**SAFETY DATA SHEET**

**Regulations (EC) n.1907/2006 e (UE) 2015/830**

Product Name: **NT-OXY Plus**

Creation Date: 08/09/2020

# SECTION 1: IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY

## 1.1. Product identifier

Product name: **NT-OXY Plus**

## 1.2. Relevant identified uses of the substance or mixture and uses advised against

Surface disinfectant (biocide PT2) – professional use.

Ready-to-use solution, used as bactericidal, fungicidal, virucidal, yeasticidal, tuberculocidal and sporicidal disinfectant. For use with PEROXYMED devices.

Use descriptor system (REACH):

SU20 (Health services)

SU22 (Professional uses)

## 1.3. Details of the supplier of the safety data sheet

| | |
|---|---|
| Company name: | Archem srl |
| Address: | Viale dell'Industria, 1 27020 Trivolzio (PV) ITALY. |
| Phone: | +39.0382.930612 |
| E-mail : | info@archem.it |

| Country | Emergency telephone number |
|---|---|
| ITALY +39 | - Bologna, Ospedale Maggiore: Tel. 051-333333, 051-6478955<br>- Milano, Ospedale Niguarda Ca' Granda, Tel. 02-66101029 Napoli, Ospedale Cardarelli, Tel. 081-7472870/ 0815453333<br>- Pavia, Centro Nazionale di Informazione Tossicologica - Fondazione Salvatore Maugeri, Clinica del Lavoro e della Riabilitazione IRCCS, Tel. 0382- 24444<br>- Roma, Policlinico A. Gemelli, Tel. 06-3054343 |

Other emergency numbers

In case of emergency, call nearest poison center or 112 or 113.

# SECTION 2: HAZARDS IDENTIFICATION

## 2.1. Classification of the substance or mixture

**In compliance with Regulation (EC) No.1272/2008 and its amendments.**

Eye irritation, Category 2 (Eye Irrit. 2, H319).

This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

## 2.2. Label elements

**In compliance with Regulation (EC) No.1272/2008 and its amendments.**

Hazard pictograms:

Signal Word: Warning

Hazard statements:

H319 Causes serious eye irritation.

Precautionary statements:

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/attention.

Additional labelling: None.

## 2.3. Other hazards

The mixture does not contain any substances classified as 'Substances of Very High Concern' (SVHC) as defined by criteria of article 57 of REACH (Regulation EC No.1907/2006) at concentration ≥ 0.1% - list published by the European CHemicals Agency (ECHA) as per article 59 of REACH.

The mixture does not contain any PBT or vPvB substances as defined in annex XIII of the REACH Regulation (EC) No.1907/2006.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

Not applicable (mixture).

### 3.2. Mixtures

Composition:

| INDEX | CAS No. | CE No. | Name | Pictogram | Classification | % w/w/ |
|---|---|---|---|---|---|---|
| 008-003-00-9 | 7722-84-1 | 231-765-0 | Hydrogen peroxide */** | SGH03<br>SGH05<br>SGH07<br>Danger | H271 H302<br>H314 H332 | 6 |
| | | | Mixture of food additives and essential oil- | | Not classified | x < 0.4 |

* Substance for which a workplace exposure limit exists.

** Specific limits: H271: C ≥ 70 %
H272: 50 % ≤ C < 70 %
H314 (1A): C ≥ 70 %
H314 (1B): 50 % ≤ C < 70 %
H315: 35 % ≤ C < 50 %
H318: 8 % ≤ C < 50 %
H319: 5 % ≤ C < 8 %
H335: C ≥ 35 %

Other data:

No data available.

## SECTION 4: FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing if the victim is unconscious.

### 4.1. Description of first aid measures

In the event of exposure by inhalation:

In case of discomfort, remove the exposed person to fresh air. Keep warm and at rest. Consult a doctor if symptoms appear.

In the event of splashes or contact with eyes:

Wash thoroughly with soft, clean water for several minutes holding the eyelids open.
Regardless of the initial state, refer the patient to an ophthalmologist and show him the label.

In the event of splashes or contact with skin:

Remove any soiled or splashed clothing immediately. Wash skin with soap and water.

In the event of swallowing:

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor. Keep the exposed person at rest. Do not induce vomiting. Consult a doctor showing the label.

### 4.2. Most important symptoms and effects, both acute and delayed

No data available for the product.

Information for hydrogen peroxide 50% (CAS No.7722-84-1) are reported below:

Effect on the skin:

Causes caustic burns. With increasing contact length, local erythema or extreme irritation (whitening) up to blistering (caustic burn) can occur.

Effect on the eyes:

Extreme irritation up to cauterisation. Can cause severe conjunctivitis, cornea damage or irreversible eye damage. Symptoms may occur with delay.

Effect when swallowed:

Swallowing can lead to bleeding of the mucosa in the mouth, oesophagus and stomach.

The rapid releasing of oxygen can cause distension and bleeding of the mucosa in the stomach and lead to severe damage of the internal organs, especially in the event of greater intake of the product.

Effect when inhaled:

Inhalation of vapour/aerosols can lead to irritation of the respiratory tract and cause inflammation of the respiratory tract and pulmonary oedema. Symptoms may occur with delay.

### 4.3. Indication of any immediate medical attention and special treatment needed

Specific and immediate treatment:

No data available.

Information for the doctor:

No data available

## SECTION 5: FIREFIGHTING MEASURES

Contains 6% of hydrogen peroxide (oxidising substance).

### 5.1. Extinguishing media

Suitable methods of extinction

In the event of a fire, use:
- sprayed water or water mist
- foam
- multipurpose ABC powder / BC powder
- carbon dioxide ($CO_2$)

Unsuitable methods of extinction

In the event of a fire, do not use:
- water jet

### 5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed:
- oxygen ($O_2$)
- carbon monoxide (CO)
- carbon dioxide ($CO_2$)

### 5.3. Advice for firefighters

No data available.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Consult safety advice of sections 7 and 8.

For non first aid worker

Avoid any contact with the eyes.

In case of accidental release of large quantities, evacuate staff and allow access only to trained operators equipped with self-contained breathing apparatus.

Ensure adequate ventilation.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

### 6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

### 6.3. Methods and material for containment and cleaning up

Clean preferably with detergent, avoid the use of solvents.

### 6.4. Reference to other sections

Refer to sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

### 7.1. Precautions for safe handling

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

Ensure adequate ventilation, especially in confined areas.

Emergency showers and eye wash stations will be required in facilities where the mixture is handled constantly.

Fire prevention:

Handle in well-ventilated areas.

Prevent access by unauthorised personnel.

Recommended equipment and procedures:

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Avoid any contact with the eyes at all times.

Packages which have been opened must be reclosed carefully and stored in an upright position.

Prohibited equipment and procedures:

No smoking, eating or drinking in areas where the mixture is used.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage/Packaging

Keep in original container tightly closed in a dry, well-ventilated area at ambient temperature between 5° and 30°C. Keep away from food, drink and animal feeding stuffs.

### 7.3. Specific end use(s)

No data available.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

Biological limits:

No data available.

Derived no effect level (DNEL) or derived minimum effect level (DMEL):

Hydrogen peroxide (CAS No.7722-84-1):

Worker:

Inhalation / acute toxicity – local effects: 3 mg/m$^3$

Inhalation / long term toxicity– local effects: 1.4 mg/m$^3$

Consumer:

Inhalation / acute toxicity – local effects: 1.93 mg/m$^3$

Inhalation / long term toxicity– local effects: 0.21 mg/m$^3$

Predicted no effect concentration (PNEC):

Hydrogen peroxide (CAS No.7722-84-1):

| | |
|---|---|
| Fresh water: | 0,0126 mg/L |
| Marine water: | 0,0126 mg/L |
| Water – intermittent releases: | 0,0138 mg/L |
| Sewage treatment plant: | 4,66 mg/L |
| Fresh water sediment: | 0,47 mg/kg (dry weight) |
| Marine sediment: | 0,47 mg/kg (dry weight) |
| Soil: | 0,0023 mg/kg (dry weight) |

### 8.2. Exposure controls

Suitable technical inspections:

Ensure adequate ventilation, especially in confined areas.

Personal protection measures, such as personal protective equipment

Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using.

Ensure adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Before handling large quantities, wear safety goggles with protective sides accordance with standard EN166. In the event of high danger, protect the face with a face shield.

Provide eyewash stations in facilities where the product is handled constantly.

- Hand protection

Use suitable protective gloves in accordance with standard EN374 in case of repeated or prolonged exposure.

- Body protection

Work clothing worn by personnel shall be laundered regularly.
After contact with the product, all parts of the body that have been soiled must be washed.

- Respiratory protection

Ensure adequate ventilation, especially in confined areas.

- Thermal risks

Not applicable.

Exposure controls linked to environmental protection

No data available.

# SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

## 9.1. Information on basic physical and chemical properties

General information:

| | |
|---|---|
| Physical state: | Liquid (fluid) |
| Odour: | characteristic odour |
| Colour: | White pale |

Important health, safety and environmental information

| | |
|---|---|
| pH (mixture): | > 7 |
| pH (1% dilution): | > 6 |
| Melting point/melting range: | Not determined |
| Freezing point: | Not determined |
| Boiling point/boiling range: | Not determined |
| Flash point: | N.A. |
| Evaporation rate: | Not determined |
| Flammability: | Not determined |
| Lower/upper flammability limits: | Not determined |
| Lower/upper explosive limits: | Not determined |
| Vapour pressure: | Not determined |
| Vapour density: | Not determined |
| Solubility: | Not determined |
| Octanol/water partition coefficient: | Not determined |
| Self-ignition temperature: | Not determined |
| Decomposition point: | Not determined |
| Density: | 1.035 g/cm$^3$ |
| Explosive properties: | Not determined |
| Oxidising properties: | Not determined |

## 9.2. Other information

N.A.

# SECTION 10: STABILITY AND REACTIVITY

## 10.1. Reactivity

No data available.

## 10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

## 10.3. Possibility of hazardous reactions

When exposed to high temperatures, the mixture can release hazardous decomposition products, such as carbon monoxide, carbon dioxide fumes, nitrogen oxides.
Hydrogen peroxide (6% in product) is an oxidizing and reactive substance. The commercial product is stabilized to reduce the risk of decomposition.
Risk of decomposition to heat.
Risk of exothermic decomposition and formation of oxygen in case of contact with incompatible or combustible substances. Mixing with organic substances (solvents) can induce explosive properties.

## 10.4. Conditions to avoid

Avoid:
- direct sunlight, high temperatures.

## 10.5. Incompatible materials

Avoid contact with:
- metals, metal salts, acids, bases, reducing agents, flammable substances, organic solvents.

## 10.6. Hazardous decomposition products

The thermal decomposition may release/form

- oxygen ($O_2$)
- carbon monoxide (CO)
- carbon dioxide ($CO_2$)

# SECTION 11: TOXICOLOGICAL INFORMATION

May have irreversible effects on the eyes, such as tissue damage in the eye, or serious physical decay of sight, which is not fully reversible by the end of observation at 21 days.

Serious eye damage is typified by the destruction of cornea, persistent corneal opacity and iritis.

## 11.1. Information on toxicological effects

### 11.1.1. Substances

Not applicable (mixture).

### 11.1.2. Mixture

No toxicological data available for the mixture.

The product is classified for serious eye damage, Category 1 (Eye Dam. 1, H318), classification by conventional calculation method.

### Acute toxicity:

The product is not classified (conventional method by calculation). Hydrogen peroxide 50% (CAS No.7722-84-1):

Oral, rat: $LD_{50}$ > 225 mg/kg (OECD No.401)

Inhalation, rat: $LC_{50}$ > 0.17 mg/L (4h) – no mortality (US EPA) Hydrogen peroxide 70% (CAS No.7722-84-1):

Dermal, rabbit: $LD_{50}$ > 6 500 mg/kg Hydrogen peroxide 35% (CAS No.7722-84-1):

### Skin corrosion/skin irritation:

The product is not classified (conventional method by calculation).

Hydrogen peroxide (CAS No.7722-84-1):

H314 (1A): C ≥ 70 %

H314 (1B): 50 % ≤ C < 70 %

H315: 35 % ≤ C < 50 %

### Serious damage to eyes/eye irritation:

The product is classified for serious eye damage, Category 1 (Eye Dam. 1, H318), classification by conventional calculation method.
Hydrogen peroxide (CAS No.7722-84-1):

H318: 8 % ≤ C < 50 %

### Respiratory or skin sensitisation:

The product does not contain any substance classified as sensitising.

### Germ cell mutagenicity:

No data available for the mixture, however no hazard is expected with regard to its components.

Hydrogen peroxide (CAS No.7722-84-1):

Genotoxicity *in vitro*:

Bacterial reverse mutation assay *S. typhimurium / E. coli*: positive and negative with or without metabolic activation Chromosomal aberration mammalian cells: positive without metabolic activation (OECD No.473)
Genetic mutation in mammal cells: positive without metabolic activation (OECD No.476)

Hydrogen peroxide 35% (CAS No.7722-84-1): Genotoxicity *in vivo*:

Micronucleus test Mouse intraperitoneal: negative (OECD No.474)

### Carcinogenicity:

No data available for the mixture, however no hazard is expected with regard to its components.

### Reproductive toxicant:

No data available for the mixture, however no hazard is expected with regard to its components.

### Specific target organ systemic toxicity - single exposure:

The product is not classified (conventional method by calculation). Hydrogen peroxide (CAS No.7722-84-1):

H335; C ≥ 35 %

### Specific target organ systemic toxicity - repeated exposure:

The product does not contain any substance classified for this hazard. Hydrogen peroxide 35% (CAS No.7722-84-1):

Oral, mouse, 90 days: NOEL = 37 mg/kg (female) – 26 mg/kg (male) (OECD No.408)

### Aspiration hazard:

The product does not contain any substance classified for this hazard.

### Absence of specific data

No data available.

### Other information

No data available.

# SECTION 12: ECOLOGICAL INFORMATION

## 12.1. Toxicity

### 12.1.1. Substances

Not applicable (mixture).

### 12.1.2. Mixture

No aquatic toxicity information is available for the mixture.

This mixture is not classified as hazardous for the environment (classification by calculation). No environmental damage is known or foreseeable under normal conditions of use.

Hydrogen peroxide (CAS No.7722-84-1):

Acute toxicity:

| | |
|---|---|
| Fish: semi-static test, *Pimephales promelas:* | $LC_{50}$ = 16,4 mg/L (96 h) |
| Invertebrates: semi-static test, *Daphnia pulex:* | $EC_{50}$ = 2,4 mg/L (48 h) |
| Algae: static test, *Skeletonema costatum:* | NOEC = 0,63 mg/L (72 h) – growth rate |
| Bacteria: activated sludge test: | $EC_{50}$ = 466 mg/L (30 min); > 1000 mg/L (3 h) (OECD No.209) |

Chronic toxicity:

| | |
|---|---|
| Invertebrates: flow-through, *Daphnia magna*: | NOEC = 0,63 mg/L (21 days) |

## 12.2. Persistence and degradability

No data available for the mixture.

Hydrogen peroxide (CAS No.7722-84-1): readily degradable.

## 12.3. Bioaccumulative potential

No data available for the mixture.

Hydrogen peroxide (CAS No.7722-84-1): no bioaccumulative potential (rapid decomposition into oxygen and water).

## 12.4. Mobility in soil

No data available.

## 12.5. Results of PBT and vPvB assessment

The mixture does not contain any PBT nor vPvB substance.

## 12.6. Other adverse effects

No data available.

# SECTION 13: DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC, Decision 2014/955/EU and Directive (EU) 2015/1127.

## 13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste:

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company. Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging:

Completely empty container. Keep label(s) on container. Give to a certified disposal contractor.

# SECTION 14: TRANSPORT INFORMATION

Exempt from transport classification and labelling.

## SECTION 15: REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture Classification and labelling information included in section 2:

The following regulations have been used:
- Regulation EC No.1272/2008 and its modifications

### Biocidal regulation (EU) No. 528/2012

Surface disinfectant (biocide PT2) – professional use.

Hydrogene peroxide, CAS No.7722-84-1: 6%

### Container information:

No data available.

### Particular provisions:

No data available.

### 15.2. Chemical safety assessment

No data available.

## SECTION 16: OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions. It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

### Wording of the phrases mentioned in section 3:

| | |
|---|---|
| H271 | May cause fire or explosion; strong oxidiser. |
| H272 | May intensify fire; oxidiser. |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |

### Abbreviations:

PBT: Persistent, bioaccumulable and toxic.

vPvB: Very persistent, very bioaccumulable.

SVHC: Substances of very high concern.