**SAFETY DATA SHEET**

<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>SKU#</strong></td>
</tr>
<tr>
<td><strong>Recommended use</strong></td>
</tr>
<tr>
<td><strong>Recommended restrictions</strong></td>
</tr>
</tbody>
</table>

**Manufacturer/Importer/Supplier/Distributor information**

<table>
<thead>
<tr>
<th><strong>Manufacturer</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Company name</strong></td>
</tr>
<tr>
<td><strong>Address</strong></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>
</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></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Environmental hazards</strong></td>
</tr>
<tr>
<td><strong>OSHA defined hazards</strong></td>
</tr>
</tbody>
</table>

**Label elements**

| **Signal word** | Warning |
| **Hazard statement** | Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. |
| **Precautionary statement** |
| **Prevention** | Avoid breathing dust/fume/gas/mist/vapors/spray. 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. |

**3. Composition/information on ingredients**

**Mixtures**

Material name: DEVCON® Wear Resistant Putty (WR-2) Resin

0106  Version #: 02  Revision date: 05-05-2020  Issue date: 05-29-2019
### Chemical name
- **Aluminium Oxide**
- **Epoxy Resin**
- **Graphite**
- **Other components below reportable levels**

### 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.

#### General information
Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed. 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.

#### Specific methods
Use water spray to cool unopened containers.

#### General fire hazards
Use standard firefighting procedures and consider the hazards of other involved materials. 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
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
Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

#### Conditions for safe storage, including any incompatibilities
Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).
8. Exposure controls/personal protection

Occupational 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>Aluminium Oxide (CAS 1344-28-1)</td>
<td>PEL</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>Graphite (CAS 7782-42-5)</td>
<td>PEL</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>
</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>Aluminium Oxide (CAS 1344-28-1)</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>
<tr>
<td>Graphite (CAS 7782-42-5)</td>
<td>TWA</td>
<td>15 mppcf</td>
<td></td>
</tr>
</tbody>
</table>

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (CAS 1344-28-1)</td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>Graphite (CAS 7782-42-5)</td>
<td>TWA</td>
<td>2 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
</tbody>
</table>

US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite (CAS 7782-42-5)</td>
<td>TWA</td>
<td>2.5 mg/m³</td>
<td>Respirable.</td>
</tr>
</tbody>
</table>

Biological limit values

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

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. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles). Face shield is recommended.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves.

Other

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

Paste.

Physical state

Solid.

Form

Solid. Paste.

Color

Grey.

Odor

Slight.

Odor threshold

Not available.

pH

Not available.
Melting point/freezing point: Not available.
Initial boiling point and boiling range: 608 °F (320 °C) estimated
Flash point: 265.0 °F (129.4 °C) estimated
Evaporation rate: Not available.
Flammability (solid, gas): Not available.
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: Not available.
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: 1.17 g/cm3 estimated
  Explosive properties: Not explosive.
  Oxidizing properties: Not oxidizing.
  Specific gravity: 1.17 estimated
  VOC: 0 g/l

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: 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: Knowledge about health hazard is incomplete.
  Skin contact: Causes skin irritation. May cause an allergic skin reaction.
  Eye contact: Causes serious eye irritation.
  Ingestion: Knowledge about health hazard is incomplete.
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.
Graphite (CAS 7782-42-5)

**Acute**

**Oral**
LD50 Rat > 10000 mg/kg

**Skin corrosion/irritation**
Causes skin irritation.

**Serious eye damage/eye irritation**
Causes serious eye irritation.

**Respiratory or skin sensitization**
- **Respiratory sensitization**
  - Due to partial or complete lack of data the classification is not possible.
- **Skin sensitization**
  - May cause an allergic skin reaction.
- **Germ cell mutagenicity**
  - Due to partial or complete lack of data the classification is not possible.
- **Carcinogenicity**
  - Due to partial or complete lack of data the classification is not possible.
  
  **IARC Monographs. Overall Evaluation of Carcinogenicity**
  Not listed.

Not listed.

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

**Reproductive toxicity**
Due to partial or complete lack of data the classification is not possible.

**Specific target organ toxicity - single exposure**
Due to partial or complete lack of data the classification is not possible.

**Specific target organ toxicity - repeated exposure**
Due to partial or complete lack of data the classification is not possible.

**Aspiration hazard**
Due to partial or complete lack of data the classification is not possible.

**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 applicable.

15. Regulatory information

US federal regulations

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

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration
Aluminium Oxide (CAS 1344-28-1) % 1.0

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance
Aluminium Oxide (CAS 1344-28-1) Listed.

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
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization

SARA 313 (TRI reporting)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>% by wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide</td>
<td>1344-28-1</td>
<td>40 - 70</td>
</tr>
</tbody>
</table>

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
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>No</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>No</td>
</tr>
</tbody>
</table>

Material name: DEVCON® Wear Resistant Putty (WR-2) Resin

0106   Version #: 02   Revision date: 05-05-2020   Issue date: 05-29-2019
<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<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

<table>
<thead>
<tr>
<th>Issue date</th>
<th>05-29-2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision date</td>
<td>05-05-2020</td>
</tr>
<tr>
<td>Version #</td>
<td>02</td>
</tr>
</tbody>
</table>

**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.

**Revision information**

This document has undergone significant changes and should be reviewed in its entirety.
SAFETY DATA SHEET

1. Identification

Product identifier
Putty Hardener

Other means of identification
SKU# 0200C

Recommended use
Not available.

Recommended restrictions
None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer
ITW Performance Polymers
30 Endicott Street
Danvers, MA 01923
United States

Address

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
Acute toxicity, oral Category 4
Acute toxicity, dermal Category 4
Skin corrosion/irritation Category 1
Serious eye damage/eye irritation Category 1
Sensitization, skin Category 1

Environmental hazards
Not classified.

OSHA defined hazards
Not classified.

Label elements

Signal word
Danger

Hazard statement
Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage.

Precautionary statement

Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

Response
If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If skin irritation or rash occurs: Get medical advice/attention.

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>N/A Aliphatic Amines</td>
<td></td>
<td></td>
<td>40 - 60</td>
</tr>
<tr>
<td>Benzyl Alcohol</td>
<td></td>
<td>100-51-6</td>
<td>20 - 40</td>
</tr>
<tr>
<td>TRIETHYLENETETRAMINE</td>
<td>TETA</td>
<td>112-24-3</td>
<td>20 - 40</td>
</tr>
<tr>
<td>Silicon Dioxide</td>
<td>Silica, amorphous, fumed, cryst-free</td>
<td>112945-52-5</td>
<td>2.5 - 10</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>TITANIUM DIOXIDE</td>
<td>13463-67-7</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>Other components below reportable levels</td>
<td></td>
<td></td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. First-aid measures

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

**Inhalation**
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.

**Skin 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: 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.

**Eye contact**
Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

**Ingestion**
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.

**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**
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**

**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**
Use water spray to cool unopened containers.

**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**
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**
Avoid discharge into drains, water courses or onto the ground.
### 7. Handling and storage

**Precautions for safe handling**

Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid breathing dust/fume/gas/mist/vapors/spray. When using, do not eat, drink or smoke. 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 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.

<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>

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon Dioxide (CAS 112945-52-5)</td>
<td>TWA</td>
<td>0.8 mg/m3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>20 mppcf</td>
<td></td>
</tr>
<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>

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Dioxide (CAS 13463-67-7)</td>
<td>TWA</td>
<td>10 mg/m3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon Dioxide (CAS 112945-52-5)</td>
<td>TWA</td>
<td>6 mg/m3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl Alcohol (CAS 100-51-6)</td>
<td>TWA</td>
<td>44.2 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 ppm</td>
</tr>
<tr>
<td>TRIETHYLENETETRAMINE (CAS 112-24-3)</td>
<td>TWA</td>
<td>6 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

Occupational Exposure Limits are not relevant to the current physical form of the product.

**US WEEL Guides: Skin designation**

TRIETHYLENETETRAMINE (CAS 112-24-3) 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. Eye wash facilities and emergency shower must be available when handling this product.

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

**Eye/face protection**

Wear safety glasses with side shields (or goggles) and a face shield. Face shield is recommended.
Skin protection
  Hand protection
    Wear appropriate chemical resistant gloves.

Other
    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
    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

Appearance
  Paste.

Physical state
  Solid.

Form
  Paste.

Color
  White

Odor
  Ammoniacal.

Odor threshold
  Not available.

pH
  Not available.

Melting point/freezing point
  4.64 °F (-15.2 °C) estimated

Initial boiling point and boiling range
  420.8 °F (216 °C) estimated

Flash point
  > 199.9 °F (> 93.3 °C)

Evaporation rate
  Not available.

Flammability (solid, gas)
  Not available.

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
  5.73 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
  640 °F (337.78 °C) estimated

Decomposition temperature
  Not available.

Viscosity
  Not available.

Other information
  Density
    1.00 g/cm³ estimated

  Explosive properties
    Not explosive.

  Oxidizing properties
    Not oxidizing.

  Specific gravity
    1 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
  Avoid temperatures exceeding the flash point. Contact with incompatible materials.
11. Toxicological information

Information on likely routes of exposure

Inhalation  May cause irritation to the respiratory system.
Skin contact  Causes severe skin burns. Harmful in contact with skin. May cause an allergic skin reaction.
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.

Information on toxicological effects

Acute toxicity  Harmful in contact with skin. Harmful if swallowed.

Components  Species  Test Results

Benzyl Alcohol (CAS 100-51-6)

Acute  Dermal  LD50  Rabbit  2000 mg/kg

Inhalation  LC50  Rat  1000 mg/l, 8 Hours

Oral  LD50  Rat  1230 - 3100 mg/kg

Silicon Dioxide (CAS 112945-52-5)

Acute  Oral  LD50  Rat  > 22500 mg/kg

TRIETHYLENETETRAMINE (CAS 112-24-3)

Acute  Dermal  Liquid  LD50  Rat  1465 mg/kg

Oral  Liquid  LD50  Rat  1716 mg/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  Due to partial or complete lack of data the classification is not possible.
Skin sensitization  May cause an allergic skin reaction.
Germ cell mutagenicity  Due to partial or complete lack of data the classification is not possible.
Carcinogenicity  Due to partial or complete lack of data the classification is not possible.

IARC Monographs. Overall Evaluation of Carcinogenicity

Silicon Dioxide (CAS 112945-52-5)  3 Not classifiable as to carcinogenicity to humans.
Titanium Dioxide (CAS 13463-67-7)  2B Possibly carcinogenic 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  Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - single exposure  Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - repeated exposure  Due to partial or complete lack of data the classification is not possible.
Aspiration hazard  Due to partial or complete lack of data the classification is not possible.

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)  Benzyl Alcohol  1.1
  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
  UN number  UN3259
  UN proper shipping name  Amines, solid, corrosive, n.o.s., or Polyamines, solid, corrosive n.o.s. (TRIETHYLENETETRAMINE, Aliphatic Amines), Limited Quantity
  Transport hazard class(es)
    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  IB8, IP3, T1, TP33
  Packaging exceptions  154
  Packaging non bulk  213
  Packaging bulk  240

IATA
  UN number  UN3259
  UN proper shipping name  Amines, solid, corrosive, n.o.s. (TRIETHYLENETETRAMINE, Aliphatic Amines), Limited Quantity
  Transport hazard class(es)
    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.
  Other information  Allowed with restrictions.
**Cargo aircraft only**

Allowed with restrictions.

**IMDG**

- **UN number**: UN3259
- **UN proper shipping name**: AMINES, SOLID, CORROSIVE, N.O.S. or POLYAMINES, SOLID, CORROSIVE, N.O.S. (TRIETHYLENETETRAMINE, Aliphatic Amines), Limited Quantity

**Transport hazard class(es)**

- **Class**: 8
- **Subsidiary risk**: -
- **Packing group**: III

**Environmental hazards**

- **Marine pollutant**: No.

**EmS**

- **F-A, S-B**: Read safety instructions, SDS and emergency procedures before handling.

**Special precautions for user**

- **Not applicable.**

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

**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.

  - Not listed.

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

- **SARA 311/312 Hazardous chemical**
  - Yes
Acute toxicity (any route of exposure)
- 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)**
  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](http://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>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>Yes</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>Yes</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**: 07-03-2019
- **Revision date**: 05-01-2020
- **Version #**: 03
- **HMIS® ratings**
  - Health: 3
  - Flammability: 1
  - Physical hazard: 0
- **NFPA ratings**
  - Health: 3
  - Flammability: 1
  - Instability: 0
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.