1. Identification of the Substance and the Organization

Supplier : National Institute of Advanced Industrial Science and Technology (AIST)
Address : 1-3-1, Kasumigaseki, Chiyoda, Tokyo, Japan
Office in Charge : Reference Materials Office, Center for Quality Management of Metrology, National Metrology Institute of Japan
Person in Charge : Certified Reference Material Staff
Telephone No. : +81-29-861-4059
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Emergency Contact : Same as above

Prepared on : June 12, 2006
Revised on : March 31, 2017
Reference No. : 6001001

Identity of Substance/Mixture : Certified Reference Material
Recommended Use of the Chemical and Restriction on Use : This CRM is intended for use in the calibration of analytical instruments, quality control of analytical instruments, and validation of analytical techniques and instruments. Do not use this reference material for other purposes than testing/research.

2. Hazards identification

GHS Classification : Not classifiable
GHS Label element : Not available
Signal word : -
Hazard and toxicity : -
Other hazards and toxicity : Harmful if inhaled or swallowed. Irritates eye or mucous membrane upon contact. Long-term exposure may cause discomfort, nausea, headache, etc.

Precautionary statements : [Preventive Measures]
Avoid exposure entirely. Use appropriate protective equipment. Restrict the use for research purpose experiments only. Do not use for in vivo experiments.
[Response]
If swallowed : Wash the mouth well, drink 1-2 glasses of water or milk to induce vomit. Get medical assistance promptly.
On the skin : if irritated or inflamed, get medical assistance
[Storage]
Store in dark place at 0 °C to 6 °C.
[Disposal]
Hazardous and toxic properties not specified in the above are not neither the object of the classification nor classifiable.

3. Composition/Information on Ingredients
Substance or mixture : Single product
Chemical name : Cholesterol
Synonym : -
Content : 99.9 % (g/g)
Chemical or structural formula : C_{27}H_{45}OH
Molecular weight : 386.65
Reference Number in Gazetted List in Japan : Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. : (4) · 1301
Industrial Safety and Health Act : Published
CAS number : 57-88-5
Hazardous component : -

4. First-aid Measures
If in eyes : Rinse off with plenty of clean water, get medical assistance
If on skin : Rinse off with plenty of clean water.
If inhaled : Move to fresh air area, keep warm and rest.
If swallowed : Wash the mouth thoroughly, call for medical assistance.
Anticipated acute & delayed symptoms : -
Most significant characteristics & symptoms : -
Protection of the person applying first-aid : Use personal protective equipment.

5. Fire-fighting Measures
Extinguishing media : Water, powder, foam, carbon dioxide, dry sand
Specific hazards at the time of fire : May generate irritable or toxic fume (or gas)
Specific extinguishing measures : Remove combustible materials from near the fire source and start extinguishing. Transfer movable containers to a safe place promptly. If impossible to transfer, cool down around the container with water spray.
Protecting fire-fighting personnel : Use protective equipment such as fire-safe clothing, breathing equipment.
### 6. Accidental Release Measures

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personal precaution</strong></td>
<td>Have fire extinguisher ready in case of fire.</td>
</tr>
<tr>
<td><strong>Protective equipment and emergency procedures</strong></td>
<td>Wear appropriate protective equipment to protect the skin from spattering droplets and prevent inhaling dust, particulate or gas.</td>
</tr>
<tr>
<td><strong>Environmental precautions</strong></td>
<td>Prevent the environment from being contaminated by the spilled products or material discharged to rivers, etc. Contaminated waste water must be treated appropriately before discharging.</td>
</tr>
<tr>
<td><strong>Recovery, neutralization</strong></td>
<td>Recover the leakage in an empty container and wash away the area thoroughly with plenty of water.</td>
</tr>
<tr>
<td><strong>Secondary disaster prevention</strong></td>
<td>Rope off the leakage area and prohibit unauthorized persons’ entrance. Work on the windward and evacuate people on the leeward.</td>
</tr>
</tbody>
</table>

### 7. Handling and Storage

#### Handling

<table>
<thead>
<tr>
<th>Technical measures</th>
<th>Avoid exposure entirely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local exhaust or central ventilation</td>
<td>When handling indoor, use local exhaust ventilation</td>
</tr>
<tr>
<td>Safe handling precautions</td>
<td>Handle the container carefully and avoid knocking over, dropping or dragging. Prevent leakage, overflow or spatter. Wash hands, face, etc. well and gargle after handling. Use appropriate protective equipment to protect from inhalation, contact with eye, skin and clothing.</td>
</tr>
</tbody>
</table>

#### Storage

<table>
<thead>
<tr>
<th>Condition for safe storage</th>
<th>Store in a dark place at 0 °C to 6 °C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safe packaging material</td>
<td>Glass</td>
</tr>
</tbody>
</table>

### 8. Exposure Controls/Personal Protection

#### Standard controlled concentration

- Not established

#### Maximum permissible concentration (Threshold limit value)

- ACGIH TLV·TWA : Not established
- Japan Society for Occupational Health recommended reference value : Not established
- OSHA PEL TWA : Not established

### Facility engineering control

- Ventilation, exhaust : Local exhaust ventilation or central ventilation system
Safety control, gas detection : –
Storage precaution : –

Protective equipment
Respiratory tract protection : Breathing apparatus
Hands : Protective gloves
Eyes : Protective eyeglasses
Skin and body : Protective clothing

9. Physical and Chemical Properties

- Appearance, etc. : Powder
- Color : White
- Odor : No data
- pH : No data
- Melting point : 148 °C
- Boiling point : 360 °C
- Flashing point : No data
- Explosive range : No data
- Vapor pressure : No data
- Relative vapor density (Air=1) : No data
- Specific gravity or bulk specific gravity : 1.067
- Solubility : Insoluble in water. Soluble in ethanol, chloroform, diethyl ether, pyridine
- \( n \)-Octanol/water partition coefficient (Log Po/w) : No data
- Auto-ignition temperature : No data

10. Stability and Reactivity

◇ Stability
- Stable under normal condition
◇ Reactivity
- May react upon contact with strong oxidant
◇ Condition to avoid
- Sunlight, heat, contact with strong oxidant
◇ Hazardous decomposition products
- Carbon monoxide

11. Toxicological Information
No data available

12. Ecological Information
Degradability, concentration
- No data available
Bioaccumulation
13. Disposal Consideration

- Burn in an incinerator equipped with afterburner and scrubber

14. Transport Information

| UN Number | Not applicable |
| UN classification | Not applicable |
| Name | - |
| Container class | - |
| Marine pollutant | Not applicable |
| Precautions | Transfer with care avoiding leakage or spill due to fall or drop, keep under appropriate temperature and away from fire sources.

15. Regulatory Information

- None applicable

© This SDS is originally prepared for the use of the material in Japan, thus the stated laws and regulations are stipulated and carried out in Japan. The use of the material in other countries should be referred to and by application of the relevant laws and regulations of the country in which the material will be used.

16. Other Information

Others

The information in this document is not intended to be exhaustive and is based on currently available information and data. The measures given in this document are applicable only to normal handling conditions. When handling this reference material under special conditions etc., it is recommended to take safety measures appropriate to each specific application and context of use. This document is intended to provide information and not intended to guarantee anything in handling this reference material.