

**Bismuth(III) nitrate****10334-250G**

Version 1.1

Revision Date 02/03/2022

Print Date 05/11/2023

**SECTION 1. IDENTIFICATION**

Product name : Bismuth(III) nitrate

Number : 000000021114

Product Use Description : Laboratory chemicals

Manufacturer or supplier's details : Honeywell International Inc.  
1953 South Harvey Street  
Muskegon, MI 49442

For more information call : 1-800-368-0050  
+1-231-726-3171(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**  
: **Transportation (CHEMTREC): 1-800-424-9300 or**  
: **+1-703-527-3887**  
:  
: (24 hours/day, 7 days/week)

**SECTION 2. HAZARDS IDENTIFICATION****Emergency Overview**

Form : solid

Color : colourless

Odor : odourless

**Classification of the substance or mixture**

Not a hazardous substance or mixture according to the Globally Harmonised System (GHS).

Precautionary statements : **Prevention:**  
Use personal protective equipment as required.

Hazards not otherwise : Repeated or prolonged exposure may irritate eyes, skin and

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classified respiratory system.

**Carcinogenicity**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula : H9Bi5N4O22

Chemical nature : Substance

| Chemical name          | CAS-No.   | Concentration |
|------------------------|-----------|---------------|
| Bismuth nitrate, basic | 1304-85-4 | 100.00 %      |

**SECTION 4. FIRST AID MEASURES**

- General advice : First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.
- Inhalation : If breathed in, move person into fresh air. If symptoms persist, call a physician.
- Skin contact : After contact with skin, wash immediately with plenty of water. If symptoms persist, call a physician.
- Eye contact : Rinse thoroughly with plenty of water, also under the eyelids. Protect unharmed eye. If eye irritation persists, consult a specialist.
- Ingestion : Drink 1 or 2 glasses of water. Rinse mouth. Consult a physician.

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**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Water spray  
Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry powder
- Specific hazards during firefighting : Fire may cause evolution of:  
nitrogen oxides  
Metal oxides
- Special protective equipment for firefighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.
- Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.  
Wear personal protective equipment. Unprotected persons must be kept away.  
Provide adequate ventilation.  
Avoid dust formation.  
Avoid breathing dust.  
Avoid contact with skin, eyes and clothing.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.  
Do not flush into surface water or sanitary sewer system.  
Should not be released into the environment.
- Methods and materials for containment and cleaning up : Use mechanical handling equipment.  
Sweep up and shovel into suitable containers for disposal.  
Dispose of in accordance with local regulations.

**SECTION 7. HANDLING AND STORAGE****Handling**

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Precautions for safe handling : Wear personal protective equipment.  
Use only in well-ventilated areas.  
Avoid breathing dust.  
Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

**Storage**

Conditions for safe storage, including any incompatibilities : Store in original container.  
Keep containers tightly closed in a dry, cool and well-ventilated place.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.  
Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment.  
Avoid breathing dust.  
Avoid contact with skin, eyes and clothing.

Eye protection : Safety glasses with side-shields

Hand protection : Latex gloves  
Gloves must be inspected prior to use.  
Replace when worn.

Skin and body protection : Protective suit

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Hygiene measures : General industrial hygiene practice.

**Exposure Guidelines**

Contains no substances with occupational exposure limit values.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

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|                               |                                                                                   |
|-------------------------------|-----------------------------------------------------------------------------------|
| Physical state                | : solid                                                                           |
| Color                         | : colourless                                                                      |
| Odor                          | : odourless                                                                       |
| Odor threshold                | : Note: No data available                                                         |
| pH                            | : Note: No data available                                                         |
| Melting point (decomposition) | : > 500 °C<br>Method: OECD Test Guideline 102<br>Note: Decomposes before melting. |
| Boiling point/boiling range   | : Note: No data available                                                         |
| Flash point                   | : Note: Not applicable                                                            |
| Evaporation rate              | : Note: No data available                                                         |
| Lower explosion limit         | : Note: No data available                                                         |
| Upper explosion limit         | : Note: No data available                                                         |
| Vapor density                 | : Note: No data available                                                         |
| Density                       | : 5.29 g/cm <sup>3</sup> at 22.8 °C<br>Method: OECD Test Guideline 109            |
| Water solubility              | : 0.9 g/l at 20 °C<br>Method: OECD Test Guideline 105                             |

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|                           |                                                            |
|---------------------------|------------------------------------------------------------|
| Ignition temperature      | : Note: No data available                                  |
| Decomposition temperature | : Note: Stable under recommended storage conditions.       |
| Viscosity, dynamic        | : Note: No data available                                  |
| Viscosity, kinematic      | : Note: No data available                                  |
| Oxidizing properties      | : The substance or mixture is not classified as oxidizing. |
| Molecular weight          | : 1,461.99 g/mol                                           |

**SECTION 10. STABILITY AND REACTIVITY**

|                                    |                                                                                |
|------------------------------------|--------------------------------------------------------------------------------|
| Reactivity                         | : Not classified as a reactivity hazard.                                       |
| Chemical stability                 | : Stable under recommended storage conditions.                                 |
| Possibility of hazardous reactions | : Hazardous polymerisation does not occur.                                     |
| Conditions to avoid                | : Protect from heat/overheating.<br>Exposure to moisture<br>Exposure to light. |
| Incompatible materials             | : Strong acids                                                                 |
| Hazardous decomposition products   | : nitrogen oxides<br>Metal oxides                                              |

**SECTION 11. TOXICOLOGICAL INFORMATION**

|                     |                                                                                                   |
|---------------------|---------------------------------------------------------------------------------------------------|
| Acute oral toxicity | : Note: Not classified due to data which are conclusive although insufficient for classification. |
|---------------------|---------------------------------------------------------------------------------------------------|

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|                           |                                                                                                                 |
|---------------------------|-----------------------------------------------------------------------------------------------------------------|
| Acute inhalation toxicity | : Note: Not classified due to data which are conclusive although insufficient for classification.               |
| Acute dermal toxicity     | : Note: No data available                                                                                       |
| Skin irritation           | : Species: reconstructed human epidermis (RhE)<br>Result: No skin irritation<br>Method: OECD Test Guideline 439 |
| Eye irritation            | : Species: Rabbit<br>Result: slight irritation<br>Method: OECD Test Guideline 405                               |
| Sensitisation             | : Species: Mouse<br>Result: Not a skin sensitizer.<br>Method: OECD Test Guideline 429                           |
| Genotoxicity in vitro     | : Note: Not classified due to data which are conclusive although insufficient for classification.               |

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity effects**

|                                                     |                                                                                                                                  |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Toxicity to fish                                    | : static test<br>LC50: > 137 mg/l<br>Exposure time: 96 h<br>Species: Danio rerio (zebra fish)<br>Method: OECD Test Guideline 203 |
| Toxicity to daphnia and other aquatic invertebrates | : static test<br>EC50: > 137 mg/l<br>Exposure time: 48 h<br>Species: Daphnia magna (Water flea)                                  |

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Method: OECD Test Guideline 202

Toxicity to algae : static test  
ErC50: > 137 mg/l  
Exposure time: 72 h  
Species: Pseudokirchneriella subcapitata (green algae)  
Method: OECD Test Guideline 201

Toxicity to bacteria : static test  
EC10: 175.4 mg/l  
Exposure time: 3 h  
Species: activated sludge  
Method: OECD Test Guideline 209  
Note: Concentration based on  
Bismuth

**Elimination information (persistence and degradability)**

Biodegradability : Note: The methods for determining biodegradability are not  
applicable to inorganic substances.

**Further information on ecology****SECTION 13. DISPOSAL CONSIDERATIONS**

Disposal methods : Observe all Federal, State, and Local Environmental  
regulations.

**SECTION 14. TRANSPORT INFORMATION**

**DOT** Not dangerous goods

**TDG** Not dangerous goods

**IATA** Not dangerous goods

**IMDG** Not dangerous goods

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**SECTION 15. REGULATORY INFORMATION****Inventories**

US. Toxic Substances Control Act : On TSCA Inventory

Australia. Industrial Chemicals Act (AICC), as amended : On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL) : All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI) : On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS) : On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC) : Not in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand : On the inventory, or in compliance with the inventory

**National regulatory information**

**SARA 302 Components** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis)

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reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards** : No SARA Hazards**California Prop. 65** : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.**SECTION 16. OTHER INFORMATION**

|                 | <b>HMIS III</b> | <b>NFPA</b> |
|-----------------|-----------------|-------------|
| Health hazard   | : 1             | 1           |
| Flammability    | : 0             | 0           |
| Physical Hazard | : 0             |             |
| Instability     | :               | 0           |

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

**Further information**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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