SAFETY DATA SHEET

1. Identification

Product identifier: DEVCON® Bronze Putty (BR) Resin

SKU#: 0134

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:

- Skin corrosion/irritation Category 2
- Serious eye damage/eye irritation Category 2A
- Sensitization, skin Category 1

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


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® Bronze Putty (BR) Resin
<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>EPOXY RESIN</td>
<td>7440-50-8</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Epoxy Resin:--reaction Product Of Bisphenol A And Epichlorohydrin (refer To Epichlorohydrin)</td>
<td></td>
<td>25068-38-6</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Zinc</td>
<td></td>
<td>7440-66-6</td>
<td>10 - 30</td>
</tr>
</tbody>
</table>

Other components below reportable levels 5 - 10

### 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
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.

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 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

<table>
<thead>
<tr>
<th>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Components</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper (CAS 7440-50-8)</td>
<td>1 mg/m³</td>
<td>Dust and mist.</td>
</tr>
<tr>
<td></td>
<td>0.1 mg/m³</td>
<td>Fume.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. ACGIH Threshold Limit Values Components</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper (CAS 7440-50-8)</td>
<td>1 mg/m³</td>
<td>Dust and mist.</td>
</tr>
<tr>
<td></td>
<td>0.2 mg/m³</td>
<td>Fume.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. NIOSH: Pocket Guide to Chemical Hazards Components</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper (CAS 7440-50-8)</td>
<td>1 mg/m³</td>
<td>Dust and mist.</td>
</tr>
<tr>
<td></td>
<td>0.1 mg/m³</td>
<td>Fume.</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
Bronze.

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
> 399.9 °F (> 204.4 °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 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 2.60 g/cm³
  Explosive properties Not explosive.
  Oxidizing properties Not oxidizing.
  Specific gravity 2.6

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.

Components Species Test Results

Zinc (CAS 7440-66-6)
  Acute
  Oral LD50 Rat 630 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.

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
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
Copper (CAS 7440-50-8) % 1.0
Zinc (CAS 7440-66-6) % 1.0

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance
Copper (CAS 7440-50-8) Listed.
Zinc (CAS 7440-66-6) 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)
- Copper (CAS 7440-50-8) Listed.
- Zinc (CAS 7440-66-6) 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>Copper</td>
<td>7440-50-8</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Zinc</td>
<td>7440-66-6</td>
<td>10 - 30</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.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))
- Copper (CAS 7440-50-8)
- Zinc (CAS 7440-66-6)

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>
<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><strong>Issue date</strong></th>
<th>05-28-2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revision date</strong></td>
<td>05-04-2020</td>
</tr>
<tr>
<td><strong>Version #</strong></td>
<td>02</td>
</tr>
<tr>
<td><strong>HMIS® ratings</strong></td>
<td></td>
</tr>
</tbody>
</table>
  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.
## 1. Identification

<table>
<thead>
<tr>
<th>Product identifier</th>
<th>Putty Hardener</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other means of identification</td>
<td>0200C</td>
</tr>
<tr>
<td>SKU#</td>
<td>Not available.</td>
</tr>
<tr>
<td>Recommended use</td>
<td>Not available.</td>
</tr>
<tr>
<td>Recommended restrictions</td>
<td>None known.</td>
</tr>
</tbody>
</table>

### 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
- 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

<table>
<thead>
<tr>
<th>Mixtures</th>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aliphatic Amines</td>
<td>N/A</td>
<td>40 - 60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benzyl Alcohol</td>
<td>100-51-6</td>
<td>20 - 40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRIETHYLENETETRAMINE</td>
<td>TETA</td>
<td>20 - 40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silicon Dioxide</td>
<td>Silica, amorphous, fumed, cryst.-free</td>
<td>112945-52-5</td>
<td>2.5 - 10</td>
<td></td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>TITANIUM DIOXIDE</td>
<td>13463-67-7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other components below reportable levels</td>
<td></td>
<td>0.1 - 1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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. 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.

**Ingestion**
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.

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

**Indication of immediate medical attention and special treatment needed**
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.

**General information**
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.

Material name: Putty Hardener

0200C    Version #: 03    Revision date: 05-01-2020    Issue date: 07-03-2019
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>
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<tr>
<td></td>
<td></td>
<td>20 mppcf</td>
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<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>
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<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>
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</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>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
  Wear appropriate chemical resistant gloves.

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

Other
  In case of insufficient ventilation, wear suitable respiratory equipment.

Respiratory protection
  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.
Incompatible materials
Peroxides. Phenols.

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.

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.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl Alcohol (CAS 100-51-6)</td>
<td></td>
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</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>2000 mg/kg</td>
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<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat</td>
<td>1000 mg/l, 8 Hours</td>
</tr>
<tr>
<td>Oral</td>
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<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>1230 - 3100 mg/kg</td>
</tr>
<tr>
<td>Silicon Dioxide (CAS 112945-52-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>&gt; 22500 mg/kg</td>
</tr>
<tr>
<td>TRIETHYLENETETRAMINE (CAS 112-24-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>1465 mg/kg</td>
</tr>
<tr>
<td>Oral</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>1716 mg/kg</td>
</tr>
</tbody>
</table>

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
Passenger and cargo aircraft 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: No.

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

DOT; IMDG

IATA

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.

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
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<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
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<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
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<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
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<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
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<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
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<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
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<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
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<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
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<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
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<td>New Zealand</td>
<td>New Zealand Inventory</td>
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<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
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<tr>
<td>Taiwan</td>
<td>Taiwan Chemical Substance Inventory (TCSI)</td>
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<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>07-03-2019</th>
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<td>Revision date</td>
<td>05-01-2020</td>
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<tr>
<td>Version #</td>
<td>03</td>
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<td>HMIS® ratings</td>
<td>Health: 3</td>
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<td>Flammability: 1</td>
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<td>Physical hazard: 0</td>
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<tr>
<td>NFPA ratings</td>
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<td>Flammability: 1</td>
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<tr>
<td></td>
<td>Instability: 0</td>
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</tbody>
</table>
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.