

**SAFETY DATA SHEET**

according to the Global Harmonized System (and with all of the information required by the HPR)

Revision Date 06/14/2018

Version 1.5

**SECTION 1. Identification****Product identifier**

Product number	106609
Product name	Sodium peroxodisulfate for analysis EMSURE®
CAS-No.	7775-27-1

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

Identified uses	Reagent for analysis
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**Details of the supplier of the safety data sheet**

Company	Millipore (Canada) Ltd   109 Woodbine Downs Blvd. Unit 5   Etobicoke   Ontario M9W 6Y1   Canada   General Inquiries: +1 800-645-5476   Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) MilliporeSigma is a business of Merck KGaA, Darmstadt, Germany.
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<b>Emergency telephone</b>	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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**SECTION 2. Hazards identification****GHS Classification**

Oxidizing solid, Category 3, H272  
Acute toxicity, Category 4, Oral, H302  
Respiratory sensitization, Category 1, H334  
Skin sensitization, Category 1, H317  
Specific target organ systemic toxicity - single exposure, Category 3, Respiratory system, H335  
For the full text of the H-Statements mentioned in this Section, see Section 16.

**GHS-Labeling***Hazard pictograms**Signal Word*

Danger

*Hazard Statements*

H272 May intensify fire; oxidizer.  
H302 Harmful if swallowed.

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H317 May cause an allergic skin reaction.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

### *Precautionary Statements*

P210 Keep away from heat.

P220 Keep/Store away from clothing/ combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing must not be allowed out of the workplace.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P285 In case of inadequate ventilation wear respiratory protection.

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P321 Specific treatment (see supplemental first aid instructions on this label).

P330 Rinse mouth.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

P363 Wash contaminated clothing before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

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

P405 Store locked up.

P501 Dispose of contents/ container to an approved waste disposal plant.

### **Other hazards**

None known.

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### **SECTION 3. Composition/information on ingredients**

Formula	Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub>	Na <sub>2</sub> O <sub>8</sub> S <sub>2</sub> (Hill)
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Molar mass	238.11 g/mol
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### **Hazardous ingredients**

*Chemical name (Concentration)*

CAS-No.

disodium peroxodisulphate (>= 90 % - <= 100 % )

7775-27-1

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### **SECTION 4. First aid measures**

#### **Description of first-aid measures**

*General advice*

First aider needs to protect himself.

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### *Inhalation*

After inhalation: fresh air. Call in physician.

### *Skin contact*

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Consult a physician.

### *Eye contact*

After eye contact: rinse out with plenty of water. Remove contact lenses.

### *Ingestion*

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Never give anything by mouth to an unconscious person.

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

irritant effects, Allergic reactions, Cough, Shortness of breath, Headache, Nausea, Vomiting

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

No information available.

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## **SECTION 5. Fire-fighting measures**

### **Extinguishing media**

#### *Suitable extinguishing media*

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### *Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

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

Not combustible.

Has a fire-promoting effect due to release of oxygen.

Risk of dust explosion.

Ambient fire may liberate hazardous vapors.

Fire may cause evolution of:

Sulfur oxides

### **Advice for firefighters**

#### *Special protective equipment for fire-fighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### *Further information*

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## **SECTION 6. Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

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Advice for emergency responders:

Protective equipment see section 8.

## Environmental precautions

Do not let product enter drains.

## Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

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## SECTION 7. Handling and storage

### Precautions for safe handling

Observe label precautions.

Work under hood. Do not inhale substance/mixture.

### Conditions for safe storage, including any incompatibilities

Dry.

Tightly closed. Do not store near combustible materials. Keep locked up or in an area accessible only to qualified or authorized persons.

Store at +15°C to +25°C (+59°F to +77°F).

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## SECTION 8. Exposure controls/personal protection

### Exposure limit(s)

#### Ingredients

Basis	Value	Threshold limits	Remarks
<i>disodium peroxodisulphate 7775-27-1</i>			
CAD AB OEL	Time Weighted Average (TWA):	0.1 mg/m <sup>3</sup>	
CAD BC OEL	Time Weighted Average (TWA):	0.1 mg/m <sup>3</sup>	Expressed as: as persulfate
CAD MB OEL	Time Weighted Average (TWA):	0.1 mg/m <sup>3</sup>	Expressed as: as persulfate
CAD ON OEL	Time Weighted Average (TWAEV):	0.1 mg/m <sup>3</sup>	Expressed as: as persulfate

### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

### Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

### Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

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## *Eye/face protection*

Safety glasses

## *Hand protection*

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0.11 mm
Break through time:	> 480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0.11 mm
Break through time:	> 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

## *Other protective equipment:*

protective clothing

## *Respiratory protection*

required when dusts are generated.

Recommended Filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are performed according to the instructions of the producer. These measures have to be properly documented.

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## **SECTION 9. Physical and chemical properties**

Physical state	solid
Color	white
Odor	odorless
Odor Threshold	Not applicable
pH	3.5 - 3.8 at 100 g/l 68 °F (20 °C)
Melting point	No information available.
Boiling point/boiling range	Not applicable

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Flash point	does not flash
Evaporation rate	No information available.
Flammability (solid, gas)	The product is not flammable.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor pressure	Not applicable
Relative vapor density	No information available.
Density	1.2 g/cm <sup>3</sup> at 68 °F (20 °C)
Relative density	No information available.
Water solubility	545 g/l at 68 °F (20 °C)
Partition coefficient: n-octanol/water	No information available.
Autoignition temperature	No information available.
Decomposition temperature	ca.356 °F (180 °C)
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	The substance or mixture is classified as oxidizing with the category 3.
Ignition temperature	not combustible
Bulk density	ca.1,150 kg/m <sup>3</sup>

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## SECTION 10. Stability and reactivity

### Reactivity

Oxidizing  
strong oxidizing agent  
Risk of dust explosion.

### Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### Possibility of hazardous reactions

Violent reactions possible with:

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Reducing agents, combustible substances, Alcohols, Strong acids, Bases, Heavy metal salts

## Conditions to avoid

Strong heating (decomposition).  
Exposure to moisture.

## Incompatible materials

no information available

## Hazardous decomposition products

in the event of fire: See section 5.

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## SECTION 11. Toxicological information

### Information on toxicological effects

#### *Likely route of exposure*

Eye contact, Skin contact, Ingestion

#### *Acute oral toxicity*

LD50 Rat: 920 mg/kg (IUCLID)

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

#### *Acute inhalation toxicity*

LC50 Rat: > 5.1 mg/l; 4 h  
(External MSDS)

Irritating to respiratory system.

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages: damage of respiratory tract, After a latency period: Lung edema

#### *Acute dermal toxicity*

LD50 Rabbit: > 10,000 mg/kg  
(External MSDS)

#### *Skin irritation*

Rabbit

Result: No irritation  
(IUCLID)

#### *Eye irritation*

Rabbit

Result: No eye irritation  
(IUCLID)

#### *Sensitization*

Sensitization test: Guinea pig

Result: positive

Method: OECD Test Guideline 406

May cause an allergic skin reaction.

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May cause allergy or asthma symptoms or breathing difficulties if inhaled.

### *Genotoxicity in vitro*

Ames test

Result: negative

(IUCLID)

### *Specific target organ systemic toxicity - single exposure*

May cause respiratory irritation.

Target Organs: Respiratory system

### *Specific target organ systemic toxicity - repeated exposure*

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

### *Aspiration hazard*

Regarding the available data the classification criteria are not fulfilled.

## **Carcinogenicity**

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

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

ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

## **Further information**

Systemic effects:

Nausea, Vomiting, Headache

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## **SECTION 12. Ecological information**

### **Ecotoxicity**

#### *Toxicity to fish*

static test LC50 *Oncorhynchus mykiss* (rainbow trout): 163 mg/l; 96 h

Analytical monitoring: yes(ECHA)

static test NOEC *Oncorhynchus mykiss* (rainbow trout): 91.7 mg/l; 96 h

Analytical monitoring: yes(ECHA)

#### *Toxicity to daphnia and other aquatic invertebrates*

static test EC50 *Daphnia magna* (Water flea): 133 mg/l; 48 h

Analytical monitoring: yes(ECHA)



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static test NOEC Daphnia magna (Water flea): 67.6 mg/l; 48 h

Analytical monitoring: yes(ECHA)

## Persistence and degradability

### *Biodegradability*

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

## Bioaccumulative potential

No information available.

## Mobility in soil

No information available.

### *Additional ecological information*

Biological effects:

Reacts with water to form toxic decomposition products.

Discharge into the environment must be avoided.

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## SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

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## SECTION 14. Transport information

### Land transport (DOT)

UN number	UN 1505
Proper shipping name	SODIUM PERSULPHATE
Class	5.1
Packing group	III
Environmentally hazardous	--

### Air transport (IATA)

UN number	UN 1505
Proper shipping name	SODIUM PERSULPHATE
Class	5.1
Packing group	III
Environmentally hazardous	--
Special precautions for user	no

### Sea transport (IMDG)

UN number	UN 1505
Proper shipping name	SODIUM PERSULPHATE
Class	5.1
Packing group	III
Environmentally hazardous	--

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**Special precautions for user**

yes

EmS

F-A S-Q

## SECTION 15. Regulatory information

### United States of America

### Canada

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

### Notification status

TSCA:

All components of the product are listed in the TSCA-inventory.

DSL:

All components of this product are on the Canadian DSL

## SECTION 16. Other information

### Training advice

Provide adequate information, instruction and training for operators.

### Labeling

#### *Hazard pictograms*



#### *Signal Word*

Danger

#### *Hazard Statements*

H272 May intensify fire; oxidizer.

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

#### *Precautionary Statements*

Prevention

P280 Wear protective gloves.

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

### Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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