1. Product and company identification

Product name : OSHA Safety Blue Full
Code : PEUL8729R
Prepared by : HSE Coordinator (HSEcoordinator@Spraylat.com)
In case of emergency : Call CHEMTREC: 1-800-424-9300 (U.S.) / 1-703-527-3887 (International)
Product type : Powder.

2. Hazards identification

Physical state : Solid. [Powder.]
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : Harmful in contact with skin. Moderately irritating to eyes. Slightly irritating to the skin and respiratory system. Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat. Avoid exposure - obtain special instructions before use. Do not breathe dust. Do not get in eyes. Avoid contact with skin and clothing. Contains material that can cause target organ damage. Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects
Inhalation : Slightly irritating to the respiratory system.
Ingestion : No known significant effects or critical hazards.
Skin : Harmful in contact with skin. Slightly irritating to the skin.
Eyes : Moderately irritating to eyes.

Potential chronic health effects
Chronic effects : Contains material that can cause target organ damage.
Carcinogenicity : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.
2. Hazards identification

Target organs: Contains material which causes damage to the following organs: lungs, upper respiratory tract, skin, eye, lens or cornea.

Over-exposure signs/symptoms

Inhalation: Adverse symptoms may include the following: respiratory tract irritation, coughing.

Ingestion: No specific data.

Skin: Adverse symptoms may include the following: irritation, redness.

Eyes: Adverse symptoms may include the following: irritation, watering, redness.

Medical conditions aggravated by over-exposure: Pre-existing skin disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (section 11)

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>barium sulfate</td>
<td>7727-43-7</td>
<td>25 - 50</td>
</tr>
<tr>
<td>Epoxy Hardener</td>
<td>TSPU0004</td>
<td>15 - 20</td>
</tr>
<tr>
<td>titanium dioxide</td>
<td>13463-67-7</td>
<td>5 - 10</td>
</tr>
</tbody>
</table>

There are no ingredients or additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation: Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing or wear gloves.

Notes to physician: No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
## 5. Fire-fighting measures

<table>
<thead>
<tr>
<th>Flammability of the product</th>
<th>Precautions should be taken to prevent the formation of dusts in concentrations above flammable, explosive or occupational exposure limits.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extinguishing media</td>
<td><strong>Suitable</strong> Use an extinguishing agent suitable for the surrounding fire.  <strong>Not suitable</strong> None known.</td>
</tr>
<tr>
<td>Special exposure hazards</td>
<td>Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
<tr>
<td>Hazardous combustion products</td>
<td>Decomposition products may include the following materials: carbon oxides, sulfur oxides, metal oxide/oxides</td>
</tr>
<tr>
<td>Special protective equipment for fire-fighters</td>
<td>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</td>
</tr>
</tbody>
</table>

## 6. Accidental release measures

### Personal precautions
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

### Environmental precautions
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Large spill
Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

### Small spill
Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

## 7. Handling and storage

### Handling
Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe dust. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

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

## 8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Product name</th>
<th>Exposure limits</th>
</tr>
</thead>
</table>
8. Exposure controls/personal protection

**Barium Sulfate**

ACGIH TLV (United States, 1/2006). Notes: The value is for total dust containing no asbestos and < 1% crystalline silica.
- TWA: 10 mg/m³ 8 hour(s).

NIOSH REL (United States, 12/2001).
- TWA: 5 mg/m³ 10 hour(s). Form: Respirable fraction
- TWA: 10 mg/m³ 10 hour(s). Form: Total

OSHA PEL (United States, 11/2006).
- TWA: 5 mg/m³ 8 hour(s). Form: Respirable fraction
- TWA: 15 mg/m³ 8 hour(s). Form: Total dust

- TWA: 5 mg/m³ 8 hour(s). Form: Respirable fraction
- TWA: 10 mg/m³ 8 hour(s). Form: Total dust

**Titanium Dioxide**

ACGIH TLV (United States, 1/2006). Notes: Substance identified by other sources as a suspected or confirmed human carcinogen.

1996 Adoption Substances for which the TLV is higher than the OSHA Permissible Exposure Limit (PEL) and/or the NIOSH Recommended Exposure Limit (REL). See CFR 58(124):36338-33351, June 30, 1993, for revised OSHA PEL. Refers to Appendix A - Carcinogens.
- TWA: 10 mg/m³ 8 hour(s).

OSHA PEL (United States, 11/2006).
- TWA: 15 mg/m³ 8 hour(s). Form: Total dust

- TWA: 10 mg/m³ 8 hour(s). Form: Total dust

Consult local authorities for acceptable exposure limits.

<table>
<thead>
<tr>
<th>Recommended monitoring procedures</th>
<th>Recommended monitoring procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.</td>
<td></td>
</tr>
</tbody>
</table>

| Engineering measures | Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. |

| Hygiene measures | Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. |

**Personal protection**

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

| Hands | Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. |

| Eyes | Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If operating conditions cause high dust concentrations to be produced, use dust goggles. |

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

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid. [Powder.]</td>
</tr>
<tr>
<td>Flash point</td>
<td>Closed cup: &gt;316°C (&gt;600.8°F)</td>
</tr>
<tr>
<td>Color</td>
<td>See product name in Section 1</td>
</tr>
<tr>
<td>Boiling/condensation point</td>
<td>&gt;427°C (800.6°F)</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.63</td>
</tr>
<tr>
<td>VOC</td>
<td>0 (g/l)</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

| Stability                                      | The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur. |
| Conditions to avoid                           | No specific data.      |
| Materials to avoid                            | No specific data.      |
| Hazardous decomposition products              | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| Conditions of reactivity                      | Reactive or incompatible with the following materials: oxidizing materials. |

11. Toxicological information

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>titanium dioxide</td>
<td>LD</td>
<td>Rat</td>
<td>&gt;100 ug/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>TDLo</td>
<td>Rat</td>
<td>5 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>TDLo</td>
<td>Intratracheal</td>
<td>1.6 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>TDLo</td>
<td>Intratracheal</td>
<td>1.25 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>TDLo Oral</td>
<td>Rat</td>
<td>60 g/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Conclusion/Summary: Not available.

Chronic toxicity

Conclusion/Summary: Not available.

Carcinogenicity

Conclusion/Summary: Not available.

Classification

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>EPA</th>
<th>NIOSH</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>barium sulfate</td>
<td>A4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>titanium dioxide</td>
<td>A4</td>
<td>2B</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Mutagenicity

Conclusion/Summary: Not available.

Teratogenicity

Conclusion/Summary: Not available.

Reproductive toxicity

Conclusion/Summary: Not available.

12. Ecological information

Environmental effects

Conclusion/Summary: No known significant effects or critical hazards.

Aquatic ecotoxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
</table>

12. Ecological information

<table>
<thead>
<tr>
<th>Substance</th>
<th>Intoxication</th>
<th>Acute EC50</th>
<th>Daphnia</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>titanium dioxide</td>
<td>Intoxication</td>
<td>&gt;1000 mg/L</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
<tr>
<td>barium sulfate</td>
<td>Intoxication</td>
<td>Acute EC50 32 mg/L</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
</tbody>
</table>

Conclusion/Summary: Not available.

Biodegradability: Not available.

13. Disposal considerations

Waste disposal: The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

<table>
<thead>
<tr>
<th>Regulatory information</th>
<th>UN number</th>
<th>Proper shipping name</th>
<th>Classes</th>
<th>PG*</th>
<th>Label</th>
<th>Additional information</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT Classification</td>
<td>Not regulated.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>TDG Classification</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Mexico Classification</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>ADR/RID Class</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>IMDG Class</td>
<td>Not regulated.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>IATA-DGR Class</td>
<td>Not regulated.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

PG*: Packing group

15. Regulatory information

United States

HCS Classification: Irritating material
Carcinogen
Target organ effects

U.S. Federal regulations: TSCA 8(b) inventory: All components are listed or exempted.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: barium sulfate; titanium dioxide
SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
barium sulfate: Immediate (acute) health hazard; titanium dioxide: Immediate (acute) health hazard

SARA 313

Form R - Reporting requirements

<table>
<thead>
<tr>
<th>Product name</th>
<th>CAS number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the components are listed.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
15. Regulatory information

State regulations:
- **Connecticut Carcinogen Reporting**: None of the components are listed.
- **Connecticut Hazardous Material Survey**: None of the components are listed.
- **Florida Substances**: None of the components are listed.
- **Illinois Chemical Safety Act**: None of the components are listed.
- **Illinois Toxic Substances Disclosure to Employee Act**: None of the components are listed.
- **Louisiana Reporting**: None of the components are listed.
- **Louisiana Spill**: None of the components are listed.
- **Massachusetts Spill**: None of the components are listed.
- **Massachusetts Substances**: The following components are listed: BARIUM SULFATE; TITANIUM DIOXIDE
- **Michigan Critical Material**: None of the components are listed.
- **Minnesota Hazardous Substances**: None of the components are listed.
- **New Jersey Hazardous Substances**: The following components are listed: TITANIUM DIOXIDE
- **New Jersey Spill**: None of the components are listed.
- **New Jersey Toxic Catastrophe Prevention Act**: None of the components are listed.
- **New York Acutely Hazardous Substances**: None of the components are listed.
- **New York Toxic Chemical Release Reporting**: None of the components are listed.
- **Pennsylvania RTK Hazardous Substances**: The following components are listed: BARIUM SULFATE; TITANIUM OXIDE (TIO2)
- **Rhode Island Hazardous Substances**: None of the components are listed.

**California Prop. 65**

**WARNING**: This product contains a chemical known to the state of California to cause cancer and birth defects, or other reproductive harm.

**Canada**

- **WHMIS (Canada)**: Not controlled under WHMIS (Canada).
- **Canadian lists**:
  - **CEPA Toxic substances**: None of the components are listed.
  - **Canadian ARET**: None of the components are listed.
  - **Canadian NPRI**: None of the components are listed.
  - **Alberta Designated Substances**: None of the components are listed.
  - **Ontario Designated Substances**: None of the components are listed.
  - **Quebec Designated Substances**: None of the components are listed.

**Canada inventory**: All components are listed or exempted.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**Mexico**

**Classification**:

1. Flammability
2. Health
0. Reactivity
Special

**International regulations**

**International lists**:
- **Australia inventory (AICS)**: All components are listed or exempted.
- **China inventory (IECSC)**: All components are listed or exempted.
- **Korea inventory (KECI)**: All components are listed or exempted.
- **Philippines inventory (PICCS)**: All components are listed or exempted.
- **Japan inventory (ENCS)**: All components are listed or exempted.

16. Other information

Label requirements: CAUTION!

MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. POSSIBLE CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER, BASED ON ANIMAL DATA.

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

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

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

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

Date of issue: 4/20/2007.
Version: 2

Notice to reader

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