

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 11/11/2015

Reviewed on 11/11/2015

1 Identification

- **Product Identifier**
- **Trade name: Hydrogen Peroxide 35%**
- **Product Number:** NGT HydrPerox35
- **Relevant identified uses of the substance or mixture and uses advised against:**
- **Product Description** PC21 Laboratory chemicals
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**
NuGeneration Technologies, LLC (dba NuGenTec)
1155 Park Avenue, Emeryville, CA 94608
salesteam@nugentec.com www.nugentec.com
1-888-996-8436 or 1-707-820-4080 for product information
- **Emergency telephone number:**
PERS Emergency Response: Domestic and Canada - 1-800-633-8253, International 1-801-629-0667

2 Hazard(s) Identification

- **Classification of the substance or mixture:**



GHS03 Flame over circle

Ox. Liq. 1 H271 May cause fire or explosion; strong oxidizer.



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

- **Label elements:**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms:**



GHS03 GHS05

- **Signal word:** Danger

- **Hazard-determining components of labeling:**

Hydrogen peroxide solution

- **Hazard statements:**

May cause fire or explosion; strong oxidizer.

Causes skin irritation.

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Causes serious eye damage.

• **Precautionary statements:**

Take any precaution to avoid mixing with combustibles.

Wear fire/flammable resistant/retardant clothing.

Keep/Store away from clothing and other combustible materials

Wear protective gloves / eye protection / face protection.

Wear protective gloves.

Wear eye protection / face protection.

Wash thoroughly after handling.

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.

If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

If skin irritation occurs: Get medical advice/attention.

In case of fire: Use for extinction: CO2, powder or water spray.

IF ON SKIN: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Classification system:**

• **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 3

Reactivity = 0

The substance possesses oxidizing properties.

• **HMIS-ratings (scale 0 - 4)**



Health = 2

Fire = 3

Reactivity = 0

• **Hazard(s) not otherwise classified (HNOC):** None known

3 Composition/Information on Ingredients

7732-18-5 Water, distilled water, deionized water

60-90%

• **Chemical characterization: Mixtures**

• **Description:** Mixture of substances listed below with non-hazardous additions.

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· Dangerous Components:

CAS: 7722-84-1	Hydrogen peroxide solution	25-50%
RTECS: MX0887000	⚠ Ox. Liq. 1, H271; ⚠ Skin Corr. 1A, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	

4 First-Aid Measures

- **Description of first aid measures:**
- **General information:**
Symptoms of poisoning may occur after exposure to dust, fumes or particulates; seek medical attention if feeling unwell.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation occurs, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed:**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed:**
No further relevant information available.

5 Fire-Fighting Measures

- **Extinguishing media:**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture:** No further relevant information available.
- **Advice for firefighters:**
- **Protective equipment:**
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:** Not required.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
Dispose of the collected material according to regulations.

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· **Reference to other sections:**

- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

7 Handling and Storage

· **Handling**

· **Precautions for safe handling:**

- Ensure good ventilation/exhaustion at the workplace.
- Prevent formation of aerosols.

· **Information about protection against explosions and fires:** Protect from heat.

· **Conditions for safe storage, including any incompatibilities:**

· **Storage**

- **Requirements to be met by storerooms and receptacles:** Store in the original container.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Protect from heat and direct sunlight.
- **Specific end use(s):** No further relevant information available.

8 Exposure Controls/Personal Protection

· **Additional information about design of technical systems:** No further data; see section 7.

· **Control parameters:**

· **Components with occupational exposure limits:**

7722-84-1 Hydrogen peroxide solution

PEL Long-term value: 1.4 mg/m³, 1 ppm

REL Long-term value: 1.4 mg/m³, 1 ppm

TLV Long-term value: 1.4 mg/m³, 1 ppm

· **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

· **Exposure controls:**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

- The usual precautionary measures for handling chemicals should be followed.
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing and wash before reuse.
- Wash hands before breaks and at the end of work.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.

· **Breathing equipment:**

- In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure, use respiratory protective device that is independent of circulating air.

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· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Select glove material based on penetration times, rates of diffusion and degradation.

· **Material of gloves:**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material:**

The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

· **Eye protection:**



Tightly sealed goggles

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Liquid
· Color:	Colorless
· Odor:	Slight
· Odor threshold:	Not determined.

· **pH-value @ 20 °C (68 °F):** 5.5

· **Change in condition**

· Melting point/Melting range:	Not determined.
· Boiling point/Boiling range:	100 °C (212 °F)

· **Flash point:** None

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** Not determined

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not self-igniting.

· **Danger of explosion:** Product does not present an explosion hazard.
Explosive when mixed with combustible material.

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- **Explosion limits:**
 - Lower:** 0.0 Vol %
 - Upper:** 0.0 Vol %
- **Vapor pressure @ 20 °C (68 °F):** 23 hPa (17 mm Hg)
- **Density @ 20 °C (68 °F):** 1.11 g/cm³ (9.263 lbs/gal)
- **Relative density:** Not determined.
- **Vapor density:** Not determined.
- **Evaporation rate:** Not determined.
- **Solubility in / Miscibility with:**
 - Water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic @ 20 °C (68 °F):** 1 mPas
 - Kinematic:** Not determined.
- **Solvent content:**
 - Organic solvents:** 0.0 %
 - Water:** 65.0 %
- **Other information:** No further relevant information available.

10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological Information

- **Information on toxicological effects:**
 - **Acute toxicity:**
 - **LD/LC50 values that are relevant for classification:**
- | 7722-84-1 Hydrogen peroxide solution | | |
|--------------------------------------|---------------|--|
| Oral | LD50 | 2000 mg/kg (mouse)
820 mg/kg (rabbit) |
| Dermal | LD50 | 4060 mg/kg (rat) |
| Inhalative | LC50/96 hours | 2000 mg/l (rat) |
- **Primary irritant effect:**
 - **On the skin:** Irritant to skin and mucous membranes.

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- **On the eye:**
Strong irritant with the danger of severe eye injury.
Causes serious eye irritation.
 - **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant
 - **Carcinogenic categories:**
- | | |
|--|---|
| · IARC (International Agency for Research on Cancer): | |
| 7722-84-1 Hydrogen peroxide solution | 3 |
- **NTP (National Toxicology Program):**
None of the ingredients are listed.
 - **OSHA-Ca (Occupational Safety & Health Administration):**
None of the ingredients are listed.

12 Ecological Information

- **Toxicity:**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Do not allow undiluted product or product that has not been neutralized to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment:**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

13 Disposal Considerations

- **Waste treatment methods:**
- **Recommendation:**
Observe all federal, state and local environmental regulations when disposing of this material.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

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14 Transport Information

- **UN-Number:** UN2014
- **DOT, ADR, IMDG, IATA** UN2014
- **UN proper shipping name:** Hydrogen peroxide, aqueous solutions
- **DOT, IATA** UN2014 Hydrogen peroxide, aqueous solutions
- **ADR** HYDROGEN PEROXIDE, AQUEOUS SOLUTION
- **IMDG**
- **Transport hazard class(es):**
- **DOT**



- **Class:** 5.1 Oxidizing substances
- **Label:** 8

· **ADR**



- **Class:** 5.1 (OC1) Oxidizing substances
- **Label:** 8

· **IMDG, IATA**



- **Class:** 5.1 Oxidizing substances
- **Label:** 8
- **Packing group:** II
- **DOT, ADR, IMDG, IATA** II
- **Environmental hazards:** Not applicable.
- **Special precautions for user:** Warning: Oxidizing substances
- **Danger code (Kemler):** 80
- **EMS Number:** F-H,S-Q
- **Segregation groups:** Peroxides
- **Stowage Category** D
- **Stowage Code** SW1 Protected from sources of heat.
- **Segregation Code** SG16 Stow "separated from" class 4.1
SG59 Stow "separated from" permanganates
SG72 See 7.2.6.3.2.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.

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· Transport/Additional information:

· DOT

· Quantity limitations: On passenger aircraft/rail: 1 L
On cargo aircraft only: 30 L

· ADR

· Excepted quantities (EQ): Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

· IMDG

· Limited quantities (LQ): 1L
· Excepted quantities (EQ): Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation": UN 2014 HYDROGEN PEROXIDE, AQUEOUS SOLUTIONS, 8, II

15 Regulatory Information

· Safety, health and environmental regulations/legislation specific for the substance or mixture:

· SARA (Superfund Amendments and Reauthorization):

· Section 355 (extremely hazardous substances):

7722-84-1 Hydrogen peroxide solution

· Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· California Proposition 65:

· Chemicals known to cause cancer:

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

· Carcinogenic categories:

· EPA (Environmental Protection Agency):

None of the ingredients are listed.

· TLV (Threshold Limit Value established by ACGIH):

7722-84-1 Hydrogen peroxide solution

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· **NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms:**



GHS03 GHS05

· **Signal word: Danger**

· **Hazard-determining components of labeling:**

Hydrogen peroxide solution

· **Hazard statements:**

May cause fire or explosion; strong oxidizer.

Causes skin irritation.

Causes serious eye damage.

· **Precautionary statements:**

Take any precaution to avoid mixing with combustibles.

Wear fire/flammable resistant/retardant clothing.

Keep/Store away from clothing and other combustible materials

Wear protective gloves / eye protection / face protection.

Wear protective gloves.

Wear eye protection / face protection.

Wash thoroughly after handling.

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.

If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

If skin irritation occurs: Get medical advice/attention.

In case of fire: Use for extinction: CO2, powder or water spray.

IF ON SKIN: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

The product is subject to be classified according with the latest version of the regulations on hazardous substances.

· **State Right to Know:**

CAS: 7732-18-5	Water, distilled water, deionized water	60-90%
CAS: 7722-84-1	Hydrogen peroxide solution	25-50%
RTECS: MX0887000	⚠ Ox. Liq. 1, H271; ⚠ Skin Corr. 1A, H314; ⚠ Acute Tox. 4, H302; ⚠ Acute Tox. 4, H332	

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Trade name: Hydrogen Peroxide 35%*All ingredients are listed.*

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

- **Date of preparation / last revision:** 11/11/2015 / 4

- **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Ox. Liq. 1: Oxidising Liquids, Hazard Category 1

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

- *** Data compared to the previous version altered.**

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