SAFETY DATA SHEET
ICP/MS Tuning Solution 10ug/L, Part Number 5184-3566

Section 1. Identification

Product identifier : ICP/MS Tuning Solution 10ug/L, Part Number 5184-3566
Part no. : 5184-3566

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Reagents and Standards for Analytical Chemistry Laboratory Use
A set of 2 x 500 mL

Supplier/Manufacturer : Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

Emergency telephone number (with hours of operation) : CHEMTREC®: 1-800-424-9300

Section 2. Hazard identification

Classification of the substance or mixture

| H290 | CORROSIVE TO METALS - Category 1 |
| H331 | ACUTE TOXICITY (inhalation) - Category 3 |
| H315 | SKIN IRRITATION - Category 2 |
| H318 | SERIOUS EYE DAMAGE - Category 1 |
| H335 | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 |
| H373 | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 |

GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H290 - May be corrosive to metals.
H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H331 - Toxic if inhaled.
H335 - May cause respiratory irritation.
H373 - May cause damage to organs through prolonged or repeated exposure. (teeth)

Precautionary statements

Prevention : P280 - Wear protective gloves. Wear eye or face protection.
P234 - Keep only in original packaging.
P260 - Do not breathe vapor.
P264 - Wash thoroughly after handling.
Section 2. Hazard identification

Response:
- P390 - Absorb spillage to prevent material damage.
- P314 - Get medical advice or attention if you feel unwell.
- P304 + P340, P311 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor.
- P362 + P364 - Take off contaminated clothing and wash it before reuse.
- P302 + P352 - IF ON SKIN: Wash with plenty of water.
- P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Storage:
- P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

Disposal:
- P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Synonyms</th>
<th>% (w/w)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitric acid</td>
<td>Nitric acid</td>
<td>≥1 - ≤5</td>
<td>7697-37-2</td>
</tr>
</tbody>
</table>

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

**Description of necessary first aid measures**

Eye contact:
- Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation:
- Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact:
- Get medical attention immediately. Call a poison center or physician. Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion:
- Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person.

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Section 4. First-aid measures

If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- **Eye contact**: Causes serious eye damage.
- **Inhalation**: Toxic if inhaled. May cause respiratory irritation.
- **Skin contact**: Causes skin irritation.
- **Ingestion**: No known significant effects or critical hazards.

Over-exposure signs/symptoms

- **Eye contact**: Adverse symptoms may include the following: pain, watering, redness
- **Inhalation**: Adverse symptoms may include the following: respiratory tract irritation, coughing
- **Skin contact**: Adverse symptoms may include the following: pain or irritation, redness, blistering may occur
- **Ingestion**: Adverse symptoms may include the following: stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

- **Notes to physician**: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- **Specific treatments**: No specific treatment.
- **Protection of first-aiders**: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

**Extinguishing media**

- **Suitable extinguishing media**: Use an extinguishing agent suitable for the surrounding fire.
- **Unsuitable extinguishing media**: None known.

Specific hazards arising from the chemical

- **Hazardous thermal decomposition products**: Decomposition products may include the following materials: nitrogen oxides

**Special protective actions for fire-fighters**: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

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Section 5. Fire-fighting measures

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Methods for cleaning up: Stop leak if without risk. Move containers from spill area. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in a corrosion resistant container with a resistant inner liner. Store locked up. Separate from alkalis. Keep away from metals. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
# Section 8. Exposure controls/personal protection

## Control parameters

## Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
</table>
| Nitric acid     | CA Alberta Provincial (Canada, 6/2018).  
|                 | 15 min OEL: 4 ppm 15 minutes.  
|                 | 15 min OEL: 10 mg/m³ 15 minutes.  
|                 | 8 hrs OEL: 2 ppm 8 hours.  
|                 | 8 hrs OEL: 5.2 mg/m³ 8 hours.  
|                 | CA British Columbia Provincial (Canada, 6/2021).  
|                 | TWA: 2 ppm 8 hours.  
|                 | STEL: 4 ppm 15 minutes.  
|                 | CA Ontario Provincial (Canada, 6/2019).  
|                 | TWA: 2 ppm 8 hours.  
|                 | STEL: 4 ppm 15 minutes.  
|                 | CA Quebec Provincial (Canada, 6/2021).  
|                 | TWAEV: 2 ppm 8 hours.  
|                 | TWAEV: 5.2 mg/m³ 8 hours.  
|                 | STEV: 4 ppm 15 minutes.  
|                 | STEV: 10 mg/m³ 15 minutes.  
|                 | CA Saskatchewan Provincial (Canada, 7/2013).  
|                 | STEL: 4 ppm 15 minutes.  
|                 | TWA: 2 ppm 8 hours.  

## Biological exposure indices

None known.

### Appropriate engineering controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## Individual protection measures

### Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

### Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

### Skin protection

<table>
<thead>
<tr>
<th>Date of issue/Date of revision</th>
<th>Date of previous issue</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>: 10/26/2022</td>
<td>: 01/31/2022</td>
<td>: 8.1</td>
</tr>
</tbody>
</table>
Section 8. Exposure controls/personal protection

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state: Liquid.
Color: Colorless to light yellow.
Odor: Odorless.
Odor threshold: Not available.
pH: 1
Melting point/freezing point: 0°C (32°F)
Boiling point, initial boiling point, and boiling range: 100°C (212°F)
Flash point: Not available.
Evaporation rate: >1 (butyl acetate = 1)
Flammability: Not applicable.
Lower and upper explosion limit/flammability limit: Not available.

Vapor pressure: |
<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Vapor Pressure at 20°C</th>
<th>Vapor pressure at 50°C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mm Hg</td>
<td>kPa</td>
</tr>
<tr>
<td>Nitric acid</td>
<td>48</td>
<td>6.4</td>
</tr>
<tr>
<td>Water</td>
<td>23.8</td>
<td>3.2</td>
</tr>
</tbody>
</table>

Relative vapor density: Not available.
Relative density: 1.008
Density: 1.008 g/cm³
Solubility(ies): |
<table>
<thead>
<tr>
<th>Media</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>Soluble</td>
</tr>
</tbody>
</table>

Miscible with water: Yes.
Section 9. Physical and chemical properties and safety characteristics

Partition coefficient: n-octanol/water : Not applicable.
Auto-ignition temperature : Not available.
Decomposition temperature : Not available.
Viscosity : Not available.
Particle characteristics
  Median particle size : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.
Chemical stability : The product is stable.
Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid : No specific data.
Incompatible materials : Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.
  Reactive or incompatible with the following materials:
  alka lis
  metals
  Reactive or incompatible with the following materials: oxidizing materials.
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitric acid</td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>2500 ppm</td>
<td>1 hours</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>130 mg/m³</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.
Section 11. Toxicological information

Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICP/MS Tuning Solution 10ug/L, Part Number 5184-3566</td>
<td>Category 3</td>
<td>-</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>nitric acid</td>
<td>Category 3</td>
<td>-</td>
<td>Respiratory tract irritation</td>
</tr>
</tbody>
</table>

Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>nitric acid</td>
<td>Category 2</td>
<td>-</td>
<td>teeth</td>
</tr>
</tbody>
</table>

Aspiration hazard

Not available.

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact: Causes serious eye damage.

Inhalation: Toxic if inhaled. May cause respiratory irritation.

Skin contact: Causes skin irritation.

Ingestion: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: Adverse symptoms may include the following: pain, watering, redness.

Inhalation: Adverse symptoms may include the following: respiratory tract irritation, coughing.

Skin contact: Adverse symptoms may include the following: pain or irritation, redness, blistering may occur.

Ingestion: Adverse symptoms may include the following: stomach pains.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: Not available.

Potential delayed effects: Not available.

Long term exposure

Potential immediate effects: Not available.

Potential delayed effects: Not available.

Potential chronic health effects

General: May cause damage to organs through prolonged or repeated exposure.
Section 11. Toxicological information

Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Reproductive toxicity: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Oral (mg/kg)</th>
<th>Dermal (mg/kg)</th>
<th>Inhalation (gases) (ppm)</th>
<th>Inhalation (vapors) (mg/l)</th>
<th>Inhalation (dusts and mists) (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICP/MS Tuning Solution 10ug/L, Part Number 5184-3566</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>6.5</td>
<td>80.6</td>
</tr>
<tr>
<td>nitric acid</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0.13</td>
<td>1.61125</td>
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</tbody>
</table>

Section 12. Ecological information

Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>nitric acid</td>
<td>Acute LC50 180000 µg/l Marine water</td>
<td>Crustaceans - Carcinus maenas - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 72 ppm Fresh water</td>
<td>Fish - Gambusia affinis - Adult</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>nitric acid</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>nitric acid</td>
<td>-0.21</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>): Not available.

Other adverse effects: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and
Section 13. Disposal considerations

runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

<table>
<thead>
<tr>
<th></th>
<th>TDG Classification</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>UN3264</td>
<td>UN3264</td>
<td>UN3264</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid, solution)</td>
<td>CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid, solution)</td>
<td>Corrosive liquid, acidic, inorganic, n.o.s. (nitric acid, solution)</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>

Proof of classification statement: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8).

Additional information

TDG Classification:

- Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8).
- Explosive Limit and Limited Quantity Index 5
- Passenger Carrying Road or Rail Index 5
- Special provisions 16

IMDG:

- Emergency schedules F-A, S-B
- Special provisions 223, 274

IATA:

- Quantity limitation Passenger and Cargo Aircraft: 5 L. Packaging instructions: 852.
- Cargo Aircraft Only: 60 L. Packaging instructions: 856.
- Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y841.
- Special provisions A3, A803

Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments: Not available.

Section 15. Regulatory information

Canadian lists

- Canadian NPRI: The following components are listed: nitric acid
- CEPA Toxic substances: None of the components are listed.

International regulations

Section 15. Regulatory information

Stockholm Convention on Persistent Organic Pollutants
Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)
Not listed.

UNEP Aarhus Protocol on POPs and Heavy Metals
Not listed.

Inventory list
Australia: Not determined.
Canada: At least one component is not listed in DSL but all such components are listed in NDSL.
China: All components are listed or exempted.
Eurasian Economic Union: Russian Federation inventory: All components are listed or exempted.
Japan: Japan inventory (CSCL): Not determined.
Japan inventory (ISHL): All components are listed or exempted.
New Zealand: All components are listed or exempted.
Philippines: All components are listed or exempted.
Republic of Korea: All components are listed or exempted.
Taiwan: All components are listed or exempted.
Thailand: Not determined.
Turkey: Not determined.
United States: All components are active or exempted.
Viet Nam: All components are listed or exempted.

Section 16. Other information

History
Date of issue/Date of revision: 10/26/2022
Date of previous issue: 01/31/2022
Version: 8.1

Key to abbreviations
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HPR = Hazardous Products Regulations
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
N/A = Not available
UN = United Nations

Procedure used to derive the classification

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### Section 16. Other information

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORROSIVE TO METALS - Category 1</td>
<td>Expert judgment</td>
</tr>
<tr>
<td>ACUTE TOXICITY (inhalation) - Category 3</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SKIN IRRITATION - Category 2</td>
<td>Expert judgment</td>
</tr>
<tr>
<td>SERIOUS EYE DAMAGE - Category 1</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)</td>
<td>Expert judgment</td>
</tr>
<tr>
<td>(Respiratory tract irritation) - Category 3</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE)</td>
<td></td>
</tr>
<tr>
<td>- Category 2</td>
<td></td>
</tr>
</tbody>
</table>

*Indicates information that has changed from previously issued version.*

**Notice to reader**

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