Material Safety Data Sheet

NIPPON GOMSEI
HI-SELON

Date Revised: May 17, 2004

1. Identification of the substance and of the company
1.1. Identification of the substance: HI-SELON C-800
1.2. Company identification: The Nippon Synthetic Chemical Industry Co., Ltd.
Umeda Sky Bldg., Tower East, 2-1-38, Oyodomaica, Kita-ku, Osaka 531-8876, Japan
Telephone: +81(Japan) - 6 - 6440 - 5320
Facsimile: +81(Japan) - 6 - 6440 - 5328

1.3. Emergency telephone number: +81(Japan) - 6 - 6440 - 5320

2. Composition / information on ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Polyvinyl Alcohol (PVOH, PVA, PVAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonproprietary Name</td>
<td>PVOH Film</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No.</th>
<th>Approximate % (w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyvinyl Alcohol (PVA, PVOH, PVAL)</td>
<td>25213-24-5</td>
<td>Total 75-95</td>
</tr>
<tr>
<td>Plasticizer (Glycerin etc.)</td>
<td>56-81-5</td>
<td>1-5</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>Max 10</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td>Max 7</td>
</tr>
</tbody>
</table>

Reference Number in Gazetteed List in Japan: 6 - 695
UN classification and UN number: Not applicable

3. Hazard Identification

Classification: Not Applicable
Stability and Reactivity: Not react with water, Not occur fire and/or explosion
Toxicity: Very stable, and toxicity is extremely low.

4. First aid measures

Eye: Irrigate with flowing water for more than 15 minutes.
Skin: It is considered to be non-irritating to skin. Call a physician, if needed.
Inhalation: It is considered to be non-effects by this route.
Ingestion: Rinse mouth with water. Call a physician, if needed.
5. Fire fighting measures

Fire Fighting Instructions: In the same way as common fire. Firemen should wear normal protective equipment and fight a fire with water or extinguishing agent from windward.

Extinguishing agent: Water, foam concentrate, carbon dioxide, dry chemical, etc...

6. Accidental release measures

Sweep up and dispose, following all relevant regulations in your country.

7. Handling and storage

7.1. Handling: Avoid water, load shift, falling, etc.
7.2. Storage: Avoid direct sunlight, extreme temperature, extreme humidity with moisture proof and tightly closed packaging.

8. Exposure controls/personal protection

PEL (OSHA): No institution
TVL (ACGIH): No institution
Equipment measures: No need
Personal protective equipment: Wear protective shoes, safety helmet, non-slip gloves, etc., if needed.
Respirator: No need
Safety goggles: No need
Protective gloves: No need

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Film</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Melting point</td>
<td>160 – 190°C (320 – 374°F)</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.25 (Water: 1.0 at 20°C / 68°F)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Cold water Soluble over 2°C (35.6°F)</td>
</tr>
</tbody>
</table>
10. Stability and reactivity

Ignition point: ...
Explosive limits (vol%): Max. None, Min. None
Combustibility: Contact with flame or spark cause fire
Ignitability: Not occur spontaneously flammable in air.
Self-reactivity: None
Explosive: None
Stability and reactivity: Extremely stable

11. Toxicological information (PVOH)

Skin corrosiveness: None
Irritation (Skin, Eyes): None
Acute toxicity (LD50): More than 1,500 mg/kg oral, rat
Chronic toxicity: No information
Carcinogenicity: Not listed in IARC, OSHA, and NTP.
Mutagenicity: Negative
Reproductive toxicity: No Information
Teratogenicity: No Information

12. Ecological information (PVOH)

Degradability: Biodegradable by bacteria, such as Pseudomonas sp.
Accumulation: No information
Fish-toxicity: No Information
Others: 50D 0.04 kg/kg, COD 0.9 kg/kg

13. Disposal considerations

Burn in an incinerator, following all relevant regulations for disposal in your country.

14. Transport information

Follow all relevant regulations for transportation in your country.

15. Regulatory information

Follow all relevant regulations for transportation in your country.

16. Other information

No specific notes.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.