

**Order
Number**
**Customer
Number**
1. Identification of the substance/preparation and of the company/undertaking

Product name : Peroxynitrite **Catalog #** 516620
Supplier : Manufactured by EMD Biosciences, Inc.
 10394 Pacific Center Court
 San Diego, CA 92121
 (858)450-5558/(800)854-3417
 FAX: (858)453-3552

Synonym Not available.

Emergency telephone number : **Call Chemtrec®**
(800)424-9300 (within U.S.A.)
(703)527-3887 (outside U.S.A.)

2. Composition / information on ingredients
Substance/Preparation : Substance

Chemical name*	CAS No.	EC Number	Symbol	R-Phrases
1) Peroxynitrite	N/A	Not available.	O, C	R8, R20/22, R34

3. Hazards identification

Physical/chemical hazards : Contact with combustible material may cause fire.

Human health hazards : DANGER!
 CAUSES RESPIRATORY TRACT, EYE AND SKIN BURNS.
 OXIDIZER.
 CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.
 MAY BE HARMFUL IF INHALED OR SWALLOWED.
 MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS: LUNGS,
 GASTROINTESTINAL TRACT, RESPIRATORY TRACT.

4. First-aid measures
First-Aid measures

- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
- Ingestion** : Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin Contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
- Eye Contact** : Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Effects and symptoms

- Inhalation** : Very hazardous in case of inhalation (lung corrosive). Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Over-exposure by inhalation may cause respiratory irritation.
- Ingestion** : May be fatal if swallowed. May cause burns to mouth, throat, and stomach. Harmful if swallowed.
- Skin Contact** : Very hazardous in case of skin contact (corrosive). Skin contact may produce burns. Prolonged exposure may result in skin burns and ulcerations.
- Eye Contact** : Very hazardous in case of eye contact (corrosive). This product is a severe eye irritant.
- Aggravating conditions** : Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

5. Fire-fighting measures

- Flammability of the Product** : May be combustible at high temperature.
- Extinguishing Media**
- Suitable** : Oxidizing material.
Do not use water jet. Use flooding quantities of water. Avoid contact with organic materials.
- Special fire-fighting procedures** : Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
- Protection of fire-fighters** : Be sure to use an approved/certified respirator or equivalent.

6. Accidental release measures

- Personal precautions** : Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
- Small Spill and Leak** : Absorb with an inert material and put the spilled material in an appropriate waste disposal.
- Large Spill and Leak** : Corrosive liquid. Oxidizing material.
Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

7. Handling and storage

- Handling** : Keep container dry. Keep away from heat. Keep away from sources of ignition. Keep away from combustible material. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as reducing agents, organic materials, metals.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalis, reducing agents and combustibles. See NFPA 43A, Code for the Storage of Liquid and Solid Oxidizers. Do not store above -70°C (-94°F).
- Packaging materials**
- Recommended use** : Use original container.

8. Exposure controls/personal protection

- Engineering measures** : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.
- Hygiene measures** : Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.

<u>Ingredient Name</u>	<u>Occupational Exposure Limits</u>
1) Peroxynitrite	Not available.

Personal protective equipment

- Respiratory system** : Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
- Skin and body** : Full suit.
- Hands** : Gloves.
- Eyes** : Face shield.
- Protective Clothing (Pictograms)** :



9. Physical and chemical properties

- Physical state** : Liquid.
- Color** : Yellowish.
- Molecular Weight** : Not available.
- Solubility** : Not available.
- Flash point** : Not available.

10. Stability and reactivity

Stability	: The product is stable.
Conditions to avoid	: Sensitive to light. Incompatible with alcohols and a wide variety of metals.
Materials to avoid	: Extremely reactive or incompatible with reducing agents. Reactive with organic materials, metals.

11. Toxicological information

RTECS #	: N/A
Local effects	
Skin irritation	: Very hazardous in case of skin contact (corrosive).
Acute toxicity	: LD50: Not available. LC50: Not available.
Chronic toxicity	: Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.
Other Toxic Effects on Humans	: Not available. Very hazardous in case of skin contact (corrosive), of eye contact (corrosive), of inhalation (lung corrosive). Hazardous in case of ingestion, . Not available. Exposure can cause lung irritation, chest pain and oedema which may be fatal. Exposure can cause nausea, headache and vomiting. Material is destructive to tissue of the mucous membranes and upper respiratory tract. Prolonged contact can cause severe irritation or even burns. To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated.
Carcinogenic effects	: Not available.
Mutagenic effects	: Not available.
Reproduction toxicity	: Not available.
Teratogenic effects	: Not available.

12. Ecological information

Ecotoxicity	: Not available.
Toxicity of the Products of Biodegradation	: Not available.

13. Disposal considerations

Methods of disposal; Waste of residues; Contaminated packaging	: Waste must be disposed of in accordance with federal, state and local environmental control regulations.
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14. Transport information


International transport regulations


UN number	: UN3098
Land - Road/Railway	
Proper shipping name	: Oxidizing liquid, corrosive, n.o.s.*
ADR/RID Class	: CLASS 5.1: Oxidizing material. CLASS 8: Corrosive liquid.
Packing Group	: II
ADR/RID label	:



Sea

Proper shipping name	: Oxidizing liquid, corrosive, n.o.s.*
IMDG Class	: CLASS 5.1: Oxidizing material. CLASS 8: Corrosive liquid.
Packing Group	: II


IMDG label : 

Air
Proper shipping name : Oxidizing liquid, corrosive, n.o.s.*
UN/ID Number : UN3098
IATA-DGR Class : CLASS 5.1: Oxidizing material.
IATA label : 

Special Provisions for Transport : Not available.

15. Regulatory information

EU Regulations

Hazard symbol(s) : 

Classification : Oxidizing, Corrosive

Risk Phrases : R8- Contact with combustible material may cause fire.
R20/22- Harmful by inhalation and if swallowed.
R34- Causes burns.

Safety Phrases : S3- Keep in a cool place.
S28.1- After contact with skin, wash immediately with plenty of water.
S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Contains : - Peroxynitrite

U.S. Federal Regulations : TSCA: No products were found.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.
SARA 313 toxic chemical notification and release reporting: No products were found.
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean air act (CAA) 112 accidental release prevention: No products were found.
Clean air act (CAA) 112 regulated flammable substances: No products were found.
Clean air act (CAA) 112 regulated toxic substances: No products were found.

HCS Classification : CLASS: Oxidizer.
CLASS: Target organ effects.
CLASS: Corrosive material

State Regulations :

WHMIS (Canada) : CLASS C: Oxidizing material.
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).
CLASS E: Corrosive liquid.
No products were found.

16. Other information

Hazardous Material Information System (U.S.A.)	Health * 3	National Fire Protection Association (U.S.A.)
	Fire Hazard 1	
	Reactivity 0	
	Personal Protection	



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