

## SAFETY DATA SHEET

Version 6.1  
Revision Date 05/28/2017  
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1. PRODUCT AND COMPANY IDENTIFICATION

## 1.1 Product identifiers

Product name : Sodium periodate

Product Number : 311448

Brand : SIGALD

CAS-No. : 7790-28-5

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

Identified uses : Laboratory chemicals, Synthesis of substances

## 1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.  
3050 Spruce Street  
ST. LOUIS MO 63103  
UNITED STATES

Telephone : +1 314 771-5765

Fax : +1 800 325-5052

## 1.4 Emergency telephone number

Emergency Phone # : +1-703-527-3887

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2. HAZARDS IDENTIFICATION

## 2.1 Classification of the substance or mixture

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Oxidizing solids (Category 1), H271

Skin corrosion (Category 1C), H314

Serious eye damage (Category 1), H318

Specific target organ toxicity - repeated exposure (Category 1), thymus gland, H372

Acute aquatic toxicity (Category 1), H400

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H271

May cause fire or explosion; strong oxidizer.

H314

Causes severe skin burns and eye damage.

H372

Causes damage to organs (/\$/\*\_ORGAN\_REPEAT\$/) through prolonged or repeated exposure.

H400

Very toxic to aquatic life.

Precautionary statement(s)	
P210	Keep away from heat.
P220	Keep/Store away from clothing/ combustible materials.
P221	Take any precaution to avoid mixing with combustibles.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P283	Wear fire/ flame resistant/ retardant clothing.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
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/doctor.
P306 + P360	IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P314	Get medical advice/ attention if you feel unwell.
P363	Wash contaminated clothing before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P371 + P380 + P375	In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Synonyms	: Sodium (meta)periodate
Formula	: $\text{NaIO}_4$
Molecular weight	: 213.89 g/mol
CAS-No.	: 7790-28-5
EC-No.	: 232-197-6

#### Hazardous components

Component	Classification	Concentration
<b>Sodium periodate</b>		
	Ox. Sol. 1; Skin Corr. 1C; Eye Dam. 1; STOT RE 1; Aquatic Acute 1; H271, H314, H318, H372, H400, H271, H314, H372, H400	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available

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**5. FIREFIGHTING MEASURES****5.1 Extinguishing media****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**5.2 Special hazards arising from the substance or mixture**

Hydrogen iodide, Sodium oxides

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**5.4 Further information**

Use water spray to cool unopened containers.

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**6. ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.  
For personal protection see section 8.

**6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**6.3 Methods and materials for containment and cleaning up**

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

For disposal see section 13.

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**7. HANDLING AND STORAGE****7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combu formation should be taken into consideration before additional processing  
Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking.  
For precautions see section 2.2.

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

Keep container tightly closed in a dry and well-ventilated place.

Light sensitive. Hygroscopic.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

##### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

##### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

##### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industria situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. If th full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- |                    |  |
|--------------------|--|
| a) Appearance      | Form: crystalline<br>Colour: white, light yellow |
| b) Odour           | odourless  |
| c) Odour Threshold | No data available                                |
| d) pH              | 3.5 - 5.5 at 107 g/l at 25 °C (77 °F)            |

e) Melting point/freezing point	Melting point/range: 300 °C (572 °F) - dec.
f) Initial boiling point and boiling range	No data available
g) Flash point	( )No data available
h) Evaporation rate	No data available
i) Flammability (solid, gas)	The product is not flammable.
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	No data available
l) Vapour density	No data available
m) Relative density	3.860 g/cm <sup>3</sup>
n) Water solubility	107 g/l at 20 °C (68 °F) - completely soluble
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	262 °C (504 °F)
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	The substance or mixture is classified as oxidizing with the category 1.

## 9.2 Other safety information

No data available

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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

hygroscopic

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Exposure to light.

### 10.5 Incompatible materials

Organic materials, Forms shock-sensitive mixtures with certain other materials., Reducing agents, Powdered metals, Magnesium

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Hydrogen iodide, Sodium oxides

Other decomposition products - No data available

In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

No data available Sodium periodate  
Inhalation: No data available (Sodium periodate)  
Dermal: No data available (Sodium periodate)  
LD50 Intraperitoneal - Mouse - 58 mg/kg (Sodium periodate)  
No data available (Sodium periodate)

#### Skin corrosion/irritation

Skin - EPISKIN Human Skin Model Test (Sodium periodate)  
Result: Corrosive, category 1C - where responses occur after exposures between 1 hour and 4 hours and observations up to 14 days.  
(OECD Test Guideline 431)

#### Serious eye damage/eye irritation

Risk of serious damage to eyes. (Sodium periodate)

#### Respiratory or skin sensitisation

No data available (Sodium periodate)

#### Germ cell mutagenicity

No data available (Sodium periodate)

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
NTP: 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.  
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

#### Reproductive toxicity

No data available (Sodium periodate)  
No data available (Sodium periodate)

#### Specific target organ toxicity - single exposure

No data available (Sodium periodate)

#### Specific target organ toxicity - repeated exposure

The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1. - thymus gland

#### Aspiration hazard

No data available (Sodium periodate)

#### Additional Information

RTECS: SD4550000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (Sodium periodate)

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## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish	semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 0.17 mg/l - 96 h (Sodium periodate)
Toxicity to daphnia and	static test EC50 - Daphnia magna (Water flea) - 0.18 mg/l - 48 h (Sodium

other aquatic                      periodate)  
invertebrates

## 12.2 Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

## 12.3 Bioaccumulative potential

No data available

## 12.4 Mobility in soil

No data available(Sodium periodate)

## 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

## 12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Very toxic to aquatic life.

No data available

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## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chem scrubber.

#### Contaminated packaging

Dispose of as unused product.

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## 14. TRANSPORT INFORMATION

### DOT (US)

UN number: 3085              Class: 5.1 (8)              Packing group: I  
Proper shipping name: Oxidizing solid, corrosive, n.o.s. (Sodium periodate)  
Poison Inhalation Hazard: No

### IMDG

UN number: 3085              Class: 5.1 (8)              Packing group: I              EMS-No: F-A, S-Q  
Proper shipping name: OXIDIZING SOLID, CORROSIVE, N.O.S. (Sodium periodate)  
Marine pollutant : yes

### IATA

UN number: 3085              Class: 5.1 (8)              Packing group: I  
Proper shipping name: Oxidizing solid, corrosive, n.o.s. (Sodium periodate)

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## 15. 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) reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazards

Reactivity Hazard, Acute Health Hazard

### Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

## Pennsylvania Right To Know Components

Sodium periodate

CAS-No.  
7790-28-5

Revision Date

## New Jersey Right To Know Components

Sodium periodate

CAS-No.  
7790-28-5

Revision Date

## California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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## 16. OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3.

H271	May cause fire or explosion; strong oxidizer.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H372	Causes damage to organs through prolonged or repeated exposure.
H372	Causes damage to organs (/\$/*_ORGAN_REPEAT/\$/) through prolonged or repeated exposure.
H400	Very toxic to aquatic life.

### HMIS Rating

Health hazard:	2
Chronic Health Hazard:	
Flammability:	0
Physical Hazard	3

### NFPA Rating

Health hazard:	2
Fire Hazard:	0
Reactivity Hazard:	3
Special hazard.I:	OX

### Further information

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### Preparation Information

Sigma-Aldrich Corporation  
Product Safety – Americas Region  
1-800-521-8956  
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