

SAFETY DATA SHEET

Version 3.9
 Revision Date 10/26/2016
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name	: Sodium (meta)periodate		
Product Number	: S1147		
Brand	: Sigma		
Product Use	: For laboratory research purposes.		
Supplier	: Sigma-Aldrich Canada Co. 2149 Winston Park Drive OAKVILLE ON L6H 6J8 CANADA	Manufacturer	: Sigma-Aldrich Corporation 3050 Spruce St. St. Louis, Missouri 63103 USA
Telephone	: +1 9058299500		
Fax	: +1 9058299292		
Emergency Phone # (For both supplier and manufacturer)	: +1-703-527-3887 (CHEMTREC)		
Preparation Information	: Sigma-Aldrich Corporation Product Safety - Americas Region 1-800-521-8956		

2. HAZARDS IDENTIFICATION

Emergency Overview

Target Organs

Thyroid

WHMIS Classification

C	Oxidizing Material	Oxidizer
D2A	Very Toxic Material Causing Other Toxic Effects	Chronic toxicity
D2B	Toxic Material Causing Other Toxic Effects	Mild skin irritant
		Severe eye irritant

GHS Classification

Oxidizing solids (Category 1)
 Skin corrosion/irritation (Sub-category 1C)
 Serious eye damage/eye irritation (Category 1)
 Specific target organ toxicity - repeated exposure (Category 1), thymus gland
 Acute aquatic toxicity (Category 1)

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 (thymus gland) through prolonged or repeated exposure.
H400	Very toxic to aquatic life.

Precautionary statement(s)

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P220	Keep away from clothing and other combustible materials.
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 resistant or flame 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.
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.
P420	Store separately.
P501	Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification

Health hazard:	2
Flammability:	0
Physical hazards:	3

Potential Health Effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms	: Sodium periodate
Formula	: NaO_4
Molecular weight	: 213.89 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Sodium periodate			
7790-28-5	232-197-6	-	<=100%

4. 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.

5. FIREFIGHTING MEASURES**Suitable extinguishing media**

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

Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products**Explosion data - sensitivity to mechanical impact**

No data available

Explosion data - sensitivity to static discharge

No data available

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

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

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.

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.

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

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking.

Conditions for safe storage

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

Light sensitive. Hygroscopic.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Personal protective equipment****Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand 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: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatrill® (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 industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye 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 and 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.

Hygiene measures

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

Specific engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	crystalline
Colour	white, light yellow

Safety data

pH	3.5 - 5.5 at 107 g/l at 25 °C (77 °F)
Melting point/freezing point	Melting point/range: 270 °C (518 °F)
Boiling point	No data available
Flash point	No data available
Flammability (solid, gas)	The product is not flammable.
Ignition temperature	No data available
Auto-ignition temperature	262 °C (504 °F)
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	No data available
Density	3.860 g/cm ³
Water solubility	107 g/l at 20 °C (68 °F) - completely soluble
Partition coefficient: n-octanol/water	No data available
Relative vapour density	No data available
Odour	odourless
Odour Threshold	No data available

Evaporation rate No data available

10. STABILITY AND REACTIVITY

Chemical stability

hygroscopic Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

Exposure to light.

Materials to avoid

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

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Hydrogen iodide, Sodium oxides
Other decomposition products - No data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

No data available

Inhalation LC50

No data available

Dermal LD50

No data available

Other information on acute toxicity

LD50 Intraperitoneal - Mouse - 58 mg/kg

No data available

Skin corrosion/irritation

Skin - EPISKIN Human Skin Model Test - 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.

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

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.

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

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

Aspiration hazard

No data available

Potential health effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

Signs and Symptoms of Exposure

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

Synergistic effects

No data available

Additional Information

RTECS: SD4550000

12. ECOLOGICAL INFORMATION**Toxicity**

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

Persistence and degradability

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

Bioaccumulative potential

No data available

Mobility in soil

No data available

PBT and vPvB assessment

No data available

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

13. DISPOSAL CONSIDERATIONS**Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is 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 chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

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)
Reportable Quantity (RQ):
Marine pollutant: No
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: No

IATA

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

15. REGULATORY INFORMATION**WHMIS Classification**

C	Oxidizing Material	Oxidizer
D2A	Very Toxic Material Causing Other Toxic Effects	Chronic toxicity
D2B	Toxic Material Causing Other Toxic Effects	Mild skin irritant Severe eye irritant

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.

16. OTHER INFORMATION**Further information**

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