1. Product and company identification

Product name : PSX 700SG DK GRAY F/S 26008 NRL PIGMENT PKG
Product code : 00428642
Product type : Liquid.

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

Product use : Industrial applications, Used by spraying.
Use of the substance/mixture : Coating.
Uses advised against : Not applicable.

Supplier's details : PPG PMC Japan Co., Ltd.
8F, Shintetsu Bldg., 1-1, Daikaidori 1-chome, Kobe 652-0803
Tel : +81 78 574 2777
Fax : +81 78 576 0035

Emergency telephone number : 078 574 2777

2. Hazards identification

GHS Classification : FLAMMABLE LIQUIDS - Category 4
EYE IRRITATION - Category 2
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 1A
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
AQUATIC HAZARD (ACUTE) - Category 3
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements
Hazard pictograms :  

Signal word : Danger
Hazard statements : Combustible liquid.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause cancer.
Causes damage to organs through prolonged or repeated exposure. (immune system, kidneys, respiratory system)
Harmful to aquatic life with long lasting effects.

Precautionary statements
2. Hazards identification

Prevention: Obtain special instructions before use. Wear protective gloves, protective clothing and eye or face protection. Keep away from flames and hot surfaces. No smoking. Avoid release to the environment. Do not breathe vapor. Do not eat, drink or smoke when using this product.

Response: IF exposed or concerned: Get medical advice or attention. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or 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 advice or attention.

Storage: Store in a well-ventilated place. Keep cool.

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

Other hazards which do not result in classification: Prolonged or repeated contact may dry skin and cause irritation.

3. Composition/information on ingredients

Substance/mixture: Mixture

CAS number/other identifiers
- CAS number: Not applicable.
- ENCS number: Not available.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
<th>ENCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4'-Isopropylidendicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane</td>
<td>25 - &lt;50</td>
<td>30583-72-3</td>
<td>Not available.</td>
</tr>
<tr>
<td>barium sulfate</td>
<td>20 - &lt;25</td>
<td>7727-43-7</td>
<td>1-89</td>
</tr>
<tr>
<td>Silica silicon dioxide containing crystalline and amorphous</td>
<td>7 - &lt;10</td>
<td>7631-86-9</td>
<td>1-548</td>
</tr>
<tr>
<td>Hematite, chromium green black</td>
<td>3 - &lt;5</td>
<td>68909-79-5</td>
<td>Not available.</td>
</tr>
<tr>
<td>Amorphous silica (silica gel, precipitated silica)</td>
<td>2 - &lt;3</td>
<td>112926-00-8</td>
<td>1-548</td>
</tr>
<tr>
<td>titanium dioxide (nanoparticle)</td>
<td>1 - &lt;2</td>
<td>13463-67-7</td>
<td>1-558; 5-5225</td>
</tr>
<tr>
<td>Butyl acetate</td>
<td>1 - &lt;2</td>
<td>123-86-4</td>
<td>2-731</td>
</tr>
<tr>
<td>bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate</td>
<td>1 - &lt;2</td>
<td>41556-26-7</td>
<td>5-5501</td>
</tr>
<tr>
<td>antimony nickel titanium oxide yellow</td>
<td>0.5 - &lt;1</td>
<td>8007-18-9</td>
<td>Not available.</td>
</tr>
<tr>
<td>methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate</td>
<td>0.2 - &lt;0.5</td>
<td>82919-37-7</td>
<td>5-5593</td>
</tr>
<tr>
<td>2,5-Furandione, telomer with ethenylbenzene and (1-methylethyl)benzene, 3-(dimethylamino)propyl imide, imide with polyethylene-polypropylene glycol 2-aminopropyl Me ether, 2-[ (C10-16-alkyloxy)methyl]oxirane-quaternized, benzoates (salts)</td>
<td>0.1 - &lt;0.2</td>
<td>1431957-88-8</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

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.

SUB codes represent substances without registered CAS Numbers.
4. First aid measures

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: No known significant effects or critical hazards.

Skin contact: Defatting to the skin. May cause skin dryness and 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 or irritation
- watering
- redness

Inhalation: No specific data.

Skin contact: Adverse symptoms may include the following:

- irritation
- redness
- dryness
- cracking

Ingestion: No specific data.

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

Notes to physician: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

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)

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media: Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media: Do not use water jet.
5. Fire-fighting measures

Specific hazards arising from the chemical: Combustible liquid. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is harmful 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.

Hazardous thermal decomposition products: Decomposition products may include the following materials:
- carbon oxides
- nitrogen oxides
- sulfur oxides
- 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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.

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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. 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). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
7. Handling and storage

Precautions for safe 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. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for safe storage: Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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. See Section 10 for incompatible materials before handling or use.

8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
</table>
                                          | OEL-M: 0.5 mg/m³, (as Cr) 8 hours. Japan Society for Occupational Health (Japan, 5/2019).  
                                          | OEL-M: 1 mg/m³ 8 hours. Form: Respirable dust  
                                          | OEL-M: 4 mg/m³ 8 hours. Form: Total dust  
                                          | OEL-M: 0.3 mg/m³, (as Ti) 8 hours. Form: nanoparticle |
| titanium dioxide (nanoparticle)       | Japan Society for Occupational Health (Japan, 5/2019).  
                                          | OEL-M: 475 mg/m³ 8 hours. Japan Society for Occupational Health (Japan, 5/2019).  
                                          | OEL-M: 100 ppm 8 hours. ISHL (Japan, 10/2019).  
                                          | TWA: 150 ppm 8 hours. |
| Butyl acetate                         | Japan Society for Occupational Health (Japan, 5/2019).  
                                          | OEL-M: 0.1 mg/m³, (as Ni) 8 hours. Form: Total dust  
                                          | ISHL (Japan, 10/2019).  
                                          | TWA: 0.1 mg/m³, (as Nickel) 8 hours. |
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. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**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 protection**: Safety glasses with side shields.

**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.
9. Physical and chemical properties

Appearance
Physical state : Liquid.
Odor : Characteristic.
Boiling point : >37.78°C (>100°F)
Flash point : Closed cup: 82°C (179.6°F)
Evaporation rate : 0.97 (butyl acetate = 1)
Relative density : 1.49
Solubility : Insoluble in the following materials: cold water.
Viscosity : Not Applicable

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.

Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.

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

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>barium sulfate</td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>&gt;2000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Silica silicon dioxide containing crystalline and amorphous</td>
<td>LD50 Oral</td>
<td>Rat - Male, Female</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Amorphous silica (silica gel, precipitated silica)</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>titanium dioxide (nanoparticle)</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Dusts and mists</td>
<td>Rat</td>
<td>&gt;6.82 mg/l</td>
<td>4 hours</td>
</tr>
<tr>
<td>Butyl acetate</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>&gt;21.1 mg/l</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>2000 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;17600 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>
11. Toxicological information

<table>
<thead>
<tr>
<th>Product code</th>
<th>Date of issue</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>00428642</td>
<td>10 August 2020</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>LD50 Oral</th>
<th>Rat</th>
<th>10.768 g/kg</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td>bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate methyl</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>3.125 g/kg</td>
<td>-</td>
</tr>
<tr>
<td>1,2,2,6,6-pentamethyl-4-piperidyl sebacate</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>3.125 g/kg</td>
<td>-</td>
</tr>
<tr>
<td>2,5-Furandione, telomer with ethenylbenzene and (1-methylethyl)benzene, 3- (dimethylamino)propyl imide, imide with polyethylene-polypropylene glycol 2-aminopropyl Me ether, 2-[(C10-16-alkyloxy)methyl] oxirane-quaternized, benzoates (salts)</td>
<td>LD50 Oral</td>
<td>Rat - Female</td>
<td>&gt;2000 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

**Irritation/Corrosion**
Not available.

**Sensitization**
Not available.

**Mutagenicity**
Not available.

**Carcinogenicity**
Not available.

**Reproductive toxicity**
Not available.

**Teratogenicity**
Not available.

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica silicon dioxide containing crystalline and amorphous</td>
<td>Category 3</td>
<td>-</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>Amorphous silica (silica gel, precipitated silica)</td>
<td>Category 3</td>
<td>-</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>Butyl acetate</td>
<td>Category 3</td>
<td>-</td>
<td>Respiratory tract irritation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica silicon dioxide containing crystalline and amorphous</td>
<td>Category 1</td>
<td>-</td>
<td>respiratory system immune system, kidneys, respiratory system respiratory system</td>
</tr>
<tr>
<td>titanium dioxide (nanoparticle)</td>
<td>Category 1</td>
<td>-</td>
<td>respiratory system</td>
</tr>
</tbody>
</table>

**Aspiration hazard**
Not available.
11. Toxicological information

Information on the likely routes of exposure:

Potential acute health effects:

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

Symptoms related to the physical, chemical and toxicological characteristics:

Eye contact: Adverse symptoms may include the following:
- Pain or irritation
- Watering
- Redness

Inhalation: No specific data.
Skin contact: Adverse symptoms may include the following:
- Irritation
- Redness
- Dryness
- Cracking

Ingestion: No specific data.

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

Short term exposure:

Potential immediate effects: Not available.
Potential delayed effects: Not available.

Long term exposure:

Potential immediate effects: Not available.
Potential delayed effects: Not available.

Potential chronic health effects:

General: Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity: May cause cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity: No known significant effects or critical hazards.
Reproductive toxicity: No known significant effects or critical hazards.

Numerical measures of toxicity:

Acute toxicity estimates:

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Oral (mg/kg)</th>
<th>Dermal (mg/kg)</th>
<th>Inhalation (gases) (ppm)</th>
<th>Inhalation (vapors) (mg/l)</th>
<th>Inhalation (dusts and mists) (mg/l)</th>
</tr>
</thead>
</table>

Japan
11. Toxicological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSX 700SG DK GRAY F/S 26008 NRL PIGMENT PKG</td>
<td>82985.5</td>
<td>4529.1</td>
<td>N/A</td>
</tr>
<tr>
<td>Barium sulfate</td>
<td>N/A</td>
<td>2500</td>
<td>N/A</td>
</tr>
<tr>
<td>Butyl acetate</td>
<td>10768</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate</td>
<td>3125</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate</td>
<td>3125</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>2,5-Furandione, telomer with ethenylbenzene and (1-methylethyl)benzene, 3-(dimethylamino)propyl imide, imide with polyethylene-polypropylene glycol 2-aminopropyl Me ether, 2-[(C10-16-alkyloxy)methyl] oxirane-quaternized, benzoates (salts)</td>
<td>2500</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Other information:
- Prolonged or repeated contact may dry skin and cause irritation. 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. Avoid contact with skin and clothing.

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>4,4'-Isopropylidenecyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane</td>
<td>LC50 11.5 mg/l</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
<tr>
<td>Silica silicon dioxide containing crystalline and amorphous</td>
<td>Acute LC50 &gt;10000 mg/l</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
<tr>
<td>Amorphous silica (silica gel, precipitated silica)</td>
<td>NOEC &gt;1000 ppm</td>
<td>Daphnia - Daphnia magna</td>
<td>24 hours</td>
</tr>
<tr>
<td>Cadmium oxide</td>
<td>Acute NOEC &gt;10000 ppm</td>
<td>Fresh water</td>
<td>96 hours</td>
</tr>
<tr>
<td>Titanium dioxide (nanoparticle)</td>
<td>Acute NOEC &gt;10000 ppm</td>
<td>Fish - Brachydanio rerio</td>
<td>4 days</td>
</tr>
<tr>
<td>Butyl acetate</td>
<td>Acute LC50 &gt;100 mg/l</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td>2,5-Furandione, telomer with ethenylbenzene and (1-methylethyl)benzene, 3-(dimethylamino)propyl imide, imide with polyethylene-polypropylene glycol 2-aminopropyl Me ether, 2-[(C10-16-alkyloxy)methyl] oxirane-quaternized, benzoates (salts)</td>
<td>Acute LC50 18 mg/l</td>
<td>Fish - Algae - Pseudokirchneriella subcapitata</td>
<td>96 hours</td>
</tr>
<tr>
<td>EC50 0.25 mg/l</td>
<td></td>
<td></td>
<td>72 hours</td>
</tr>
</tbody>
</table>

**Persistence/degradability**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Dose</th>
<th>Inoculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butyl acetate</td>
<td>TEPA and OECD 301D</td>
<td>83 % - Readily - 28 days</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
12. Ecological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amorphous silica (silica gel, precipitated silica)</td>
<td>-</td>
<td>-</td>
<td>Not readily</td>
</tr>
<tr>
<td>Butyl acetate</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amorphous silica (silica gel, precipitated silica)</td>
<td>-</td>
<td>0</td>
<td>low</td>
</tr>
<tr>
<td>Butyl acetate</td>
<td>1.78</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

Mobility in soil

- Soil/water partition coefficient (K<sub>oc</sub>): Not available.
- Mobility: Not available.
- Other adverse effects: No known significant effects or critical hazards.

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. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. Transport information

<table>
<thead>
<tr>
<th></th>
<th>UN</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>
14. Transport information

Additional information

UN : 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.

Transport in bulk according to IMO instruments : Not applicable.

15. Regulatory information

Fire Service Law

<table>
<thead>
<tr>
<th>Category</th>
<th>Substance name/Type</th>
<th>Danger category</th>
<th>Signal word</th>
<th>Designated quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specified flammables</td>
<td>Combustible liquid</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>2 m³</td>
</tr>
</tbody>
</table>

Pollutant Release and Transfer Registers (PRTR)

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>Status</th>
<th>Reference number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium and chromium(III) compounds</td>
<td>4.655</td>
<td>Class 1</td>
<td>87</td>
</tr>
<tr>
<td>Nickel compounds</td>
<td>0.685</td>
<td>Specified Class 1</td>
<td>309</td>
</tr>
</tbody>
</table>

ISHL

Use of specified chemical substances
None of the components are listed.

Substances requiring labelling

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>Status</th>
<th>Reference number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline silica</td>
<td>&lt;10</td>
<td>Listed</td>
<td>165-2</td>
</tr>
<tr>
<td>Butyl acetate</td>
<td>≤2.8</td>
<td>Listed</td>
<td>181</td>
</tr>
<tr>
<td>Titanium(IV) oxide</td>
<td>≤3.0</td>
<td>Listed</td>
<td>191</td>
</tr>
<tr>
<td>Nickel and its compounds</td>
<td>≤1.0</td>
<td>Listed</td>
<td>418</td>
</tr>
</tbody>
</table>

Chemicals requiring notification

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>Status</th>
<th>Reference number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline silica</td>
<td>&lt;10</td>
<td>Listed</td>
<td>165-2</td>
</tr>
<tr>
<td>Chromium and its compounds</td>
<td>≤5.0</td>
<td>Listed</td>
<td>142</td>
</tr>
<tr>
<td>Butyl acetate</td>
<td>≤2.8</td>
<td>Listed</td>
<td>181</td>
</tr>
<tr>
<td>Titanium(IV) oxide</td>
<td>≤3.0</td>
<td>Listed</td>
<td>191</td>
</tr>
<tr>
<td>Nickel and its compounds</td>
<td>&lt;1.0</td>
<td>Listed</td>
<td>418</td>
</tr>
</tbody>
</table>

Carcinogen
None of the components are listed.

Mutagen

Japan Page: 12/14
15. Regulatory information

None of the components are listed.

**Corrosive liquid**
- Not listed

**Occupational Safety and Health Law**
- Not available.

**Regulations on the Prevention of Tetraalkyl Lead Poisoning**
- Not listed

**Harmful Substances Subject to Obtaining Permission for Manufacturing**
- Not listed

**Harmful Substances, Prohibited for Manufacturing**
- Not listed

**Dangerous Substances**
- Not listed

**Lead regulation**
- Not listed

**Organic solvents poisoning prevention**
- Not applicable.

**Poisonous and Deleterious Substances**
None of the components are listed.

**Chemical Substances Control Law (CSCL)**
None of the components are listed.

**High Pressure Gas Control Law**
- Not available.

**Explosives Control Law**
None of the components are listed.

**Law Concerning Prevention of Pollution of the Ocean and Maritime Disaster**
- Not available.

**Maritime Safety Law**
**Notification Regulating Transportation of Dangerous Materials by Sea**
None of the components are listed.

**Container class**
None of the components are listed.

**JSOH Carcinogen**
- Group 2B

**List of Specially Controlled Industrial Waste**
- Not listed

**Japan inventory**
- All components are listed or exempted.

**Road law**
- Not available.
16. Other information

History

Date of issue/Date of revision : 10 August 2020
Date of previous issue : 4/22/2020
Version : 6
Prepared by : EHS
Key to abbreviations : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
UN = United Nations

 Indicates information that has changed from previously issued version.

Notice to reader

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