

# MATERIAL SAFETY DATA SHEET

## trophon<sup>®</sup> Sonex-HL<sup>™</sup>

<b>1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING</b>
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### 1.1. Identification of the Substance/Preparation

Product Name : trophon Sonex-HL  
 Synonyms : Peroxide, Hydroperoxide, Hydrogen dioxide  
 Commercial Product Name : Sonex-HL  
 Molecular Formula : H<sub>2</sub>O<sub>2</sub>  
 Molecular Weight : 34 g/mol

### 1.2. Use of the Substance/Preparation

Recommended use : Disinfectant

### 1.3. Company/Undertaking Identification

Address : Nanosonics Limited  
 24/566 Gardeners Rd  
 Alexandria, NSW 2015  
 Telephone : +61 2 8063 1600  
 Fax : +61 2 9317 5010

### 1.4. Emergency Telephone Number

Telephone : Within Australia  
 Toll free: 1800 039 008  
 Land line: 03 9573 3112

If ringing from overseas  
 Toll free: +800 2436 2255  
 Land line: +61 3 9573 3112  
 US/Can: (+1) 877 715 9305

<b>2. HAZARDS IDENTIFICATION</b>
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Appearance : Liquid  
 Color : Colorless  
 Odor : Slightly pungent

- DANGER
- Oxidizer. Contact with other material may cause fire
- Causes skin burns
- Causes eye burns
- May cause respiratory tract irritation
- May be harmful if absorbed through skin
- May be harmful if swallowed

<b>3. COMPOSITION/INFORMATION ON INGREDIENTS</b>
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**Hydrogen peroxide** :  
 CAS-No. : 7722-84-1  
 Symbol(s) : O, C  
 R-pharse(s) : R 8, R34  
 Concentration : >=34.90 - <= 37.00%

## **4. FIRST AID MEASURES**

### **4.1. Inhalation**

- Remove person to fresh air.
- Consult a physician if irritation occurs and persists.

### **4.2. Eye Contact**

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- Get medical attention immediately

### **4.3. Skin Contact**

- Remove contaminated clothing.
- Wash with soap and copious amount of water.
- Consult a physician if irritation occurs and persists.

### **4.4. Ingestion**

- Call a poison control center or physician immediately. Do NOT induce vomiting unless directed by a physician
- If Conscious: Rinse mouth thoroughly with water.
- If Unconscious: Never give anything by mouth to an unconscious person.

## **5. FIRE FIGHTING MEASURES**

### **5.1. Suitable extinguishing media**

- Flood with water.

### **5.2. Fire / Explosion Hazards**

- Product is non-combustible. On decomposition releases oxygen which may intensify fire.

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

- In the case of fire, wear respiratory protective equipment independent of surrounding air and chemical protective suit.

### **5.4. Other information**

- Evacuate personnel to safe areas.
- Keep unauthorized persons away.
- Keep out unprotected persons.
- HAZCHEM Code:2P

## **6. ACCIDENTAL RELEASE MEASURES**

### **6.1. Personal precautions**

- Product causes chemical burns.
- Wear personal protective equipment; see section 8.
- Evacuate personnel to safe areas.
- Keep out unprotected persons.
- Keep away from incompatible products.

### **6.2. Environmental precautions**

- Small quantities can be discharged into the sewer with large quantities of water.
- If the product contaminates rivers and lakes or drains inform respective authorities.

### 6.3. Methods for cleaning up

- If possible, dam large quantities of liquid with sand or earth.
- Dilute with plenty of water.
- Do not add chemical products.
- Never return spills to original packaging for re-use.

## 7. HANDLING AND STORAGE

### 7.1. Handling

- Use only in well-ventilated areas.
- Keep away from incompatible products.
- Prevent all contact with organics.
- Use only equipment and materials which are compatible with the product.
- Never return unused material to bottle.
- Ascertain that an adequate supply of water is available in the event of an accident.

### 7.2. Storage

- Keep in a cool place.
- Keep away from heat and direct sun-light.
- Keep away from incompatible products.
- Keep away from combustible material.
- Keep in original packaging, closed.
- Keep upright as specified on packaging.

### 7.3. Specific use(s)

- Use only with the trophon EPR.

### 7.4. Packaging material

- HDPE bottle
- 350um fibre board and ecocote

### 7.5. Other information

- Refer to protective measures listed in section 8.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Exposure Limit Values

#### Hydrogen peroxide

- US. ACGIH Threshold Limit Values 2005

TWA = 1 ppm

- TLV (NOHSC) 11/2004

TWA = 1 ppm

TWA = 1.4 mg/m<sup>3</sup>

### 8.2. Exposure controls

- Ensure adequate ventilation.
- Refer to protective measures listed in section 8.

#### 8.2.1. Occupational exposure controls for spills

##### 8.2.1.1. *Respiratory protection*

- If workplace exposure limit is exceeded apply Respiratory protective equipment.
- Use only respiratory protection that conforms to the international/national standards.

#### 8.2.1.2. *Hand protection*

- Wear suitable gloves.
- Recommended materials : PVC, rubber

#### 8.2.1.3. *Eye protection*

- Chemical resistant goggles must be worn.
- If risk of splashing, chemical proof goggles/face shield.

#### 8.2.1.4. *Skin and body protection*

- Protective suit.
- Apron/boots of PVC or rubber if risk of splashing.

#### 8.2.1.5. *Hygiene measures*

- Shower and eye wash stations.
- Handle in accordance with good hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. General Information (appearance, odor)

<b>Appearance</b>	: Liquid
<b>Color</b>	: Colorless
<b>Odor</b>	: Slightly pungent

### 9.2. Important Health Safety and Environmental Information

<b>pH</b>	: 1-4
<b>Boiling point/range</b>	: 108°C (H <sub>2</sub> O <sub>2</sub> 35%)
<b>Flash point</b>	: Does not flash – not flammable.
<b>Flammability (solid, gas)</b>	: The product is not flammable.
<b>Explosive properties</b>	: Not explosive.
<b>Oxidizing properties</b>	: Remarks: Oxidizer
<b>Vapor pressure</b>	: 12 mbar Temperature: 20°C Remarks: Total pressure (H <sub>2</sub> O <sub>2</sub> + H <sub>2</sub> O) (H <sub>2</sub> O <sub>2</sub> 50%)
	: 72 mbar Temperature: 50°C Remarks: Total pressure (H <sub>2</sub> O <sub>2</sub> + H <sub>2</sub> O) (H <sub>2</sub> O <sub>2</sub> 50%)
	: 1 mbar Temperature: 30°C Remarks: Partial pressure (H <sub>2</sub> O <sub>2</sub> + H <sub>2</sub> O) (H <sub>2</sub> O <sub>2</sub> 50%)
<b>Relative density/ Density</b>	: 1.13 (H <sub>2</sub> O <sub>2</sub> 35%)

<b>Solubility</b>	:	Soluble in: Water Polar organic solvents
<b>Partition coefficient (n-octanol/water)</b>	:	<u>Log Pow:</u> -1.1
<b>Viscosity</b>	:	1.07mPa.s Temperature:20°C (H <sub>2</sub> O <sub>2</sub> 27.5%)
<b>Vapor density</b>	:	1 (H <sub>2</sub> O <sub>2</sub> 50%)

### 9.3. Other data

**Miscibility in water** : Completely miscible

## 10. STABILITY AND REACTIVITY

### 10.1. Conditions to avoid

- Direct sunlight, heat, heat effect.

### 10.2. Materials to avoid

- Contamination, impurities, metals, decomposition catalysts, reducing agents.

### 10.3. Hazardous decomposition products

- Oxygen, steam.

## 11. TOXICOLOGICAL INFORMATION

### 11.1. Toxicological data

#### **Acute oral toxicity**

- LD50, rat, 1,232 mg/kg (H<sub>2</sub>O<sub>2</sub> 35%)

#### **Acute inhalation toxicity**

- 11.1.1. LD50, 4h, rat, 2,000 mg/m<sup>3</sup> (Hydrogen peroxide)
- 11.1.2. LC0, 1h, mouse, 2,170 mg/m<sup>3</sup> (Hydrogen peroxide)

#### **Acute dermal toxicity**

- LD50, rabbit, >2,000 mg/kg (H<sub>2</sub>O<sub>2</sub> 35%)

#### **Skin irritation**

- 11.1.3. Rabbit, irritant (skin) (H<sub>2</sub>O<sub>2</sub> < 50%)

#### **Eye irritation**

- 11.1.4. Rabbit, Risk of serious damage to eyes. (H<sub>2</sub>O<sub>2</sub> 35%)

#### **Sensitization**

- 11.1.5. Guinea pig: not sensitizing

#### **Chronic toxicity**

- 11.1.6. Oral, Prolonged exposure, rat/mouse, Target Organs: gastro-intestinal system, observed effect

#### **Carcinogenicity**

- 11.1.7. Oral, Prolonged exposure, mouse, Target organs; duodenum, carcinogenic effect

#### **Genetic toxicity in vitro**

- 11.1.8. In vitro, without metabolic activation, mutagenic effects.

#### **Genetic toxicity in vivo**

- 11.1.9. In vivo, animal testing did not show any mutagenic effects.

## 11.2. Health effects

### *Inhalation*

- 11.2.1. Irritation to respiratory tract and cause inflammation of the respiratory tract and pulmonary oedema.

### *Eye contact*

- 11.2.2. Extreme irritation, watering, redness and swelling of the eyelids.  
11.2.3. Risk of irreversible damage.

### *Skin contact*

- 11.2.4. Causes caustic burns.  
11.2.5. Irritation and temporary whitening at contact area.

### *Ingestion*

- 11.2.6. May lead to bleeding of the mucosa in the mouth, oesophagus and stomach.  
11.2.7. May be fatal if swallowed.

## 12. ECOLOGICAL INFORMATION

### 12.1. Ecotoxicity effects

#### *Acute toxicity*

- 12.1.1. Fishes, Pimephales promelas, LC50, 96h, 16.4 mg/l  
12.1.2. Fishes, Pimephales promelas, NOEC, 96h, 5 mg/l  
12.1.3. Crustaceans, Daphnia pulex, EC50, 48h, 2.4 mg/l  
12.1.4. Crustaceans, Daphnia pulex, NOEC, 48h, 1 mg/l

#### *Chronic toxicity*

- 12.1.5. Remarks: no data available  
12.1.6. Algae, various species, EC50, from 72 – 96h, from 3.7 – 160 mg/l  
12.1.7. Remarks: fresh water  
12.1.8. Algae, Nitzschia closterium, EC50, from 72 – 96, 0.85 mg/l  
12.1.9. Remarks: salt water

## 13. DISPOSAL CONSIDERATIONS

### 13.1. Waste from residues / unused products

- In accordance with local and national regulations.
- Large quantities:  
Contact manufacturer

### 13.2. Packaging treatment

- In accordance with local and national regulations.

## 14. TRANSPORT INFORMATION

### 14.1. Mode of transport

- Sea, road and rail.

### 14.2. Mode of transport to avoid

- Air – STRICTLY NO AIR FREIGHT.

### 14.3. Other information

UN-No

2014

#### IMDG

Class	5.1
Sub-risks	CORROSIVE
Packing group	II
IMO-Labels	OXIDISING AGENT + CORROSIVE

HI/UN No. 2014  
EmS: F-H, S-Q  
Proper shipping name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION

#### ADG

Class 5.1  
Sub-risks 8  
Packing group II  
ADG-Labels 5.1 + 8  
HI/UN No. 58/2014

Proper shipping name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION

#### Remarks:

14.3.1. HAZCHEM Code:2P

### 15. REGULATORY INFORMATION

#### 15.1. Label

15.1.1. Hazardous components which must be listed on the label: Hydrogen peroxide

Symbol(s)	C	Corrosive
R-Phrase(s)	R34	Causes burns
S-phrase(s)	S1/2	Keep locked up and out of the reach of children
	S3	Keep in a cool place
	S28	After contact with skin, wash immediately with plenty of water.
	S36/39	Wear suitable protective clothing and eye/face protection
	S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

#### 15.2. International Inventories

**Toxic Substance Control Act list (TSCA)** : - In compliance with inventory.

**Australian Inventory of Chemical Substances (AICS)** : - In compliance with inventory.

**EU list of existing chemical substances (EINECS)** : - In compliance with inventory.

**New Zealand Inventory (in preparation) (NZ)** : - One or more components not listed on inventory.

### 16. OTHER INFORMATION

#### 16.1. Further information

The information provided in this Material 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. This applies to the product which conforms to the specification, unless otherwise stated.