Safety Data Sheet

Cat. # BKC-12

Sodium metaperiodate

Size: 25g
Sodium Metaperiodate
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of issue: 12/07/2011
Revision date: 05/11/2017
Version: 7.1

SECTION 1: Identification

1.1. Identification
Product form : Substance
Substance name : Sodium Metaperiodate
CAS-No. : 7790-28-5
Product code : 243S
Formula : NaIO4
Chemical structure :

Synonyms : periodic acid (HIO4), sodium salt / periodic acid sodium salt / sodium periodate / sodium tetroxiodate / sodium(meta)periodate
BIG No : 16866

1.2. Recommended use and restrictions on use
No additional information available

1.3. Supplier
Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
Saint Louis, 63132-1429 - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number
Emergency number : Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture
GHS US classification
Oxidizing solids Category 2 H272 - May intensify fire; oxidizer
Skin corrosion/irritation Category 2 H315 - Causes skin irritation
Serious eye damage/eye irritation Category 2 H319 - Causes serious eye irritation
Specific target organ toxicity (single exposure) Category 3 H335 - May cause respiratory irritation

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements
GHS US labeling
Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger
Hazard statements (GHS US) :
H272 - May intensify fire; oxidizer
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

Precautionary statements (GHS US) :
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220 - Keep/Store away from clothing and other combustible materials
P221 - Take any precaution to avoid mixing with combustibles
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### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

#### SECTION 3: Composition/Information on ingredients

### 3.1. Substances

<table>
<thead>
<tr>
<th>Name</th>
<th>Common Name (Synonyms)</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Metaperiodate (Main constituent)</td>
<td>periodic acid (HIO4), sodium salt / periodic acid sodium salt / sodium periodate / sodium tetroxoiodate / sodium(meta)periodate</td>
<td>(CAS-No.) 7790-28-5</td>
<td>100</td>
<td>Ox. Sol. 2, H272</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Skin Irr. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Eye Irr. 2, H319</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H335</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements: see section 16

### 3.2. Mixtures

Not applicable

#### SECTION 4: First-aid measures

### 4.1. Description of first aid measures


First-aid measures after inhalation: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact: Wash immediately with lots of water. Do not apply (chemical) neutralizing agents. Remove clothing before washing. Take victim to a doctor if irritation persists.

First-aid measures after eye contact: Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.


### 4.2. Most important symptoms and effects (acute and delayed)

**Potential Adverse human health effects and symptoms**

- Causes skin irritation. May cause respiratory irritation. Causes serious eye irritation.

**Symptoms/effects after inhalation**

- Irritation of the respiratory tract. Irritation of the nasal mucous membranes.

**Symptoms/effects after skin contact**

- Tingling/irritation of the skin.

**Symptoms/effects after eye contact**

- Irritation of the eye tissue.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.
**SECTION 5: Fire-fighting measures**

5.1. **Suitable (and unsuitable) extinguishing media**


5.2. **Specific hazards arising from the chemical**

Fire hazard: INDIRECT FIRE HAZARD: May intensify fire; oxidiser. Reactions involving a fire hazard: see "Reactivity Hazard".

Explosion hazard: INDIRECT EXPLOSION HAZARD: Reactions with explosion hazards: see "Reactivity Hazard".

5.3. **Special protective equipment and precautions for fire-fighters**

Precautionary measures fire: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions: Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray.


**SECTION 6: Accidental release measures**

6.1. **Personal precautions, protective equipment and emergency procedures**

6.1.1. **For non-emergency personnel**


Measures in case of dust release: In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

6.1.2. **For emergency responders**

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. **Environmental precautions**

Prevent spreading in sewers.

6.3. **Methods and material for containment and cleaning up**

For containment: Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray.

Methods for cleaning up: Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Spill must not return in its original container. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

Other information: Dispose of materials or solid residues at an authorized site.

6.4. **Reference to other sections**

For further information refer to section 13.

**SECTION 7: Handling and storage**

7.1. **Precautions for safe handling**

Precautions for safe handling: Avoid raising dust. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep container tightly closed.

Hygiene measures: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. **Conditions for safe storage, including any incompatibilities**

Storage conditions: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Incompatible materials: Combustible materials.

Heat-ignition: KEEP SUBSTANCE AWAY FROM: heat sources.

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Storage area: Store in a dry area. Keep only in the original container. Meet the legal requirements.

Special rules on packaging: SPECIAL REQUIREMENTS: closing, watertight, dry, clean, correctly labelled. Meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials: SUITABLE MATERIAL: synthetic material. glass. MATERIAL TO AVOID: paper. cardboard. wood.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Sodium Metaperiodate (7790-28-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No additional information available</td>
</tr>
</tbody>
</table>

8.2. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

- Gloves

Eye protection:

- Face shield. In case of dust production: protective goggles

Skin and body protection:

- Protective clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing

Respiratory protection:

- Dust production: dust mask with filter type P2

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Crystalline solid. Crystalline powder.</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative density</td>
<td>3.9</td>
</tr>
<tr>
<td>Specific gravity / density</td>
<td>3865 kg/m³</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>213.89 g/mol</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td></td>
<td>Water: 14 g/100ml (25 °C)</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>300 °C</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
</tbody>
</table>
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**Explosion limits**: Not applicable  
**Explosive properties**: No data available  
**Oxidizing properties**: May intensify fire; oxidiser.

**9.2. Other information**  
**VOC content**: 0 %  
**Other properties**: Hygroscopic. Acid reaction.

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**SECTION 10: Stability and reactivity**

**10.1. Reactivity**  
Reacts with (strong) reducers: release of explosive compounds. Reacts with (some) metal powders: release of explosive compounds. Violent to explosive reaction with combustible materials: (increased) risk of fire/explosion. Decomposes on exposure to temperature rise: oxidation resulting in increased fire or explosion risk.

**10.2. Chemical stability**  
Hygroscopic.

**10.3. Possibility of hazardous reactions**  
No dangerous reactions known under normal conditions of use.

**10.4. Conditions to avoid**  
Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

**10.5. Incompatible materials**  
Combustible materials.

**10.6. Hazardous decomposition products**  
Hazardous decomposition products.

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**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity – single exposure</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>Specific target organ toxicity – repeated exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Potential Adverse human health effects and symptoms</td>
<td>Causes skin irritation. May cause respiratory irritation. Causes serious eye irritation.</td>
</tr>
<tr>
<td>Symptoms/effects after inhalation</td>
<td>Irritation of the respiratory tract. Irritation of the nasal mucous membranes.</td>
</tr>
<tr>
<td>Symptoms/effects after skin contact</td>
<td>Tingling/irritation of the skin.</td>
</tr>
<tr>
<td>Symptoms/effects after eye contact</td>
<td>Irritation of the eye tissue.</td>
</tr>
</tbody>
</table>

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**SECTION 12: Ecological information**

**12.1. Toxicity**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology - general</td>
<td>The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.</td>
</tr>
<tr>
<td>Ecology - air</td>
<td>Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).</td>
</tr>
<tr>
<td>Ecology - water</td>
<td>Mild water pollutant (surface water). No data available on ecotoxicity.</td>
</tr>
</tbody>
</table>
12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Sodium Metaperiodate (7790-28-5)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Biodegradability: not applicable.</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>ThOD</td>
<td>Not applicable</td>
</tr>
<tr>
<td>BOD (% of ThOD)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Sodium Metaperiodate (7790-28-5)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
<td>No bioaccumulation data available.</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

<table>
<thead>
<tr>
<th>Waste treatment methods</th>
<th>Waste treatment methods.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product/Packaging disposal recommendations</td>
<td>Treat using the best available techniques before discharge into drains or the aquatic environment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized dump (Class I). Immobilize the toxic or harmful components.</td>
</tr>
</tbody>
</table>


SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

<table>
<thead>
<tr>
<th>Transport document description</th>
<th>UN3085 Oxidizing solid, corrosive, n.o.s., 5.1 (8), I</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-No. (DOT)</td>
<td>UN3085</td>
</tr>
<tr>
<td>Proper Shipping Name (DOT)</td>
<td>Oxidizing solid, corrosive, n.o.s.</td>
</tr>
<tr>
<td>Class (DOT)</td>
<td>5.1 - Class 5.1 - Oxidizer 49 CFR 173.128</td>
</tr>
<tr>
<td>Packing group (DOT)</td>
<td>I - Great Danger</td>
</tr>
<tr>
<td>Subsidiary risk (DOT)</td>
<td>8 - Class 8 - Corrosive material 49 CFR 173.136</td>
</tr>
<tr>
<td>Hazard labels (DOT)</td>
<td>5.1 - Oxidizer 8 - Corrosive</td>
</tr>
</tbody>
</table>

DOT Packaging Non Bulk (49 CFR 173.xxx) : 211
DOT Packaging Bulk (49 CFR 173.xxx) : 242
DOT Symbols : G - Identifies PSN requiring a technical name
DOT Special Provisions (49 CFR 172.102) : 62 - Oxygen generators (see §171.8 of this subchapter) are not authorized for transportation under this entry.
DOT Packaging Exceptions (49 CFR 173.xxx) : None
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 kg
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DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75): 15 kg

DOT Vessel Stowage Location: D - The material must be stowed “on deck only” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers or one passenger per each 3 m of overall vessel length, but the material is prohibited on passenger vessels in which the limiting number of passengers is exceeded.

DOT Vessel Stowage Other: 13 - Keep as dry as reasonably practicable,56 - Stow “separated from” ammonium compounds,58 - Stow “separated from” cyanides

Emergency Response Guide (ERG) Number: 140

Other information: No supplementary information available.

Transportation of Dangerous Goods

Transport by sea

Transport document description (IMDG): UN 1479 oxidizing solid, n.o.s., 5.1, II
UN-No. (IMDG): 1479
Proper Shipping Name (IMDG): oxidizing solid, n.o.s.
Class (IMDG): 5.1 - Oxidizing substances
Packing group (IMDG): II - substances presenting medium danger
EmS-No. (1): F-A
EmS-No. (2): S-Q

Air transport

Transport document description (IATA): UN 1479 Oxidizing solid, n.o.s., 5.1, II
UN-No. (IATA): 1479
Proper Shipping Name (IATA): Oxidizing solid, n.o.s.
Class (IATA): 5.1 - Oxidizing Substances
Packing group (IATA): II - Medium Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

Sodium Metaperiodate (7790-28-5)
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

EU-Regulations

National regulations
No additional information available

15.3. US State regulations

SECTION 16: Other information

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Full text of H-phrases:

<table>
<thead>
<tr>
<th>H</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H272</td>
<td>May intensify fire; oxidizer</td>
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<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
</tbody>
</table>

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.