1. Identification of the Substance/Mixture and the Supplier

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 (NMIJ)
Person in Charge: Person in Charge of Certified Reference Materials
Telephone No.: +81-29-861-4059
Fax No.: +81-29-861-4009
Emergency Contact: Same as above

Prepared on: February 8, 2012
Revised on: March 31, 2017
Reference No.: 7510001

Identity of Substance/Mixture: Certified Reference Material NMIJ CRM 7510-a
Recommended Use of the Chemical and Restriction on Use:

This reference material can be used for controlling the precision of analysis or for confirming the validity of analytical methods or instruments during the analysis of pesticides in apple samples and similar materials. Do not use this reference material for other purposes than testing/research.

2. Hazards Identification

GHS classification: Unclassifiable
GHS label element: ble
Signal word: —
Hazard and toxicity: —

Other hazard and toxicity: If inhaled in a large amount, the accumulation in respiratory organ causes impairment.

Precautionary statement:
[Preventive measures]
Low in hazard when handled normally.
[Response]
If inhaled the dust in a large amount, get assistance of respiratory specialist
If in eyes, rinse with a large amount of water and get medial assistance if necessary.
[Storage]
Store in a clean place protected from light at the temperature of about -30 °C
[Disposal]
Outsource to a professional industrial waste disposal contractor licensed by the prefectural governor.

Hazardous and toxic properties not specified in the above are neither the object of the classification nor classifiable.

### 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Single or compound</th>
<th>Single product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical name</td>
<td>Apple powder</td>
</tr>
<tr>
<td>Synonym</td>
<td></td>
</tr>
<tr>
<td>Chemical formula</td>
<td></td>
</tr>
<tr>
<td>Molecular weight</td>
<td></td>
</tr>
<tr>
<td>CAS number</td>
<td></td>
</tr>
<tr>
<td>Content</td>
<td>100 %</td>
</tr>
</tbody>
</table>

Reference Number in Gazetted List in Japan

- Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.
- Industrial Safety and Health Act

This CRM contains ingredients shown below:

**Ingredient 1**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Diazinon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synonym</td>
<td>Thio phosphoric acid</td>
</tr>
<tr>
<td>Chemical formula</td>
<td>C₁₂H₂₁N₂O₅PS</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>304.34</td>
</tr>
<tr>
<td>CAS number</td>
<td>333-41-5</td>
</tr>
<tr>
<td>Content</td>
<td>2.28 mg/kg</td>
</tr>
</tbody>
</table>

Reference Number in Gazetted List in Japan

- Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.
- Published

**Ingredient 2**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Fenitrothion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synonym</td>
<td>Thio phosphoric acid</td>
</tr>
<tr>
<td>Chemical formula</td>
<td>C₉H₁₂NO₅PS</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>277.23</td>
</tr>
<tr>
<td>CAS number</td>
<td>122-14-5</td>
</tr>
<tr>
<td>Content</td>
<td>3.14 mg/kg</td>
</tr>
</tbody>
</table>

Reference Number in Gazetted List in Japan

- Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.
- 3-2616

**Ingredient 3**
Chemical name : Permethrin
Synonym : 3-phenoxybenzyl=3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate
Chemical formula : C_{21}H_{20}Cl_{2}O_{3}
Molecular weight : 391.29
CAS number : 52645-53-1
Content : 2.81 mg/kg
Reference Number in Gazetted List in Japan : Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. : 3-4010
Industrial Safety and Health Act : Published

Ingredient 4
Chemical name : Cypermethrin
Synonym : \(\alpha\)-cyano-3-phenoxybenzyl=3-(2,2-dichlorovinyl)-2,2-dimethylcy clopropanecarboxylate
Chemical formula : C_{22}H_{19}Cl_{2}NO_{3}
Molecular weight : 416.3
CAS number : 52315-07-8
Content : 1.55 mg/kg
Reference Number in Gazetted List in Japan : Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. :
Industrial Safety and Health Act :

4. First-aid Measures
If in eye : Rinse well with clean water. Get medical assistance
If on skin : Rinse well with clean water. Take off the contaminated clothing and shoes, etc. Get medical assistance
If inhaled : Move to a fresh air, rest and keep warm. Get medical assistance.
If swallowed : Rinse well inside the mouth with water. Get medical assistance
Anticipated acute and delayed symptoms : 
Measures to protect the person applying emergency first aid: Use personal protective equipment.

5. Fire-fighting Measures
Extinguishing media : Fire extinguishing media corresponding to the fire in the surrounding area
Specific hazards at the time of fire : None
Specific extinguishing measures : Remove combustion sources away from the fire and extinguish with fire extinguishing agent. If possible, promptly transfer the container to safe area. If unable to transfer, cool down the periphery with water spray.
Protecting fire-fighting personnel: Extinguishing activities on windward side, avoid inhaling toxic gases. Use protective equipment such as fire-resistant clothing, heat-resistant protective clothing, protective clothing, air-breathing apparatus, closed-circuit self-contained oxygen breathing apparatus, rubber gloves, rubber boots, etc.

6. Accidental Release Measures

Personal precautions: Promptly remove ignition sources nearby. Keep extinguishing equipment close at hand in case of ignition.

Protective equipment and emergency procedure: If in the indoor, ventilate well until the spill or leak is treated completely. Use appropriate protective equipment to prevent the skin from contact with airborne droplets or to protect from inhaling dust and gas.

Environmental precaution: -

Recovery neutralization: -

Measures to prevent secondary accident: Collect as much as possible in an empty container by a method that can prevent the dust to scatter.

7. Handling and Storage

Handling:
• Avoid contacting with eyes
• Avoid inhaling the dust
• This material should be used for study purposes only

Storage:
• Store in a clean place protected from light at the temperature of about −30 °C

Material for safe packing: Glass

8. Exposure Controls/Personal Protection

Administrative levels
• Not established

Occupational exposure limit (Substance name):
• ACGIH TLV-TWA (2000): Not established
• Japan Society for Occupational Health Recommended Reference (1998): Not established
• OSHA PEL TWA: Not established

Facility engineering:
• In case of exuding dust, seal the source and install a local ventilation system.

Protective equipment:
• Dust protecting mask, protective gloves, safety eyeglasses
9. Physical and Chemical Properties

- Appearance, etc. : Powder
- Color : Milky white
- Odor : No data
- pH : No data
- Melting point : No data
- Boiling point : No data
- 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 : No data
- Solubility : A part of the constituent may dissolve in water.
- Octanol/water partition coefficient (Log Po/w) : No data
- Auto-ignition temperature : No data

10. Stability and Reactivity

◇ Stability
  - Stable under normal condition

◇ Reactivity
  - No data available

◇ Conditions to avoid
  - Sunlight, humidity

◇ Hazardous decomposition products
  - No data available

11. Toxicological Information

Severe damage to eyes/eye irritation
Respiration organ sensitivity

Irritation possible
If inhaled in a large amount, the accumulation in respiratory organ causes impairment.

12. Ecological Information

Degradability, concentration
- No data available

Bioaccumulation
- No data available

Ecotoxicity
- No data available
13. Disposal Considerations

- Disposal should be according to the related laws and regulation as well as to the ordinances of the local government.
- Before disposing the empty container, the content should be completely discarded.

14. Transport Information

<table>
<thead>
<tr>
<th>UN Number</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN Classification</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Material name</td>
<td>-</td>
</tr>
<tr>
<td>Container grade</td>
<td>-</td>
</tr>
<tr>
<td>ICAO/IATA</td>
<td>-</td>
</tr>
<tr>
<td>Marine pollutant</td>
<td>-</td>
</tr>
<tr>
<td>Precautions</td>
<td>Avoid direct sunlight. Prevent the container from dropping, falling, etc. and transport carefully.</td>
</tr>
</tbody>
</table>

15. Regulatory Information

- No applicable laws and regulations

© 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.