ENGLISH

MATERIAL SAFETY DATA SHEET
trophon® Sonex-HL™

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

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_2O_2
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

2. HAZARDS IDENTIFICATION

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hydrogen peroxide	:	
CAS-No.	:	7722-84-1
Symbol(s)	:	O, C
R-phrase(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/m3

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)

Appearance	:	Liquid
Color	:	Colorless
Odor	:	Slightly pungent

9.2. Important Health Safety and Environmental Information

pH	:	1-4
Boiling point/range	:	108°C (H_2O_2 35%)
Flash point	:	Does not flash – not flammable.
Flammability (solid, gas)	:	The product is not flammable.
Explosive properties	:	Not explosive.
Oxidizing properties	:	Remarks: Oxidizer
Vapor pressure	:	12 mbar Temperature: 20°C Remarks: Total pressure (H_2O_2 + H_2O) (H_2O_2 50%)
	:	72 mbar Temperature: 50°C Remarks: Total pressure (H_2O_2 + H_2O) (H_2O_2 50%)
	:	1 mbar Temperature: 30°C Remarks: Partial pressure (H_2O_2 + H_2O) (H_2O_2 50%)
Relative density/ Density	:	1.13 (H_2O_2 35%)

Solubility	:	Soluble in: Water Polar organic solvents
Partition coefficient (n-octanol/water)	:	Log Pow: -1.1
Viscosity	:	1.07mPa.s Temperature:20°C (H_2O_2 27.5%)
Vapor density	:	1 (H_2O_2 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 (H2O2 35%)

Acute inhalation toxicity

11.1.1. LD50, 4h, rat, 2,000 mg/m3 (Hydrogen peroxide)

11.1.2. LC0, 1h, mouse, 2,170 mg/m3 (Hydrogen peroxide)

Acute dermal toxicity

- LD50, rabbit, >2,000 mg/kg (H2O2 35%)

Skin irritation

11.1.3. Rabbit, irritant (skin) (H2O2 < 50%)

Eye irritation

11.1.4. Rabbit, Risk of serious damage to eyes. (H2O2 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, Nitzchia 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.