Safety Data Sheet (SDS)

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

Issue date 02/13/2017 Reviewed on 02/13/2017

*

1 Identification

· **Product Identifier**

· **Trade name: Hydrogen Peroxide 35%**
· **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:**
H271 May cause fire or explosion; strong oxidizer.
H315 Causes skin irritation.
H318 Causes serious eye damage.

(Contd. on page 2)

Safety Data Sheet (SDS)

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

Issue date 02/13/2017 Reviewed on 02/13/2017

Trade name: Hydrogen Peroxide 35%

· **Precautionary statements:**

P221	Take any precaution to avoid mixing with combustibles.
P283	Wear fire/flame resistant/retardant clothing.
P220	Keep/Store away from clothing and other combustible materials
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P264	Wash thoroughly after handling.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P306+P360	If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P321	Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
P371+P380+P375	In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P370+P378	In case of fire: Use for extinction: CO2, powder or water spray.
P302+P352	IF ON SKIN: Wash with plenty of water.
P362+P364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents/container in accordance with local/regional/national/ international regulations.

· **Unknown acute toxicity:**
This value refers to knowledge of known, established toxicological or ecotoxicological values.
0 % of the mixture consists of component(s) of unknown toxicity.

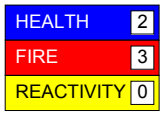
· **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

· **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

· **Non-hazardous components:**

7732-18-5	Water, distilled water, deionized water	60-90%

· **Chemical characterization: Mixtures**
· **Description:** Mixture of substances listed below with non-hazardous additions.

(Contd. on page 3)

Safety Data Sheet (SDS)

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

Issue date 02/13/2017 Reviewed on 02/13/2017

Trade name: Hydrogen Peroxide 35%

· **Dangerous Components:**

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

· **Additional information:**
The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

*

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.
If easy to do so, remove contact lenses if worn.
If eye irritation occurs, consult a doctor.
· **After swallowing:** If swallowed and symptoms occur, consult 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:** Use fire fighting measures that suit the environment.
· **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.

(Contd. on page 4)

Safety Data Sheet (SDS)

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

Issue date 02/13/2017 Reviewed on 02/13/2017

Trade name: Hydrogen Peroxide 35%

· **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.
· **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.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
7722-84-1	Hydrogen peroxide solution	10 ppm
· **PAC-2:**		
7722-84-1	Hydrogen peroxide solution	50 ppm
· **PAC-3:**		
7722-84-1	Hydrogen peroxide solution	100 ppm

*

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:** No special measures required.

· **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:** None.
· **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.

(Contd. on page 5)

Safety Data Sheet (SDS)

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

Issue date 02/13/2017 Reviewed on 02/13/2017

Trade name: Hydrogen Peroxide 35%

· **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 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.
· **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.

(Contd. on page 6)

Safety Data Sheet (SDS)

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

Issue date 02/13/2017 Reviewed on 02/13/2017

Trade name: Hydrogen Peroxide 35%

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.
· **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):**	1.158 g/cm³ (9.664 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.

(Contd. on page 7)

Safety Data Sheet (SDS)

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

Issue date 02/13/2017 Reviewed on 02/13/2017

Trade name: Hydrogen Peroxide 35%

*

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.
· **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:
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.

(Contd. on page 8)

Safety Data Sheet (SDS)

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

Issue date 02/13/2017 Reviewed on 02/13/2017

Trade name: Hydrogen Peroxide 35%

· **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.

*

14 Transport Information

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

· **DOT**

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

· **ADR/ADN**

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

· **IMDG, IATA**

· **Class:** 5.1 Oxidizing substances
· **Label:** 8
· **Packing group:**
· **DOT, ADR/ADN, IMDG, IATA** II
· **Environmental hazards:** Not applicable.

(Contd. on page 9)

Safety Data Sheet (SDS)

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

Issue date 02/13/2017 Reviewed on 02/13/2017

Trade name: Hydrogen Peroxide 35%

· **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.
· **Transport/Additional information:**	
· **DOT**	
· **Quantity limitations:**	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
· **ADR/ADN**	
· **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 or exempt from listing.

· **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.

(Contd. on page 10)

Safety Data Sheet (SDS)

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

Issue date 02/13/2017 Reviewed on 02/13/2017

Trade name: Hydrogen Peroxide 35%

· **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.

· **New Jersey Right-to-Know List:**

7722-84-1	Hydrogen peroxide solution

· **New Jersey Special Hazardous Substance List:**

7722-84-1	Hydrogen peroxide solution	CO, MU, R3

· **Pennsylvania Right-to-Know List:**

7722-84-1	Hydrogen peroxide solution

· **Pennsylvania Special Hazardous Substance List:**

7722-84-1	Hydrogen peroxide solution	E

· **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	A3

· **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:**
H271 May cause fire or explosion; strong oxidizer.
H315 Causes skin irritation.
H318 Causes serious eye damage.
· **Precautionary statements:**

P221	Take any precaution to avoid mixing with combustibles.
P283	Wear fire/flame resistant/retardant clothing.
P220	Keep/Store away from clothing and other combustible materials
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P264	Wash thoroughly after handling.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

(Contd. on page 11)

Safety Data Sheet (SDS)

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

Issue date 02/13/2017 Reviewed on 02/13/2017

Trade name: Hydrogen Peroxide 35%

P310	Immediately call a POISON CENTER/doctor.
P306+P360	If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P321	Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
P371+P380+P375	In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P370+P378	In case of fire: Use for extinction: CO2, powder or water spray.
P302+P352	IF ON SKIN: Wash with plenty of water.
P362+P364	Take off contaminated clothing and wash it before reuse.
P501	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.

· **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:** 02/13/2017 / 6

· **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)
HMIS: 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 and Health
OSHA: Occupational Safety & Health Administration
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Ox. Liq. 1: Oxidizing liquids – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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

SDS created by MSDS Authoring Services www.msdsauthoring.com +1-877-204-9106