01
Issue date: 05-29-2019
5601
**Chemical name** | **Common name and synonyms** | **CAS number** | **%**
--- | --- | --- | ---
Epoxy Resin--reaction Product Of Bisphenol A And Epichlorohydrin (refer To Epichlorohydrin) | | 25068-38-6 | 30 - 60
Poly[phenyl glycidyl ether]-co-formaldehyde] | | 28064-14-4 | 30 - 60
Elastomer Modified Diglycidyl Ether | | 68909-14-8 | 5 - 10
Neopentyl Glycol Diglycidyl Ether | | 17557-23-2 | 5 - 10
Other components below reportable levels | | | 5 - 10

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

**Inhalation**
Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact**
Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

**Eye contact**
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

**Ingestion**
Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

**Most important symptoms/effects, acute and delayed**
Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

**Indication of immediate medical attention and special treatment needed**
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

**Suitable extinguishing media**
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

**Unsuitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**
During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions**
Move containers from fire area if you can do so without risk.

**General fire hazards**
No unusual fire or explosion hazards noted.

### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**
Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

**Environmental precautions**
Avoid discharge into drains, water courses or onto the ground.

### 7. Handling and storage

**Precautions for safe handling**
Avoid breathing mist/vapors. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

### 8. Exposure controls/personal protection

#### Occupational exposure limits
- This mixture has no ingredients that have PEL, TLV, or other recommended exposure limit.

#### Biological limit values
- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

#### Appropriate engineering controls
- No biological exposure limits noted for the ingredient(s).

#### Individual protection measures, such as personal protective equipment

##### Eye/face protection
- Face shield is recommended. Wear safety glasses with side shields (or goggles).

##### Skin protection
- Wear appropriate chemical resistant gloves.

##### Hand protection
- Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

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

##### Thermal hazards
- Wear appropriate thermal protective clothing, when necessary.

#### General hygiene considerations
- Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

### 9. Physical and chemical properties

#### Appearance
- Viscous. Liquid.

#### Physical state
- Liquid.

#### Form
- Viscous. Liquid.

#### Color
- Not available.

#### Odor
- Mild.

#### Odor threshold
- Not available.

#### pH
- Not available.

#### Melting point/freezing point
- Not available.

#### Initial boiling point and boiling range
- 473 °F (245 °C) estimated

#### Flash point
- > 199.9 °F (> 93.3 °C)

#### Evaporation rate
- Not available.

#### Flammability (solid, gas)
- Not applicable.

#### Upper/lower flammability or explosive limits

##### Flammability limit - lower (%)
- Not available.

##### Flammability limit - upper (%)
- Not available.

##### Explosive limit - lower (%)
- Not available.

##### Explosive limit - upper (%)
- Not available.

#### Vapor pressure
- 0.02 hPa estimated

#### Vapor density
- Not available.

#### Relative density
- Not available.

#### Solubility(ies)

##### Solubility (water)
- Not available.

#### Partition coefficient (n-octanol/water)
- Not available.

#### Auto-ignition temperature
- Not available.

#### Decomposition temperature
- Not available.
Viscosity
Not available.

Other information
- **Density**: 1.18 g/cm³ estimated
- **Explosive properties**: Not explosive.
- **Flammability class**: Combustible III-B estimated
- **Oxidizing properties**: Not oxidizing.
- **Specific gravity**: 1.18 estimated

10. Stability and reactivity

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

Chemical stability
Material is stable under normal conditions.

Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

Conditions to avoid
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials
Strong oxidizing agents.

Hazardous decomposition products
No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure
- **Inhalation**: No adverse effects due to inhalation are expected.
- **Skin contact**: Causes skin irritation. May cause an allergic skin reaction.
- **Eye contact**: Causes serious eye irritation.
- **Ingestion**: Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics
- Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects
- **Acute toxicity**: Not known.
- **Skin corrosion/irritation**: Causes skin irritation.
- **Serious eye damage/eye irritation**: Causes serious eye irritation.

Respiratory or skin sensitization
- **Respiratory sensitization**: Not a respiratory sensitizer.
- **Skin sensitization**: May cause an allergic skin reaction.

Germ cell mutagenicity
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity
Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity
Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens
Not listed.

Reproductive toxicity
This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure
Not classified.

Specific target organ toxicity - repeated exposure
Not classified.

Aspiration hazard
Not an aspiration hazard.

12. Ecological information

Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability
No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential
No data available.

Mobility in soil
No data available.

Other adverse effects
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions
Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations
Dispose in accordance with all applicable regulations.

Hazardous waste code
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging
Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not established.

15. Regulatory information

US federal regulations
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Neopentyl Glycol Diglycidyl Ether (CAS 17557-23-2) 1.0% One-Time Export Notification only.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
Yes

Classified hazard categories
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.
Safe Drinking Water Act (SDWA)
US state regulations
California Proposition 65
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Taiwan Chemical Substance Inventory (TCSI)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A “Yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(s). A “No” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date          05-29-2019
Version #            01
HMIS® ratings        Health: 2  
                      Flammability: 1  
                      Physical hazard: 0
NFPA ratings         Health: 2  
                      Flammability: 1  
                      Instability: 0

Disclaimer
ITW Performance Polymers cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.
<table>
<thead>
<tr>
<th>1. Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product identifier</strong></td>
</tr>
<tr>
<td><strong>Other means of identification</strong></td>
</tr>
<tr>
<td><strong>Recommended use</strong></td>
</tr>
<tr>
<td><strong>Recommended restrictions</strong></td>
</tr>
<tr>
<td><strong>Manufacturer/Importer/Supplier/Distributor information</strong></td>
</tr>
<tr>
<td><strong>Manufacturer</strong></td>
</tr>
<tr>
<td><strong>Company name</strong></td>
</tr>
<tr>
<td><strong>Address</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Telephone</strong></td>
</tr>
<tr>
<td><strong>Website</strong></td>
</tr>
<tr>
<td><strong>E-mail</strong></td>
</tr>
<tr>
<td><strong>Contact person</strong></td>
</tr>
<tr>
<td><strong>Emergency phone number</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Hazard(s) identification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical hazards</strong></td>
</tr>
<tr>
<td><strong>Health hazards</strong></td>
</tr>
<tr>
<td>Acute toxicity, oral</td>
</tr>
<tr>
<td>Acute toxicity, dermal</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
</tr>
<tr>
<td>Sensitization, respiratory</td>
</tr>
<tr>
<td>Sensitization, skin</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
</tr>
<tr>
<td><strong>Environmental hazards</strong></td>
</tr>
<tr>
<td><strong>OSHA defined hazards</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Label elements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Signal word</strong></td>
</tr>
<tr>
<td><strong>Hazard statement</strong></td>
</tr>
<tr>
<td><strong>Precautionary statement</strong></td>
</tr>
<tr>
<td><strong>Prevention</strong></td>
</tr>
<tr>
<td><strong>Response</strong></td>
</tr>
</tbody>
</table>
Storage
Store locked up.

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)
None known.

Supplemental information
None.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-Benzenedimethanamine</td>
<td></td>
<td>1477-55-0</td>
<td>10 - 30</td>
</tr>
<tr>
<td>4-tert-butylphenol</td>
<td></td>
<td>98-54-4</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Diethylenetriamine</td>
<td></td>
<td>111-40-0</td>
<td>5 - 10</td>
</tr>
<tr>
<td>2,2,4(OR 2,4,4)-TRIMETHYLHEXANE-1,6-DI AMINE</td>
<td></td>
<td>25513-64-8</td>
<td>1 - 5</td>
</tr>
<tr>
<td>1-(2-aminoethyl)piperazine</td>
<td></td>
<td>140-31-8</td>
<td>1 - &lt;3</td>
</tr>
<tr>
<td>Triethylolamine</td>
<td></td>
<td>102-71-6</td>
<td>1 - &lt;3</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td></td>
<td>13463-67-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

Other components below reportable levels
30 - 60

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation
If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Skin contact
Remove contaminated clothing immediately and wash skin with soap and water. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately. Chemical burns cause serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Difficulty in breathing.

Most important symptoms/effects, acute and delayed
Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

Indication of immediate medical attention and special treatment needed
IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

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

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions
Move containers from fire area if you can do so without risk.

Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards
No unusual fire or explosion hazards noted.
6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up
This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions
Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Precautions for safe handling
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist/vapors. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities
Store locked up. Store in tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Dioxide (CAS 13463-67-7)</td>
<td>PEL</td>
<td>15 mg/m³</td>
<td>Total dust.</td>
</tr>
</tbody>
</table>

US. OSHA Table Z-3 (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Dioxide (CAS 13463-67-7)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mg/m³</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 mppcf</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mppcf</td>
<td>Respirable fraction.</td>
</tr>
</tbody>
</table>

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-Benzene-dimethanamine (CAS 1477-55-0)</td>
<td>Ceiling</td>
<td>0.1 mg/m³</td>
</tr>
<tr>
<td>Diethylene triamine (CAS 111-40-0)</td>
<td>TWA</td>
<td>1 ppm</td>
</tr>
<tr>
<td>Titanium Dioxide (CAS 13463-67-7)</td>
<td>TWA</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Triethylene diamine (CAS 102-71-6)</td>
<td>TWA</td>
<td>5 mg/m³</td>
</tr>
</tbody>
</table>

US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-Benzene-dimethanamine (CAS 1477-55-0)</td>
<td>Ceiling</td>
<td>0.1 mg/m³</td>
</tr>
</tbody>
</table>
US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylenetriamine (CAS 111-40-0)</td>
<td>TWA</td>
<td>4 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 ppm</td>
</tr>
</tbody>
</table>

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Exposure guidelines**

**US - California OELs: Skin designation**

- 1,3-Benzenedimethanamine (CAS 1477-55-0)
  Can be absorbed through the skin.
- Diethylenetriamine (CAS 111-40-0)
  Can be absorbed through the skin.

**US - Minnesota Haz Subs: Skin designation applies**

- Diethylenetriamine (CAS 111-40-0)
  Skin designation applies.

**US - Tennessee OELs: Skin designation**

- 1,3-Benzenedimethanamine (CAS 1477-55-0)
  Can be absorbed through the skin.

**US ACGIH Threshold Limit Values: Skin designation**

- 1,3-Benzenedimethanamine (CAS 1477-55-0)
  Can be absorbed through the skin.
- Diethylenetriamine (CAS 111-40-0)
  Can be absorbed through the skin.

**US NIOSH Pocket Guide to Chemical Hazards: Skin designation**

- 1,3-Benzenedimethanamine (CAS 1477-55-0)
  Can be absorbed through the skin.
- Diethylenetriamine (CAS 111-40-0)
  Can be absorbed through the skin.

**Appropriate engineering controls**

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. General ventilation normally adequate. Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Chemical respirator with organic vapor cartridge and full facepiece.

**Skin protection**

- **Hand protection**
  Wear appropriate chemical resistant gloves.
- **Other**
  Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection**

Chemical respirator with organic vapor cartridge and full facepiece.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Observe any medical surveillance requirements. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

**9. Physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Amber</td>
</tr>
<tr>
<td>Odor</td>
<td>Ammoniacal. fishy</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>-38.2 °F (-39 °C) estimated</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>404.6 °F (207 °C) estimated</td>
</tr>
<tr>
<td>Flash point</td>
<td>212.0 °F (100.0 °C) estimated</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Flammability limit - lower (%) Not available</td>
</tr>
</tbody>
</table>
Flammability limit - upper (%) Not available.
Explosive limit - lower (%) Not available.
Explosive limit - upper (%) Not available.
Vapor pressure 0.15 hPa estimated
Vapor density Not available.
Relative density Not available.
Solubility(ies) Solubility (water) Not available.
Partition coefficient (n-octanol/water) Not available.
Auto-ignition temperature 750.02 °F (398.9 °C) estimated
Decomposition temperature Not available.
Viscosity Not available.
Other information Density 1.01 g/cm³ estimated
Explosive properties Not explosive.
Flammability class Combustible IIB estimated
Oxidizing properties Not oxidizing.
Specific gravity 1.01 estimated
VOC 0.3 % estimated

10. Stability and reactivity
Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability Material is stable under normal conditions.
Possibility of hazardous reactions Hazardous polymerization does not occur.
Conditions to avoid Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials Strong acids. Alkaline metals.
Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information
Information on likely routes of exposure
Inhalation May cause irritation to the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Prolonged inhalation may be harmful.
Skin contact Causes severe skin burns. Harmful in contact with skin. May cause an allergic skin reaction. Prolonged or repeated exposure may cause liver and kidney damage. These effects have not been observed in humans.
Eye contact Causes serious eye damage.
Ingestion Causes digestive tract burns. Harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Difficulty in breathing.
Information on toxicological effects
Acute toxicity Harmful in contact with skin. Harmful if swallowed.
Components Species Test Results
Triethylolamine (CAS 102-71-6)
Acute
Dermal
LD50 Rabbit > 20000 mg/kg
Test Results Components Species

Oral
LD50 Rat 8 g/kg

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

Respiratory or skin sensitization
  Respiratory sensitization May cause allergy or asthma symptoms or breathing difficulties if inhaled.
  Skin sensitization May cause an allergic skin reaction.
Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity
Titanium Dioxide (CAS 13463-67-7) 2B Possibly carcinogenic to humans.
Triethylolamine (CAS 102-71-6) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens
Not listed.

Reproductive toxicity Suspected of damaging fertility or the unborn child.
Specific target organ toxicity - single exposure Not classified.
Specific target organ toxicity - repeated exposure Not classified.
Aspiration hazard Not an aspiration hazard.
Chronic effects Prolonged inhalation may be harmful. May be harmful if absorbed through skin.
Prolonged or repeated exposure may cause liver and kidney damage. These effects have not been observed in humans.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability No data is available on the degradability of any ingredients in the mixture.
Bioaccumulative potential Partition coefficient n-octanol / water (log Kow)
  Triethylolamine -1
Mobility in soil No data available.
Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations Dispose in accordance with all applicable regulations.
Hazardous waste code D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
# 14. Transport information

**DOT**

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN3267</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Corrosive liquid, basic, organic, n.o.s. (1,3-Benzenedimethanamine, 4-tert-butylphenol), Limited Quantity</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td></td>
</tr>
</tbody>
</table>
  Class | 8 |
  Subsidiary risk | - |
  Label(s) | 8 |
  Packing group | III |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Special provisions | IB3, T7, TP1, TP28 |
| Packaging exceptions | 154 |
| Packaging non bulk | 203 |
| Packaging bulk | 241 |

**IATA**

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN3267</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Corrosive liquid, basic, organic, n.o.s. (1,3-Benzenedimethanamine, 4-tert-butylphenol), Limited Quantity</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td></td>
</tr>
</tbody>
</table>
  Class | 8 |
  Subsidiary risk | - |
  Packing group | III |
  Environmental hazards | No. |
  ERG Code | 8L |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |

**IMDG**

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN3267</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (1,3-Benzenedimethanamine, 4-tert-butylphenol), Limited Quantity</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td></td>
</tr>
</tbody>
</table>
  Class | 8 |
  Subsidiary risk | - |
  Packing group | III |
  Environmental hazards | No. |
  Marine pollutant | No. |
  EmS | F-A, S-B |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not established. |
IATA

General information
IMDG Regulated Marine Pollutant. DOT Regulated Marine Pollutant.

15. Regulatory information

US federal regulations
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
Yes

Classified hazard categories
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization
Reproductive toxicity

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations
California Proposition 65
WARNING: This product can expose you to Titanium Dioxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance
Titanium Dioxide (CAS 13463-67-7) Listed: September 2, 2011
US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))
Titanium Dioxide (CAS 13463-67-7)

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Country(s) or region</td>
<td>Inventory name</td>
<td>On inventory (yes/no)</td>
</tr>
<tr>
<td>------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Taiwan Chemical Substance Inventory (TCSI)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A “Yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(s).
A “No” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

### 16. Other information, including date of preparation or last revision

- **Issue date**: 05-29-2019
- **Version #**: 01

**HMIS® ratings**
- Health: 3*
- Flammability: 1
- Physical hazard: 0

**NFPA ratings**
- Health: 3
- Flammability: 1
- Instability: 0

**Disclaimer**
ITW Performance Polymers cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.