Section 1 – CHEMICALS AND COMPANY IDENTIFICATION

Chemical Identifier | EHPE 3150 [EHPE 3150]
Product Code | ODP-OH-EHPE3150-01
Reference Number | yuuki294-10
Company Name | DAICEL CORPORATION
Address | 2-18-1, Konan, Minato-ku, Tokyo 108-8230, Japan
Company Contact | Organic Chemical Products Company
Phone Number | +81-3-6711-8211
Fax Number | +81-3-6711-8218
Emergency Phone | +81-3-6711-8211
Recommended Use and Restriction on Use ID | EHPE3150_E10

Section 2 – HAZARDS IDENTIFICATION

GHS Classification
Physicochemical Hazards | Pyrophoric solids Out of category
Health Hazards | Acute toxicity – oral Out of category
Skin corrosion/irritation Out of category
Sensitization – skin Out of category
Specific target organ toxicity (repeated exposure) Out of category
Other hazards than mentioned above are Not applicable or No data available.

Section 3 – COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Distinction of Substance or Mixture</th>
<th>Substance</th>
<th>Chemical Name or Generic Name</th>
<th>Concentration or Its Ranges</th>
<th>Formula</th>
<th>CASS RN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impurities and/or Stabilizing Additives which Contribute to the Classification</td>
<td>No information available</td>
<td>Poly[(2-oxiranyl)-1,2-cyclohexanediol] 2-ethyl-2-(hydroxymethyl)-1,3-propanediol ether</td>
<td>≥99%</td>
<td>C126H194O33</td>
<td>244772-00-7</td>
</tr>
</tbody>
</table>

Section 4 – FIRST AID MEASURES

Inhalation | Remove person to fresh air and keep comfortable for breathing. Immediately call a doctor. IF exposed or concerned: Get medical advice and attention.
Skin Contact | Take off or dispose of all polluted clothes.
**Eye Contact**

Rinse skin with water or shower. Immediately call a doctor. Get medical advice and attention.

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor. Get medical advice and attention.

**Ingestion**

Rinse mouth. Do NOT induce vomiting. Immediately call a doctor. Get medical advice and attention.

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**Section 5 – FIRE FIGHTING MEASURES**

**Extinguishing Media**

Small fires: Dry chemical, dry sand, alcohol-resistant foam.

Large fire: Dry chemicals, alcohol-resistance foam extinguishing agents and water sprinkling.

**Unsuitable Extinguishing Media**

Straight streams.

**Specific Hazards**

Fire may produce irritating, corrosive and/or toxic gases.

Contaminated fire fighting water or dilution water are corrosive and/or toxic and may cause damage to a person concerned with fire extinguishing. Some of these materials may burn, but none ignite readily.

**Specific Fire Fighting**

Use extinguishing agent suitable for type of surrounding fire.

Move containers from fire area if you can do it without risk.

**Protection of Fire Fighter**

In fire fighting, wear respiratory protection and chemical protective clothing.

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**Section 6 – ACCIDENTAL RELEASE MEASURES**

**Personal Precautions,** **Protective Equipment and Emergency Procedures**

Keep unauthorized personnel away.

Wear appropriate personal protective equipment (Refer to “Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION”) and avoid inhalation or contact with eyes and skin.

Isolate the site as a leak area by providing a zone that has an appropriate width to all directions.

Do not touch or walk through spilled material.

Pay attention not to cause the influence on the environment by discharging into rivers.

**Environmental Precautions**

Stop leak if you can do it without risk.

**Methods and Equipment for Containment and Cleaning up**

Small dry spills: with clean shovel place material into clean, dry container and cover loosely, move containers from spill area.

Collect the leakage by scraping up and put it into an empty container that can be closed tightly.

Dispose of it later.

Removes all ignition sources promptly. (Prohibition of smoking, sparks, and flames in the surrounding area).

Isolate flammables (such as wood, paper, and oil) from the leakage.
Section 7 – HANDLING AND STORAGE

Handling

Technical Measures

Provide ventilation system and use necessary personal protective equipment as described in “Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION”.

Precautions for Safe Handling

Do not handle until all safety precautions have been read and understood.
Handle at a well-ventilated place.
Avoid release to the environment.
Do not get in eyes, on skin or on clothing.
Ventilate the exhaust to keep the concentration in the air below the exposure limit.
Obtain special instructions before use.
Use properly by reading “Precautions for Use” labeled on the container before use or disposal.
Wash hand thoroughly after handling.
Prohibit use of heat, sparks, and fire in the surrounding area.
Do not contact, breathe or swallow.
Do not expose to temperatures exceeding appropriate temperature.
Do not breathe dust and fume.
Do not handle containers with such manners as tumbling down, falling, exposing to shock, or dragging.

Prevents Handling of Incompatible Substances or Mixtures

Refer to “Section 10 – STABILITY AND REACTIVITY”.

Specific Hygiene Measures

Wash hand thoroughly after handling.

Storage Precautionary Statements

Technical Measures

The storage floor should be protected from water penetration, or should have water-proof construction.
Refer to “Section 10 – STABILITY AND REACTIVITY”.
Store away from incompatible materials.
Store locked up.
Have containers keep away from direct sunlight and heat.
Store in a well-ventilated and cool place keeping container tightly closed.

Material Used in Packaging/Containers

Use containers prescribed in the “Fire Service Law (Japan)” and the “UN Transport Regulations”.

Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits

<table>
<thead>
<tr>
<th>Poly[2–oxiranyl]–1,2–cyclohexanediy] 2–ethyl–2–(hydroxymethyl)–1,3–propanediol ether</th>
<th>Exposure Limits (ACGIH)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not established</td>
</tr>
</tbody>
</table>
**Engineering Controls**

Workplace storing or handling this product should be equipped with eye washing station and safety shower.

Use process enclosures, local exhaust ventilation, or other engineering controls.

Install ventilation system to keep exposure to airborne contaminants below the exposure limit if vapor, fume, mist generates in the process handling at elevated temperature.

Take precautionary measures against static discharge.

**Personal Protective Equipment**

**Respiratory Protection**

Wear respiratory protection.

**Hand Protection**

Wear protective gloves.

**Eye Protection**

Protection glasses (ordinary glasses, ordinary glasses with side shields, and goggles).

**Skin and Body Protection**

Wear protective clothing and face protection.

**Section 9 – PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid (flake)</td>
</tr>
<tr>
<td>Form</td>
<td>Solid (flake)</td>
</tr>
<tr>
<td>Color</td>
<td>Clear</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>70 – 90°C</td>
</tr>
<tr>
<td>Initial Boiling Point and Boiling Ranges</td>
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</tr>
<tr>
<td>Flash Point</td>
<td>253°C (Ceta Closed Cup)</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
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</tr>
<tr>
<td>Flammability or Explosive Limits</td>
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</tr>
<tr>
<td>Lower Limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper Limit</td>
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</tr>
<tr>
<td>Vapor Pressure</td>
<td>133 Pa (25°C)</td>
</tr>
<tr>
<td>Vapor Density</td>
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<tr>
<td>Specific Gravity (Density)</td>
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<tr>
<td>Partition Coefficient : n-Octanol/Water</td>
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</tr>
<tr>
<td>Auto-Ignition Temperature</td>
<td>400°C</td>
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<tr>
<td>Decomposition</td>
<td>No data available</td>
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<tr>
<td>Temperature</td>
<td>No data available</td>
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<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**Section 10 – STABILITY AND REACTIVITY**

**Reactivity**

No data available

**Chemical stability**

Stable under ordinary conditions of use and storage.

**Possibility of Hazardous Reaction**

Contact with strong oxidizers, strong alkalis, or strong acids may cause fire and explosions.

**Conditions to Avoid**

Fire, heat, incompatibles.

**Incompatible Substances or Mixtures**

Strong oxidizers, strong alkalis, strong acid.
Hazardous Decomposition Products

Carbon dioxide and carbon monoxide may form when heated to decomposition.

Section 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity

Oral: Out of category; Rat, LD50 >2000mg/kg

Skin Corrosion/Irritation: Out of category; From the skin irritation test (4hr, 500mg, rabbit) results; mild. P.I.I=0.4

Respiratory or Skin Sensitization: Out of category (Skin sensitization); LLNA-DA method (TG442A simplified test method); negative

Germ Cell Mutagenicity: Ames test; negative, chromosome aberration test; positive (D20; 0.0125mg/ml)

Specific target organ toxicity (repeated exposure): Out of category; For doses up to 500mg/kg/day (4weeks maximum doses), evidence for significant toxicity had not provided.

Section 12 – ECOLOGICAL INFORMATION

Hazard to the aquatic environment (acute hazard): No data available

Hazard to the aquatic environment (long-term hazard): No data available

Persistence: (Degradability) Low biodegradable

Bioaccumulative Potential: Low bioaccumulation

Hazard to the ozone layer: No data available

Section 13 – DISPOSAL CONSIDERATIONS

Residual Waste: Commission a waste disposal company, or a local public body who are licensed by local or regional government, to dispose of the material. Disposal should be in accordance with applicable regulations and standards by the respective local governments. When commissioning the disposal to a disposal company, notify the danger and toxicity thoroughly to the company. Recycle containers after cleansing, or carry out the disposal under the related laws and regulations and the standards of the local governments.

Contaminated Container and Packaging: In case of disposal of empty containers, remove the content thoroughly. Recycle containers after cleansing, or carry out the disposal under the related laws and regulations and the standards of the local governments.

Section 14 – TRANSPORT INFORMATION

International Regulations

Regulatory Information by Sea Marine Pollutant Transport in bulk according to MARPOL 73/78,Annex II and the IBC code: Not applicable

Emergency Response Guide Number: Not applicable
Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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All materials may present unknown hazards and should be used with caution.

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