1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product name: Valproic Acid
Product number: 04642465190
Business area: Centralized Diagnostics
Product line: Roche/Hitachi
Supplier: Roche Diagnostics Corporation
9115 Hague Road
Indianapolis, IN 46250
Site Phone Number: 1-800-428-5074

2. COMPOSITION/INFORMATION ON INGREDIENTS

Description 1: Bottle 1

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS Number</th>
<th>Weight %</th>
<th>OSHA PEL</th>
<th>OSHA STEL</th>
<th>ACGIH TLV</th>
<th>ACGIH STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-Chloro-2-methyl-4-isothiazolin-3-one</td>
<td>26172-55-4</td>
<td>&lt;0.005</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Methylisothiazolone (MIT)</td>
<td>2682-20-4</td>
<td>&lt;0.01</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Description 2: Bottle 2

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS Number</th>
<th>Weight %</th>
<th>OSHA PEL</th>
<th>OSHA STEL</th>
<th>ACGIH TLV</th>
<th>ACGIH STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylisothiazolone (MIT)</td>
<td>2682-20-4</td>
<td>&lt;0.1</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Sodium azide</td>
<td>26628-22-8</td>
<td>&lt;0.1</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>0.11 ppm Ceiling</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

**Emergency Overview**

NFPA Ratings: Health= 1  Flammability= 0  Reactivity= 0  Special= 1

Special Definitions: A=Allergen  CA=Carcinogen  CO=Corrosive  F=Flammable  H=Harmful  I=Irritant  Ox=Oxidizer  PB=Potential Biohazard  R=Reproductive  S=Sensitizer  T=Toxic  T+=Highly Toxic  W=Water Reactive

**Principle routes of exposure:** Ingestion, inhalation, skin absorption, skin and/or eye contact.

**Inhalation:** May cause irritation of respiratory tract.

**Ingestion:** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Skin contact:** Substance may cause slight skin irritation. May cause allergic skin reaction.

**Eye contact:** Contact with eyes may cause irritation.

**Sensitization or Odor threshold:** The following chemical(s) may cause sensitization, be absorbed via skin, and/or has an odor threshold for detection:

<table>
<thead>
<tr>
<th>Components</th>
<th>ACGIH - Sensitizer Designation:</th>
<th>Germany (DFG) - Skin/Sensitizers:</th>
<th>Switzerland - Sensitizers:</th>
<th>AIHA - Odor Threshold Values:</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-Chloro-2-methyl-4-isothiazolin-3-one</td>
<td>skin sensitizer</td>
<td>Sensitizer (and 2-Methyl-2,3-dihydroisothiazol-3-one, Mixture in 3:1 ratio)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methylisothiazolone (MIT)</td>
<td>skin sensitizer</td>
<td>Sensitizer (5-Chloro-2-methyl-2,3-dihydroisothiazole-3-one, mixture in 1:3 ratio)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>ACGIH - Sensitizer Designation:</th>
<th>Germany (DFG) - Skin/Sensitizers:</th>
<th>Switzerland - Sensitizers:</th>
<th>AIHA - Odor Threshold Values:</th>
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</thead>
<tbody>
<tr>
<td>Methylisothiazolone (MIT)</td>
<td>skin sensitizer</td>
<td>Sensitizer (5-Chloro-2-methyl-2,3-dihydroisothiazole-3-one, mixture in 1:3 ratio)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Medical conditions aggravated by exposure: Persons with pre-existing skin disorders may be more susceptible to the effects of this material. Persons with impaired respiratory function may be more susceptible to the effects of the substance.

Additional information: None

**4. FIRST AID MEASURES**

Inhalation: Consult a physician. Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

Skin contact: Rinse with plenty of water. If skin irritation persists, call a physician. Remove and wash contaminated clothing before re-use

Ingestion: Consult a physician. Do not induce vomiting without medical advice

Eye contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice

Notes to physician: None determined

**5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media: Use dry chemical, CO2, water spray or “alcohol” foam

Unusual hazards: None known

Special protective equipment for firefighters: Wear self contained breathing apparatus for fire fighting if necessary

**6. ACCIDENTAL RELEASE MEASURES**

Personal precautions: Use personal protective equipment. Evacuate personnel to safe areas

Environmental precautions: Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods for cleaning up: Never return spills in original containers for re-use. Sweep up or vacuum (if powder) or soak up with inert absorbent material (if liquid), then place into a suitable clean, dry, closed container, and label for disposal

**7. HANDLING AND STORAGE**

Handling: Protect from contamination. Wear personal protective equipment

Storage: No special precautions required

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Engineering measures: Not applicable

Personal Protective Equipment

Respiratory protection: Respiratory protection is not required under normal use of this product. If respiratory protection is needed, follow the OSHA regulation, 29CFR1910.134. Always use a NIOSH approved respirator when necessary

Hand protection: Wear appropriate protective gloves to prevent skin contact. Replace torn or punctured gloves promptly

Skin and body protection: Wear appropriate body protection to prevent skin contact

Eye protection: Wear appropriate eye protection to prevent eye contact

Hygiene measures: Avoid contact with skin, eyes and clothing

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Color: Colorless.

Melting point/range: May start to solidify at 0 C. Based on data of deionized water.

Odor: None.

pH: Bottle 1=5.5. Bottle 2=8.2.

Physical state: Liquid.

Specific gravity: 1. Based on data of deionized water.

Product number: 04642465190

Product name: Valproic Acid
10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions
Polymerization: Not applicable
Hazardous decomposition products: Carbon oxides
Materials to avoid: Strong acids and strong bases. Strong oxidising agents

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Components</th>
<th>NIOSH - Selected LD50s and LC50s:</th>
<th>NIOSH Pocket Guide - Target Organs:</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-Chloro-2-methyl-4-isothiazolin-3-one</td>
<td>=1.23 mg/L Inhalation LC50 Rat 4h</td>
<td></td>
</tr>
<tr>
<td>Methylisothiazolone (MIT)</td>
<td>=53 mg/kg Oral LD50 Rat</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>NIOSH - Selected LD50s and LC50s:</th>
<th>NIOSH Pocket Guide - Target Organs:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylisothiazolone (MIT)</td>
<td>=53 mg/kg Oral LD50 Rat</td>
<td></td>
</tr>
<tr>
<td>Sodium azide</td>
<td>=20 mg/kg Dermal LD50 Rabbit</td>
<td>eyes skin CNS CVS kidneys</td>
</tr>
</tbody>
</table>

Inhalation: No additional data available
Skin: No additional data available
Oral: No additional data available
Mutagenic effects: No data is available on the product itself
Reproductive toxicity: No data is available on the product itself

12. ECOLOGICAL INFORMATION

Bioaccumulation: Not determined
Aquatic toxicity: No data is available on the product itself
Ecotoxicity effects: No data is available on the product itself

U.S. EPA, RCRA, CERCLA, SARA, or DGC information on persistent, bioaccumulative, and toxic chemicals (PBTs):
The following chemicals are listed under the U.S. EPA regulations of RCRA, CERCLA, SARA, or DGC:

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Residue from fires extinguished with this material may be hazardous

14. TRANSPORT INFORMATION

Is product hazardous to ship? No

DOT

<table>
<thead>
<tr>
<th>Proper shipping name: None</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN Number: Not applicable</td>
</tr>
<tr>
<td>Hazard class: Not applicable</td>
</tr>
<tr>
<td>Subsidiary risk: Not applicable</td>
</tr>
<tr>
<td>Packing group: Not applicable</td>
</tr>
</tbody>
</table>

ICAO/IATA

<table>
<thead>
<tr>
<th>Proper shipping name: None</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN Number: Not applicable</td>
</tr>
<tr>
<td>Hazard class: Not applicable</td>
</tr>
<tr>
<td>Subsidiary risk: Not applicable</td>
</tr>
<tr>
<td>Packing group: Not applicable</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

U.S. Regulations:

U.S. CERCLA/SARA/TSCA Regulatory Information: The following chemicals are listed under the following TSCA/SARA/CERCLA lists. Refer to TSCA regulation if you need a definition for acronyms that may be shown in the TSCA Inventory field in the table below
### Components CERCLA/SARA 302 RQ and TPQ (40 CFR 355, App.A) | CERCLA/SARA 304 RQ (40 CFR Table 302.4) | SARA 313 Emission reporting | TSCA inventory
---|---|---|---
5-Chloro-2-methyl-4-isothiazolin-3-one | | | P; S
Methylisothiazolone (MIT) | | | P; S

<table>
<thead>
<tr>
<th>Components</th>
<th>CERCLA/SARA 302 RQ and TPQ (40 CFR 355, App.A)</th>
<th>CERCLA/SARA 304 RQ (40 CFR Table 302.4)</th>
<th>SARA 313 Emission reporting</th>
<th>TSCA Inventory</th>
</tr>
</thead>
</table>
Methylisothiazolone (MIT) | | | | P; S
Sodium azide | =454 kg final RQ | | Listed | Present

### U.S. Clean Water Act (CWA)/ California Proposition 65:
The following chemicals are listed under the CWA and/or California Proposition 65:

### Canadian Regulations:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

<table>
<thead>
<tr>
<th>Components</th>
<th>Canada - WHMIS: Classifications of Substances:</th>
</tr>
</thead>
</table>
Sodium azide | D1A |

### 16. OTHER INFORMATION

**Reason for revision:** Not applicable

**References:** None

**Additional advice:** None

**Prepared by:** Roche Diagnostics, Health & Safety Department, MSDS Contact: 317-521-7425 or 317-521-7505

The information, data and recommendations contained herein are based upon information believed by Roche Diagnostics Operations after reasonable investigation and research, to be accurate; however, Roche Diagnostics Operations does not warrant the accuracy of this information. All materials and mixtures may present unknown hazards and should be used with caution. When necessary or appropriate, independent opinions regarding the risk of handling or exposure should be obtained from trained professionals. Roche Diagnostics Operations disclaims any warranty against patent infringement and the implied warranties of merchantability and fitness for a particular purpose. Customer's sole and exclusive remedy shall be replacement of the product or return of the product and refund of the purchase price, at Roche Diagnostics Operations's option. In no case shall Roche Diagnostics Operations be liable for incidental or consequential damages, including lost profits.

**End of Safety Data Sheet**