SAFETY DATA SHEET
Hydrogen Peroxide 3%

According to the REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577, as amended.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name Hydrogen Peroxide 3%

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

Identified uses Bleaching agent for pulp. Raw Material. Laboratory reagent.

Uses advised against Biocide.

1.3. Details of the supplier of the safety data sheet

Supplier

Byon Limited
Gemma House
39 Lilestone Street
London
England
NW8 8SS
contact@ukonyx.com

1.4. Emergency telephone number

Emergency telephone 0333 339 3295

National emergency telephone number National Poisons Information Service

For medical advice or information you should contact your GP or NHS 111 (or NHS 24 in Scotland) on 111 (for 24 hour health advice)

If you are a healthcare professional with an enquiry please visit www.TOXBASE.org

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (SI 2019 No. 720)

Physical hazards Not Classified

Health hazards Eye Irrit. 2 - H319

Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms



Signal word Warning

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Hazard statements H319 Causes serious eye irritation.

Precautionary statements P264 Wash contaminated skin 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.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

hydrogen peroxide solution	**3-5%**
CAS number: 7722-84-1	EC number: 231-765-0

Classification
Ox. Liq. 1 - H271
Acute Tox. 4 - H302
Acute Tox. 4 - H332
Skin Corr. 1A - H314
Eye Dam. 1 - H318
STOT SE 3 - H335
Aquatic Chronic 3 - H412

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention if symptoms are severe or persist.

Ingestion Rinse mouth thoroughly with water. Give plenty of water to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. Get medical attention immediately.

Skin contact It is important to remove the substance from the skin immediately. Take off immediately all contaminated clothing. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention. Get medical attention if symptoms are severe or persist after washing.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes. Get medical attention immediately.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	May cause respiratory irritation.
Ingestion	May cause stomach pain or vomiting.
Skin contact	May cause irritation. Redness. Dry skin.
Eye contact	Irritating to eyes.

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

Notes for the doctor	Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Water spray.
Unsuitable extinguishing media	Do not use the following: Foam. Carbon dioxide (CO2). Powder. Dry chemicals.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Containers can burst violently or explode when heated, due to excessive pressure build-up.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Oxygen.

5.3. Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. May cause or intensify fire; oxidiser. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
Special protective equipment for firefighters	Regular protection may not be safe. Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with skin and eyes. Avoid inhalation of dust and vapours. No smoking, sparks, flames or other sources of ignition near spillage. Do not touch or walk into spilled material. Use suitable respiratory protection if ventilation is inadequate.

6.2. Environmental precautions

Environmental precautions	Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Contain and absorb spillage with sand, earth or other non-combustible material. Do not use sawdust or other combustible material. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Inform authorities if large amounts are involved.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. Mechanical ventilation or local exhaust ventilation may be required. If ventilation is inadequate, suitable respiratory protection must be worn. Do not breathe vapour/spray. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not eat, drink or smoke when using this product. Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

Advice on general occupational hygiene Eye wash facilities and emergency shower must be available when handling this product. Good personal hygiene procedures should be implemented. Wash promptly if skin becomes contaminated. Take off immediately all contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep away from oxidising materials, heat and flames. Keep away from combustible materials. Protect from light. Store away from incompatible materials (see Section 10). Store at temperatures between 5°C and 25°C.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

hydrogen peroxide solution

Long-term exposure limit (8-hour TWA): WEL 1 ppm 1.4 mg/m³
Short-term exposure limit (15-minute): WEL 2 ppm 2.8 mg/m³
WEL = Workplace Exposure Limit.

hydrogen peroxide solution (CAS: 7722-84-1)

DNEL

Workers - Inhalation; Short term local effects: 3 mg/m³
Workers - Inhalation; Long term local effects: 1.4 mg/m³
Consumer - Inhalation; Short term local effects: 1.93 mg/m³
Consumer - Inhalation; Long term local effects: 0.21 mg/m³

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PNEC	- Fresh water; 0.0126 mg/l - marine water; 0.0126 mg/l - Soil; 0.0023 mg/kg - STP; 4.66 mg/l - Sediment (Freshwater); 0.047 mg/kg - Sediment (Marinewater); 0.047 mg/kg - Intermittent release; 0.0138 mg/l

8.2. Exposure controls

Appropriate engineering controls	Provide adequate ventilation. As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure.
Eye/face protection	Wear tight-fitting, chemical splash goggles or face shield. Personal protective equipment that provides appropriate eye and face protection should be worn. If inhalation hazards exist, a full-face respirator may be required instead.
Other skin and body protection	Wear appropriate clothing to prevent skin contamination.
Hygiene measures	Provide eyewash station and safety shower. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Warn cleaning personnel of any hazardous properties of the product.
Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Gas filter, type A2. Gas filter, type B.
Environmental exposure controls	Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid.
Colour	Colourless.
Bulk density	~ 1018 kg/m³

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

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Possibility of hazardous reactions	No potentially hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid	Avoid heat. Light.

10.5. Incompatible materials

Materials to avoid	Acetone. Alkalis. Some metals. Metal oxides. Reducing agents. Some metals. Organic compounds.

10.6. Hazardous decomposition products

Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Oxygen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg)	7,183.33

Acute toxicity - inhalation

ATE inhalation (dusts/mists mg/l)	25.0

Toxicological information on ingredients.

hydrogen peroxide solution

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	431.0
Species	Rat
ATE oral (mg/kg)	431.0

Acute toxicity - dermal

Notes (dermal LD_{50})	LD_{50} >2000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

ATE inhalation (dusts/mists mg/l)	1.5

Skin corrosion/irritation

Skin corrosion/irritation	Corrosive to skin. Causes severe burns.

Serious eye damage/irritation

Serious eye damage/irritation	Causes serious eye damage.

Respiratory sensitisation

Respiratory sensitisation	No data available.

Skin sensitisation

Skin sensitisation	Conclusive data but not sufficient for classification.

Germ cell mutagenicity

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Genotoxicity - in vitro	Conclusive data but not sufficient for classification.
Genotoxicity - in vivo	Conclusive data but not sufficient for classification.
Carcinogenicity	
Carcinogenicity	Conclusive data but not sufficient for classification.
Reproductive toxicity	
Reproductive toxicity - fertility	Conclusive data but not sufficient for classification.
Reproductive toxicity - development	Conclusive data but not sufficient for classification.
Specific target organ toxicity - single exposure	
STOT - single exposure	STOT SE 3 - H335 Respiratory system irritation.
Target organs	Respiratory tract
Specific target organ toxicity - repeated exposure	
STOT - repeated exposure	Conclusive data but not sufficient for classification. LOAEL 0.0029 mg/l, Inhalation, Rat NOAEL 26 mg/kg/day, Oral, Rat
Aspiration hazard	
Aspiration hazard	No data available.

SECTION 12: Ecological information

12.1. Toxicity

Ecological information on ingredients.

hydrogen peroxide solution

Acute aquatic toxicity	
Acute toxicity - fish	LC_{50}, 96 hour: 16.4 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	LC_{50}, 48 hour: 2.4 mg/l, Daphnia pulex
Acute toxicity - aquatic plants	ErC50, 72 hour: 1.38 mg/l, skeletonema costatum
Acute toxicity - microorganisms	EC_{50}, 0.5 hour: 466 mg/l, Activated sludge
Chronic aquatic toxicity	
Chronic toxicity - aquatic invertebrates	NOEC, 21 day: 0.63 mg/l, Daphnia magna

12.2. Persistence and degradability

Ecological information on ingredients.

hydrogen peroxide solution

Persistence and degradability	Substance is inorganic.

12.3. Bioaccumulative potential

Ecological information on ingredients.

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hydrogen peroxide solution

Bioaccumulative potential	Bioaccumulation is unlikely.
Partition coefficient	Kow: -1.57 Calculation method.

12.4. Mobility in soil

Ecological information on ingredients.

hydrogen peroxide solution

Mobility	Soluble in water.
Surface tension	Not determined.

12.5. Results of PBT and vPvB assessment

Ecological information on ingredients.

hydrogen peroxide solution

Results of PBT and vPvB assessment	This substance is not classified as PBT or vPvB according to current UK criteria.

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous. Do not discharge into drains or watercourses or onto the ground.
Disposal methods	Dispose of contents/container in accordance with local regulations.

SECTION 14: Transport information

General	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

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Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations	Health and Safety at Work etc. Act 1974 (as amended). The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]. EH40/2005 Workplace exposure limits. Control of Substances Hazardous to Health Regulations 2002 (as amended). GB CLP Regulation. The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 (SI 2020 No. 1577) (as amended). This is a regulated/reportable substance under the Poisons Act 1972 as amended by the Control of Explosives Precursors and Poisons Regulations 2023.
Restrictions (SI 2020 No. 1577 Annex XVII)	Entry number: 3

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Hydrogen Peroxide 3%

Abbreviations and acronyms used in the safety data sheet	ATE: Acute Toxicity Estimate. ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. CAS: Chemical Abstracts Service. GHS: Globally Harmonized System. DNEL: Derived No Effect Level. IATA: International Air Transport Association. ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air. IMDG: International Maritime Dangerous Goods. Kow: Octanol-water partition coefficient. LC50: Lethal Concentration to 50 % of a test population. LD50: Lethal Dose to 50% of a test population (Median Lethal Dose). PBT: Persistent, Bioaccumulative and Toxic substance. PNEC: Predicted No Effect Concentration. REACH: The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577. RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail. SVHC: Substances of Very High Concern. vPvB: Very Persistent and Very Bioaccumulative. MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. EC_{50}: 50% of maximal Effective Concentration. LOAEL: Lowest Observed Adverse Effect Level. NOAEL: No Observed Adverse Effect Level. UN: United Nations. IBC: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code).
Classification abbreviations and acronyms	Acute Tox. = Acute toxicity Aquatic Chronic = Hazardous to the aquatic environment (chronic) Eye Dam. = Serious eye damage Ox. Liq. = Oxidising liquid Skin Corr. = Skin corrosion STOT SE = Specific target organ toxicity-single exposure
Key literature references and sources for data	Source: European Chemicals Agency, http://echa.europa.eu/
Classification procedures according to SI 2019 No. 720	Eye Irrit. 2 - H319: Expert judgement.
Training advice	Read and follow manufacturer's recommendations. Only trained personnel should use this material.
Revision date	30/08/2023
Revision	5
Supersedes date	09/05/2022
SDS number	4691

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Hazard statements in full

H271 May cause fire or explosion; strong oxidiser.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.