SAFETY DATA SHEET

Date of issue/Date of revision: 24 April 2016
Version: 5

Section 1. Identification

Product name: PR 1829 B 2 Part A
Product code: PR 1829 B 2 Part A
Other means of identification: Not available.
Product type: Solid.

Relevant identified uses of the substance or mixture and uses advised against

Product use: Industrial applications.
Use of the substance/mixture: Sealants
Uses advised against: Not applicable.

Manufacturer: PPG Aerospace PRC-DeSoto
12780 San Fernando Road
Sylmar, CA 91342
Phone: 818 362 6711
(412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Section 2. Hazards identification

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture:
- SKIN IRRITATION - Category 2
- SERIOUS EYE DAMAGE - Category 1
- SKIN SENSITIZATION - Category 1
- CARCINOGENICITY - Category 2
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 29.3%

GHS label elements

Hazard pictograms:

Signal word: Danger
Section 2. Hazards identification

Hazard statements

Causes serious eye damage.
Causes skin irritation.
May cause an allergic skin reaction.
Suspected of causing cancer.

Precautionary statements

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Avoid breathing dust. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response

IF exposed or concerned: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. 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 or physician.

Storage

Store locked up.

Disposal

Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

Sanding and grinding dusts may be harmful if inhaled. Trimethoxysilanes are capable of forming methanol if hydrolyzed or ingested. If swallowed, methanol may be harmful or fatal or cause blindness. Emits toxic fumes when heated.

Hazards not otherwise classified

None known.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture
Product name: PR 1829 B 2 Part A

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin</td>
<td>≥20 - ≤50</td>
<td>25068-38-6</td>
</tr>
<tr>
<td>Phenol, polymer with formaldehyde, glycidyl ether (MW&lt;=700)</td>
<td>≥20 - ≤50</td>
<td>28064-14-4</td>
</tr>
<tr>
<td>[3-(2,3-epoxypropoxy)propyl]trimethoxysilane</td>
<td>≥1.0 - ≤5.0</td>
<td>2530-83-8</td>
</tr>
<tr>
<td>carbon black, respirable powder</td>
<td>≥1.0 - ≤5.0</td>
<td>1333-86-4</td>
</tr>
</tbody>
</table>

SUB codes represent substances without registered CAS Numbers.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no 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.

Occupational exposure limits, if available, are listed in Section 8.
Section 4. First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Description of necessary first aid measures

Eye contact: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

Inhalation: Remove 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.

Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Ingestion: If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact: Causes serious eye damage.

Inhalation: No known significant effects or critical hazards.

Skin contact: Causes skin irritation. May cause an allergic skin reaction.

Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:
- pain
- watering
- redness

Inhalation: No specific data.

Skin contact: Adverse symptoms may include the following:
- pain or irritation
- redness
- blistering may occur

Ingestion: Adverse symptoms may include the following:
- stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)
Section 5. Fire-fighting measures

**Extinguishing media**

- **Suitable extinguishing media**: Use an extinguishing agent suitable for the surrounding fire.

- **Unsuitable extinguishing media**: None known.

**Specific hazards arising from the chemical**

- **Hazardous thermal decomposition products**: This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

- **Decomposition products may include the following materials:**
  - Carbon dioxide
  - Carbon monoxide
  - Halogenated compounds
  - Metal oxide/oxides

**Special protective actions for fire-fighters**

- 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.

**Special protective equipment for fire-fighters**

- Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

- **For non-emergency personnel**: 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. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

- **For emergency responders**: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**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).

**Methods and materials for containment and cleaning up**

- **Small spill**: Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

- **Large spill**: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
Section 6. Accidental release measures

Section 7. Handling and storage

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.

Special precautions: If this material is part of a multiple component system, read the Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Advice on general occupational hygiene: 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. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities: Do not store below the following temperature: 5°C (41°F). 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. Store locked up. 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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin</td>
<td>None.</td>
</tr>
<tr>
<td>Phenol, polymer with formaldehyde, glycidyl ether (MW&lt;=700)</td>
<td>None.</td>
</tr>
<tr>
<td>[3-(2,3-epoxypropoxy)propyl]trimethoxysilane</td>
<td>None.</td>
</tr>
<tr>
<td>carbon black, respirable powder</td>
<td>None.</td>
</tr>
<tr>
<td>Phenol, polymer with formaldehyde, glycidyl ether [3-(2,3-epoxypropoxy)propyl]trimethoxysilane</td>
<td>None.</td>
</tr>
<tr>
<td>carbon black, respirable powder</td>
<td>None.</td>
</tr>
<tr>
<td>ACGIH TLV (United States, 3/2015).</td>
<td>TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction</td>
</tr>
<tr>
<td>OSHA PEL (United States, 2/2013).</td>
<td>TWA: 3.5 mg/m³ 8 hours.</td>
</tr>
</tbody>
</table>

Key to abbreviations

A = Acceptable Maximum Peak
ACGIH = American Conference of Governmental Industrial Hygienists.
C = Ceiling Limit
F = Fume
IPEL = Internal Permissible Exposure Limit

S = Potential skin absorption
SR = Respiratory sensitization
SS = Skin sensitization
STEL = Short term Exposure limit values
TD = Total dust
Section 8. Exposure controls/personal protection

Recommended monitoring procedures: 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. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Consult local authorities for acceptable exposure limits.

Appropriate engineering controls: 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.

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.

Individual protection measures

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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Chemical splash goggles and face shield.

Skin protection

Hand protection: 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Gloves: butyl rubber

Body protection: 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.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.
### Section 9. Physical and chemical properties

#### Appearance

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Color</td>
<td>Black</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Closed cup: 98.89°C (210°F)</td>
</tr>
<tr>
<td>Material supports combustion</td>
<td>Yes</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower and upper explosive (flammable) limits</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.37</td>
</tr>
<tr>
<td>Density ( lbs / gal )</td>
<td>11.43</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in the following materials: cold water.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Kinematic (40°C (104°F)): Not applicable.</td>
</tr>
<tr>
<td>VOC</td>
<td>47 g/l</td>
</tr>
<tr>
<td>% Solid. (w/w)</td>
<td>97</td>
</tr>
</tbody>
</table>

### Section 10. Stability and reactivity

#### Reactivity

No specific test data related to reactivity available for this product or its ingredients.

#### Chemical stability

The product is stable.

#### Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

#### Conditions to avoid

When exposed to high temperatures may produce hazardous decomposition products. Refer to protective measures listed in sections 7 and 8.

#### Incompatible materials

Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.
Section 10. Stability and reactivity

Hazardous decomposition products: Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

Section 11. Toxicological information

Information on toxicological effects

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>Reaction product: bisphenol-A-</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;2 g/kg</td>
<td></td>
</tr>
<tr>
<td>(epichlorhydrin); epoxy resin</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>11.4 g/kg</td>
<td></td>
</tr>
<tr>
<td>[3-(2,3-epoxypropoxy)propyl] trimethoxysilane</td>
<td>LC50 Inhalation</td>
<td>Rat</td>
<td>&gt;5300 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>4.3 g/kg</td>
<td></td>
</tr>
<tr>
<td>carbon black, respirable powder</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>7.01 g/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;3 g/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;15400 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion/Summary: There are no data available on the mixture itself.

Irritation/Corrosion

Conclusion/Summary

Skin: There are no data available on the mixture itself.

Eyes: There are no data available on the mixture itself.

Respiratory: There are no data available on the mixture itself.

Sensitization

Conclusion/Summary

Skin: There are no data available on the mixture itself.

Respiratory: There are no data available on the mixture itself.

Mutagenicity

Conclusion/Summary: There are no data available on the mixture itself.

Carcinogenicity

Conclusion/Summary: There are no data available on the mixture itself.

Classification

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>carbon black, respirable powder</td>
<td>-</td>
<td>2B</td>
<td>-</td>
</tr>
</tbody>
</table>

Carcinogen Classification code:

IARC: 1, 2A, 2B, 3, 4
NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen
OSHA: +
Not listed/not regulated: -

Reproductive toxicity

Conclusion/Summary: There are no data available on the mixture itself.

Teratogenicity
Section 11. Toxicological information

Conclusion/Summary: There are no data available on the mixture itself.

Specific target organ toxicity (single exposure)
Not available.

Specific target organ toxicity (repeated exposure)
Not available.

Target organs: Contains material which causes damage to the following organs: skin, eyes. Contains material which may cause damage to the following organs: lungs, upper respiratory tract.

Aspiration hazard
Not available.

Information on the likely routes of exposure

Potential acute health effects

Eye contact: Causes serious eye damage.
Inhalation: No known significant effects or critical hazards.
Skin contact: Causes skin irritation. May cause an allergic skin reaction.
Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:
  - pain
  - watering
  - redness

Inhalation: No specific data.
Skin contact: Adverse symptoms may include the following:
  - pain or irritation
  - redness
  - blistering may occur

Ingestion: Adverse symptoms may include the following:
  - stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Conclusion/Summary: There are no data available on the mixture itself. Trimethoxysilanes are capable of forming methanol if hydrolyzed or ingested. If swallowed, methanol may be harmful or fatal or cause blindness. Ingestion may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Short term exposure

Potential immediate effects: There are no data available on the mixture itself.
Potential delayed effects: There are no data available on the mixture itself.

Long term exposure

Potential immediate effects: There are no data available on the mixture itself.
Potential delayed effects: There are no data available on the mixture itself.

Potential chronic health effects
Section 11. Toxicological information

General: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity: Suspected of causing cancer. 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.

Numerical measures of toxicity

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermal</td>
<td>89379.9 mg/kg</td>
</tr>
</tbody>
</table>

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}): Not available.

Section 13. Disposal considerations

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. 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.
Section 13. Disposal considerations

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14. Transport information

<table>
<thead>
<tr>
<th>UN number</th>
<th>DOT</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Not regulated.</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin, Phenol, polymer with formaldehyde, glycidyl ether (MW&lt;=700))</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin, Phenol, polymer with formaldehyde, glycidyl ether (MW&lt;=700))</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>-</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Packing group</td>
<td>-</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No. Not applicable.</td>
<td>Yes. (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin, Phenol, polymer with formaldehyde, glycidyl ether (MW&lt;=700))</td>
<td>Yes. Not applicable.</td>
</tr>
</tbody>
</table>

Additional information

DOT: None identified.
IMDG: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
IATA: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

United States

United States inventory (TSCA 8b): All components are listed or exempted.

SARA 302/304

SARA 304 RQ: Not applicable.

Composition/information on ingredients

No products were found.
Section 15. Regulatory information

SARA 311/312
Classification: Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>Fire hazard</th>
<th>Sudden release of pressure</th>
<th>Reactive</th>
<th>Immediate (acute) health hazard</th>
<th>Delayed (chronic) health hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>carbon black, respirable powder</td>
<td>Yes.</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
</tr>
</tbody>
</table>

California Prop. 65
WARNING: This product contains a chemical known to the State of California to cause cancer.

Section 16. Other information

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

Health: 3  Flammability: 1  Physical hazards: 0

(*) - Chronic effects

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.)

Health: 3  Flammability: 1  Instability: 0

Date of previous issue: 12/17/2015

Organization that prepared the MSDS: EHS

Key to abbreviations: ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = loganthem of the octanol/water partition coefficient
UN = United Nations

* Indicates information that has changed from previously issued version.

Disclaimer
Section 16. Other information

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.
SAFETY DATA SHEET

Date of issue/Date of revision: 1 July 2016
Version: 3.01

Section 1. Identification

Product name: PR 1829 B 2 Part B
Product code: PR 1829 B 2 Part B
Other means of identification: Not available.
Product type: Solid.

Relevant identified uses of the substance or mixture and uses advised against

Product use: Industrial applications.
Use of the substance/mixture: Sealants
Uses advised against: Not applicable.

Manufacturer: PPG Aerospace PRC-DeSoto
12780 San Fernando Road
Sylmar, CA 91342
Phone: 818 362 6711
(412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Section 2. Hazards identification

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture:
- SKIN IRRITATION - Category 2
- EYE IRRITATION - Category 2A
- CARCINOGENICITY - Category 2
- SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 49.6%

GHS label elements

Hazard pictograms:

Signal word: Warning
Section 2. Hazards identification

Hazard statements:
- Causes serious eye irritation.
- Causes skin irritation.
- Suspected of causing cancer.
- May cause respiratory irritation.

Precautionary statements:

Prevention:
- Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Use only outdoors or in a well-ventilated area. Avoid breathing dust. Wash hands thoroughly after handling.

Response:
- IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage:
- Store locked up.

Disposal:
- Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements:
- Emits toxic fumes when heated.

Hazards not otherwise classified:
- None known.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture
Product name: PR 1829 B 2 Part B

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>proprietary polythioether</td>
<td>≥20 - ≤50</td>
<td>Not available.</td>
</tr>
<tr>
<td>1,3-Propanediol, 2-ethyl-2-(hydroxymethyl) -, polymer with 2-(5-hexenylthio)</td>
<td>≥20 - ≤50</td>
<td>119147-78-3</td>
</tr>
<tr>
<td>ethanol, 2-mercaptopethanol-propylene oxide reaction products, 2,2'-thiobis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ethanol) and 2,2'-thiobis(ethanethiol)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>titanium dioxide</td>
<td>≥1.0 - ≤5.0</td>
<td>13463-67-7</td>
</tr>
<tr>
<td>2,2'-thiodiethanethiol</td>
<td>&lt;1.0</td>
<td>3570-55-6</td>
</tr>
</tbody>
</table>

SUB codes represent substances without registered CAS Numbers.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no 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.

Occupational exposure limits, if available, are listed in Section 8.
Section 4. First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Description of necessary first aid measures

Eye contact: Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.

Inhalation: Remove 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.

Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Ingestion: If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact: Causes serious eye irritation.

Inhalation: May cause respiratory irritation.

Skin contact: Causes skin irritation.

Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:
- pain or irritation
- watering
- redness

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

Skin contact: Adverse symptoms may include the following:
- irritation
- redness

Ingestion: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)
Section 5. Fire-fighting measures

Extinguishing media

- **Suitable extinguishing media**: Use an extinguishing agent suitable for the surrounding fire.
- **Unsuitable extinguishing media**: None known.

Specific hazards arising from the chemical

- **Hazardous thermal decomposition products**: Decomposition products may include the following materials: carbon dioxide, carbon monoxide, sulfur oxides, metal oxide/oxides.
- **Special protective actions for fire-fighters**: 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.
- **Special protective equipment for fire-fighters**: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- **For non-emergency personnel**: 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. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- **For emergency responders**: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- **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).

Methods and materials for containment and cleaning up

- **Small spill**: Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
- **Large spill**: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
Section 6. Accidental release measures

Section 7. Handling and storage

**Precautions for safe handling**

**Protective measures**: Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. 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.

**Special precautions**: If this material is part of a multiple component system, read the Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

**Advice on general occupational hygiene**: 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. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities**: Do not store below the following temperature: 5°C (41°F). 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. Store locked up. 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.

Section 8. Exposure controls/personal protection

**Control parameters**

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>proprietary polythioether</td>
<td>None.</td>
</tr>
<tr>
<td>1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with 2-(5-hexenylthio)ethanol, 2-mercaptoethanol-propylene oxide reaction products, 2,2’-thiobis(ethanol) and 2,2’-thiobis(ethanethiol) titanium dioxide</td>
<td>None.</td>
</tr>
<tr>
<td>2,2’-thiodiethanethiol</td>
<td>None.</td>
</tr>
</tbody>
</table>

**OSHA PEL (United States, 2/2013)**

TWA: 15 mg/m³ 8 hours. Form: Total dust

**ACGIH TLV (United States, 3/2015)**

TWA: 10 mg/m³ 8 hours. None.

Key to abbreviations

<table>
<thead>
<tr>
<th>A</th>
<th>Acceptable Maximum Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Governmental Industrial Hygienists.</td>
</tr>
<tr>
<td>C</td>
<td>Ceiling Limit</td>
</tr>
<tr>
<td>F</td>
<td>Fume</td>
</tr>
<tr>
<td>IPEL</td>
<td>Internal Permissible Exposure Limit</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration.</td>
</tr>
<tr>
<td>S</td>
<td>Potential skin absorption</td>
</tr>
<tr>
<td>SR</td>
<td>Respiratory sensitization</td>
</tr>
<tr>
<td>SS</td>
<td>Skin sensitization</td>
</tr>
<tr>
<td>STEL</td>
<td>Short term Exposure limit values</td>
</tr>
<tr>
<td>TD</td>
<td>Total dust</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
</tbody>
</table>
Section 8. Exposure controls/personal protection

Recommended monitoring procedures: 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. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Appropriate engineering controls: 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.

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.

Individual protection measures

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.

Eye/face protection

Skin protection: Chemical splash goggles.

Hand protection: 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection: 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.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.
## Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Closed cup: Not applicable</td>
</tr>
<tr>
<td>Material supports combustion</td>
<td>Yes</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower and upper explosive (flammable) limits</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.43</td>
</tr>
<tr>
<td>Density (lbs / gal)</td>
<td>11.93</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in the following materials: cold water.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Kinematic (40°C (104°F)): Not applicable.</td>
</tr>
<tr>
<td>VOC</td>
<td>14 g/l</td>
</tr>
<tr>
<td>% Solid. (w/w)</td>
<td>99</td>
</tr>
</tbody>
</table>

## Section 10. Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>The product is stable.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>When exposed to high temperatures may produce hazardous decomposition products. Refer to protective measures listed in sections 7 and 8.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.</td>
</tr>
</tbody>
</table>
Section 10. Stability and reactivity

Hazardous decomposition products: Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

Section 11. Toxicological information

Information on toxicological effects

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>1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with 2-(5-hexenylthio)ethanol, 2-mercaptoethanol-propylene oxide reaction products, 2,2'-thiobis(ethanol) and 2,2'-thiobis(ethanethiol)</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>titanium dioxide</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;11 g/kg</td>
<td>-</td>
</tr>
<tr>
<td>2,2'-thiodiethanethiol</td>
<td>LC50 Inhalation Dusts and mists</td>
<td>Rat</td>
<td>160 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td>2,2'-thiodiethanethiol</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>0.164 g/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Conclusion/Summary: There are no data available on the mixture itself.

Irritation/Corrosion

Skin: There are no data available on the mixture itself.
Eyes: There are no data available on the mixture itself.
Respiratory: There are no data available on the mixture itself.

Sensitization

Skin: There are no data available on the mixture itself.
Respiratory: There are no data available on the mixture itself.

Mutagenicity

Conclusion/Summary: There are no data available on the mixture itself.

Carcinogenicity

Conclusion/Summary: There are no data available on the mixture itself.

Classification

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>titanium dioxide</td>
<td>-</td>
<td>2B</td>
<td>-</td>
</tr>
</tbody>
</table>

Carcinogen Classification code:

IARC: 1, 2A, 2B, 3, 4
NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen
OSHA: +
Not listed/not regulated: -

Reproductive toxicity

Conclusion/Summary: There are no data available on the mixture itself.

Teratogenicity

Conclusion/Summary: There are no data available on the mixture itself.
### Section 11. Toxicological information

#### Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>proprietary polythioether</td>
<td>Category 3</td>
</tr>
<tr>
<td>1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with 2-(5-hexenylthio)ethanol, 2-mercaptopropanol-propylene oxide reaction products, 2,2'-thiobis(ethanol) and 2,2'-thiobis(ethanethiol)</td>
<td>Category 3</td>
</tr>
<tr>
<td>2,2'-thiodiethanethiol</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

#### Specific target organ toxicity (repeated exposure)

Not available.

### Target organs

Contains material which may cause damage to the following organs: lungs, the nervous system, upper respiratory tract, skin, eyes.

### Aspiration hazard

Not available.

### Information on the likely routes of exposure

#### Potential acute health effects

**Eye contact**: Causes serious eye irritation.

**Inhalation**: May cause respiratory irritation.

**Skin contact**: Causes skin irritation.

**Ingestion**: No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

**Eye contact**: Adverse symptoms may include the following:
- pain or irritation
- watering
- redness

**Inhalation**: Adverse symptoms may include the following:
- respiratory tract irritation
- coughing

**Skin contact**: Adverse symptoms may include the following:
- irritation
- redness

**Ingestion**: No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

**Conclusion/Summary**: There are no data available on the mixture itself. Ingestion may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

#### Short term exposure

**Potential immediate effects**: There are no data available on the mixture itself.

**Potential delayed effects**: There are no data available on the mixture itself.

#### Long term exposure

**Potential immediate effects**: There are no data available on the mixture itself.

**Potential delayed effects**: There are no data available on the mixture itself.
Section 11. Toxicological information

Potential chronic health effects

- General: No known significant effects or critical hazards.
- Carcinogenicity: Suspected of causing cancer. 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.

Numerical measures of toxicity

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>10891.6 mg/kg</td>
</tr>
</tbody>
</table>

Section 12. Ecological information

Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>titanium dioxide</td>
<td>Acute LC50 &gt;100 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
</tbody>
</table>

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

| Soil/water partition coefficient ($K_{OC}$) | Not available. |

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Section 13. Disposal considerations

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. Section 6. Accidental release measures

14. Transport information

<table>
<thead>
<tr>
<th></th>
<th>DOT</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Packing group</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td>Marine pollutant substances</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

Additional information

DOT : None identified.
IMDG : None identified.
IATA : None identified.

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

United States

United States inventory (TSCA 8b) : All components are listed or exempted.

SARA 302/304

SARA 304 RQ : Not applicable.

Composition/information on ingredients

No products were found.

SARA 311/312

Classification : Immediate (acute) health hazard
                Delayed (chronic) health hazard

Composition/information on ingredients
Section 15. Regulatory information

<table>
<thead>
<tr>
<th>Name</th>
<th>Fire hazard</th>
<th>Sudden release of pressure</th>
<th>Reactive</th>
<th>Immediate (acute) health hazard</th>
<th>Delayed (chronic) health hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>proprietary polythioether 1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with 2-(5-hexenylthio)ethanol, 2-mercaptoethanol-propylene oxide reaction products, 2,2'-thiobis(ethanol) and 2,2'-thiobis(ethanethiol)</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
<tr>
<td>2,2'-thiodiethanethiol</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Section 16. Other information

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

Health : 2  *  Flammability : 0  Physical hazards : 0

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.)

Health : 2  Flammability : 0  Instability : 0  Date of previous issue : 4/24/2016

Organization that prepared the MSDS : EHS


* Indicates information that has changed from previously issued version.

Disclaimer
Section 16. Other information

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.