



SAFETY DATA SHEET PEROXAL 30 PG

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

1.1. Product identifier

Product name	PEROXAL 30 PG
Product number	60014
Synonyms; trade names	HYDROGEN PEROXIDE SOLUTION - ≥ 20 - $< 40\%$
REACH registration number	01-2119485845-22-XXXX
CAS number	7722-84-1
EU index number	008-003-00-9
EC number	231-765-0

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

Identified uses	Chemical
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1.3. Details of the supplier of the safety data sheet

Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com
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1.4. Emergency telephone number

Emergency telephone	SGS - +32 (0)3 575 55 55 (24h)
Sds No.	60014

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 STOT SE 3 - H335
Environmental hazards	Not Classified

2.2. Label elements

EC number	231-765-0
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PEROXAL 30 PG

Hazard pictograms



Signal word

Danger

Hazard statements

H302+H332 Harmful if swallowed or if inhaled.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

Precautionary statements

P261 Avoid breathing vapour/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental label information

Acquisition, possession or use by the general public is restricted.

Contains

HYDROGEN PEROXIDE

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

HYDROGEN PEROXIDE		>= 20 - <40%
CAS number: 7722-84-1	EC number: 231-765-0	REACH registration number: 01-2119485845-22-XXXX
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 hazard statements is displayed in Section 16.

Composition comments

The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aid personnel should wear appropriate protective equipment during any rescue. Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk.

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Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse nose and mouth with water. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. If breathing stops, provide artificial respiration. Keep affected person under observation. Get medical attention if any discomfort continues.
Ingestion	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Do not induce vomiting. Rinse mouth thoroughly with water. 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. Get medical attention immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Continue to rinse for at least 15 minutes. 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 15 minutes. Get medical attention immediately. Continue to rinse.

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

Inhalation	Harmful if inhaled. May cause respiratory irritation. Symptoms following overexposure may include the following: Pulmonary oedema, frothy sputum. Irritation of nose, throat and airway. Effects may be delayed.
Ingestion	Harmful if swallowed. May cause burns in mucous membranes, throat, oesophagus and stomach. May cause severe internal injury. Unconsciousness, possibly death.
Skin contact	Causes skin irritation. Symptoms following overexposure may include the following: Pain or irritation. Discoloration of the skin. Redness.
Eye contact	Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated.

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

Notes for the doctor	No specific recommendations. Effects may be delayed. Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with the following media: Water spray, fog or mist.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire. Do not use the following: Alcohol-resistant foam. Carbon dioxide (CO ₂). Dry chemicals. Foam.

5.2. Special hazards arising from the substance or mixture

Specific hazards	May ignite other combustible materials. The product increases the risk of fire and may accelerate combustion. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. 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	Evacuate area. No action shall be taken without appropriate training or involving any personal risk. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Control run-off water by containing and keeping it out of sewers and watercourses. Contain and collect extinguishing water.
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Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

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. Follow precautions for safe handling described in this safety data sheet. Evacuate area. Keep unnecessary and unprotected personnel away from the spillage. Approach the spillage from upwind. Provide adequate ventilation. Avoid inhalation of vapours and contact with skin and eyes. Do not touch or walk into spilled material. No smoking, sparks, flames or other sources of ignition near spillage.

6.2. Environmental precautions

Environmental precautions Avoid the spillage or runoff entering drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if safe to do so. Approach the spillage from upwind. Avoid the spillage or runoff entering drains, sewers or watercourses. Absorb spillage with inert, damp, non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Clean contaminated objects and areas thoroughly, observing environmental regulations. Keep only in the original container.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet. Collect and dispose of spillage as indicated in Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Handle all packages and containers carefully to minimise spills. Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid inhalation of vapours and contact with skin and eyes. Contents may develop pressure upon prolonged storage. Do not close container tightly, due to the risk of excessive pressure build-up.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Provide eyewash station and safety shower.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store locked up. Keep only in the original container in a cool, well-ventilated place. Do not close container tightly, due to the risk of excessive pressure build-up. Avoid exposure to high temperatures or direct sunlight. Use appropriate containment to avoid environmental contamination. Ensure control measures are regularly inspected and maintained. Store in a demarcated bunded area to prevent release to drains and/or watercourses. Avoid contact with the following materials: Flammable/combustible materials. Organic materials Chemically-active metals. Metal oxide(s). Alkalies. Acetone.

Suitable container materials: Stainless steel. Aluminium. Polyethylene. Polytetrafluoroethylene (PTFE, Teflon).

7.3. Specific end use(s)

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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

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 (CAS: 7722-84-1)

Ingredient comments	WEL = Workplace Exposure Limits
DNEL	Workers - Inhalation; Short term local effects: 3 mg/m ³ Workers - Inhalation; Long term local effects: 1.4 mg/m ³ Consumer - Inhalation; Short term local effects: 1.93 mg/m ³ Consumer - Inhalation; Long term local effects: 0.21 mg/m ³
PNEC	- Fresh water; 0.0126 mg/l - marine water; 0.0126 mg/l - STP; 4.66 mg/l - Intermittent release; 0.0138 mg/l - Sediment (Freshwater); 0.047 mg/l - Sediment (Marinewater); 0.047 mg/l - Soil; 0.0023 mg/kg

8.2. Exposure controls

Protective equipment



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. Avoid inhalation of vapours and contact with skin and eyes. Provide eyewash station and safety shower.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Chemical splash goggles or face shield.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374. The selected gloves should have a breakthrough time of at least 8 hours. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.

It is recommended that gloves are made of the following material:

Butyl rubber. Protective gloves should have a minimum thickness of 0.7 mm.

Rubber (natural, latex). Protective gloves should have a minimum thickness of 1.0 mm.

Nitrile rubber. Protective gloves should have a minimum thickness of 0.33 mm.

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Other skin and body protection	Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.
Hygiene measures	Wash at the end of each work shift and before eating, smoking and using the toilet. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Care should be taken to avoid contact with contaminants when removing contaminated clothing. Wash contaminated clothing before reuse.
Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Gas filter, type A2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Pungent.
Odour threshold	No information available.
pH	pH (concentrated solution): 2 - 4
Melting point	-26°C
Initial boiling point and range	106°C
Flash point	Does not flash.
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	No information available.
Other flammability	No information available.
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	1.03 - 1.07 @ 20°C
Bulk density	No information available.
Solubility(ies)	Soluble in water.
Partition coefficient	log Kow: -1.57 Calculation method.
Auto-ignition temperature	No information available.
Decomposition Temperature	No information available.
Viscosity	No information available.
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

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9.2. Other information

Other information No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No test data specifically related to reactivity available for this product or its ingredients.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Under normal conditions of storage and use, no hazardous reactions will occur. Do not close container tightly, due to the risk of excessive pressure build-up.

10.4. Conditions to avoid

Conditions to avoid Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials to avoid Avoid contact with the following materials: Flammable/combustible materials. Organic materials Chemically-active metals. Metal oxide(s). Alkalis. Acetone.

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

Notes (oral LD₅₀) Harmful if swallowed.
LD₅₀ > 1200 mg/kg, Oral, Rat (35% Solution.)

ATE oral (mg/kg) 1,428.57

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ 6500 mg/kg, Dermal, Rabbit (70% Solution.) (0 Death.)

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Harmful if inhaled.
LC₅₀ (MAC) > 0.17 mg/l, 4 hour, Vapour Rat (0 Death.)

ATE inhalation (dusts/mists mg/l) 1.5

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.
Highly irritating. Rabbit (35% Solution.)

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Not sensitising.

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Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Genotoxicity - in vivo Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.
NOAEL (90d) 26 mg/kg/day, Oral, Rat
LOAEL 0.0029 mg/l, Inhalation, local effects, Rat

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

Inhalation	Harmful if inhaled. May cause respiratory irritation. Symptoms following overexposure may include the following: Pulmonary oedema, frothy sputum. Irritation of nose, throat and airway. Effects may be delayed.
Ingestion	May cause chemical burns in mouth, oesophagus and stomach. May cause severe internal injury. Unconsciousness, possibly death.
Skin contact	Causes skin irritation. Symptoms following overexposure may include the following: Pain or irritation. Discoloration of the skin. Redness.
Eye contact	Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated.

Toxicological information on ingredients.

HYDROGEN PEROXIDE

Acute toxicity - oral

Notes (oral LD₅₀) Harmful if swallowed.

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

Notes (dermal LD₅₀) No specific test data are available.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Harmful if inhaled.

**ATE inhalation
(dusts/mists mg/l)** 1.5

Skin corrosion/irritation

Skin corrosion/irritation Causes severe burns.

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Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Genotoxicity - in vivo Micronucleus assay: Negative., Mouse OECD 474
DNA damage and/or repair: Negative., Rat OECD 486

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.
NOAEL (90d) 26 mg/kg/day, Oral, Rat
LOAEL 0.0029 mg/l, Inhalation, local effects, Rat

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

Inhalation Harmful if inhaled. May cause respiratory system irritation.

Ingestion Harmful if swallowed.

Skin contact Causes severe burns.

Eye contact Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated.

SECTION 12: Ecological information

Ecotoxicity Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

Ecological information on ingredients.

HYDROGEN PEROXIDE

Ecotoxicity The product components are not classified as environmentally hazardous.
However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Toxicity There are no data on the ecotoxicity of this product.

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Ecological information on ingredients.

HYDROGEN PEROXIDE

Acute aquatic toxicity

Acute toxicity - fish LC50, 96 hours: 16.4 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 2.4 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 2.62 mg/l, Selenastrum capricornutum
ErC50, 72 hour: 1.38 mg/l, Skeletonema costatum
NOEC, r 72 hour: 0.63 mg/l, Skeletonema costatum

Acute toxicity - microorganisms EC₅₀, 0.5 hour: 466 mg/l, Activated sludge
OECD 209

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 0.63 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability The product is readily biodegradable.

Ecological information on ingredients.

HYDROGEN PEROXIDE

Persistence and degradability The product is readily biodegradable.

Biodegradation - Degradation 99%: 30 minute

12.3. Bioaccumulative potential

Bioaccumulative potential The product is not bioaccumulating.

Partition coefficient log Kow: -1.57 Calculation method.

Ecological information on ingredients.

HYDROGEN PEROXIDE

Bioaccumulative potential The product is not bioaccumulating.

Partition coefficient log Pow: -1.57

12.4. Mobility in soil

Mobility The product is soluble in water.

Ecological information on ingredients.

HYDROGEN PEROXIDE

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

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Ecological information on ingredients.

HYDROGEN PEROXIDE

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

12.6. Other adverse effects

Other adverse effects No information required.

Ecological information on ingredients.

HYDROGEN PEROXIDE

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste is classified as hazardous waste. Do not puncture or incinerate, even when empty. Avoid discharge into drains or watercourses or onto the ground. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	2014
UN No. (IMDG)	2014
UN No. (ICAO)	2014
UN No. (ADN)	2014

14.2. UN proper shipping name

Proper shipping name (ADR/RID) HYDROGEN PEROXIDE, AQUEOUS SOLUTION

Proper shipping name (IMDG) HYDROGEN PEROXIDE, AQUEOUS SOLUTION

Proper shipping name (ICAO) HYDROGEN PEROXIDE, AQUEOUS SOLUTION

Proper shipping name (ADN) HYDROGEN PEROXIDE, AQUEOUS SOLUTION

14.3. Transport hazard class(es)

ADR/RID class 5.1

ADR/RID subsidiary risk 8

ADR/RID classification code OC1

ADR/RID label 5.1

IMDG class 5.1

IMDG subsidiary risk 8

ICAO class/division 5.1

ICAO subsidiary risk 8

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ADN class 5.1

ADN subsidiary risk 8

Transport labels



14.4. Packing group

ADR/RID packing group II

IMDG packing group II

ICAO packing group II

ADN packing group II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

IMDG Code segregation group 16. Peroxides

EmS F-H, S-Q

ADR transport category 2

Emergency Action Code 2P

Hazard Identification Number (ADR/RID) 58

Tunnel restriction code (E)

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

SECTION 15: Regulatory information

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

EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Commission Regulation (EU) No 2015/830 of 28 May 2015.

Restrictions (Annex XVII Regulation 1907/2006)

CAUTION - Chemical may be subject to REACH RESTRICTIONS - see Annex XVII. This product is/contains a substance that is included in REGULATION (EC) No 1907/2006 (REACH) ANNEX XVII - RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES. Entry number: 3

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

SECTION 16: Other information

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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.
 DNEL: Derived No Effect Level.
 IATA: International Air Transport Association.
 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: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 vPvB: Very Persistent and Very Bioaccumulative.
 IARC: International Agency for Research on Cancer.
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
 cATpE: Converted Acute Toxicity Point Estimate.
 BCF: Bioconcentration Factor.
 BOD: Biochemical Oxygen Demand.
 EC₅₀: 50% of maximal Effective Concentration.
 LOAEC: Lowest Observed Adverse Effect Concentration.
 LOAEL: Lowest Observed Adverse Effect Level.
 NOAEC: No Observed Adverse Effect Concentration.
 NOAEL: No Observed Adverse Effect Level.
 NOEC: No Observed Effect Concentration.
 LOEC: Lowest Observed Effect Concentration.
 DMEL: Derived Minimal Effect Level.
 EL50: Exposure Limit 50
 hPa: Hectopascal
 LL50: Lethal Loading fifty
 OECD: Organisation for Economic Co-operation and Development
 POW: Octanol-water partition coefficient
 SCBA: self-contained breathing apparatus
 STP: Sewage Treatment Plant
 VOC: Volatile Organic Compounds

Classification abbreviations and acronyms

Acute Tox. = Acute toxicity
 Aquatic Acute = Hazardous to the aquatic environment (acute)
 Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Key literature references and sources for data

Supplier's information.

Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date

30/03/2020

Version number

2.000

Supersedes date

04/08/2015

SDS number

60014

PEROXAL 30 PG

SDS status

Approved.

Hazard statements in full

H271 May cause fire or explosion; strong oxidiser.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Signature

Jacq Pattinson



Exposure scenario
Loading and unloading operations, distribution covering all identified uses

Identification

Product name	Hydrogen Peroxide
REACH registration number	01-2119485845-22-XXXX
CAS number	7722-84-1
EC number	231-765-0
EU index number	008-003-00-9
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Loading and unloading operations, distribution covering all identified uses
Product category	PC1 Adhesives, sealants. PC8 Biocidal products PC12 Lawn and garden preparations (- fertilizers). PC14 Metal surface treatment products PC15 Non-metal-surface treatment products. PC21 Laboratory chemicals. PC25 Metal working fluids. PC27 Plant protection products. PC29 Pharmaceuticals PC31 Polishes and wax blends. PC32 Polymer preparations and compounds. PC34 Textile dyes and impregnating products PC35 Washing and cleaning products PC37 Water treatment chemicals. PC39 Cosmetics, personal care.
Main sector	SU3 Industrial uses

Loading and unloading operations, distribution covering all identified uses

Sector of use	SU4 Manufacture of food products SU5 Manufacture of textiles, leather, fur SU6 Manufacture of paper and paper products SU8 Manufacture of bulk, large-scale chemicals (including petroleum products) SU9 Manufacture of fine chemicals SU10 Formulation [mixing] of preparations and/or re-packaging SU11 Manufacture of rubber products SU12 Manufacture of plastics products, including compounding and conversion SU14 Manufacture of basic metals, including alloys SU15 Manufacture of fabricated metal products, except machinery and equipment SU16 Manufacture of computer, electronic and optical products, electrical equipment SU17 General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment SU21 Consumer uses SU22 Professional uses
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Environment

Environmental release category	ERC1 Manufacture of the substance ERC2 Formulation into mixture ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article) ERC6a Use of intermediate ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article) ERC6c Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article) ERC6d Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)
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Worker

Process category	PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 90 %.

Other given operational conditions affecting environmental exposure

Emission factor - air	Air emission controls are not applicable as there is no direct release to air.
Emission factor - water	Wastewater emission controls are not applicable as there is no direct release to wastewater.
Emission factor - soil	Not applicable - no direct release to soil.

Risk management measures

Good practice	Common practices vary across sites, thus conservative process release estimates used.
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Conditions and measures related to external treatment of waste for disposal

Waste treatment	Hazardous waste incineration.
Disposal method	Contain and dispose of waste according to local regulations.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Loading and unloading operations, distribution covering all identified uses

Physical state Liquid

Concentration details Covers concentrations up to 90 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Provide extract ventilation to points where emissions occur.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Wash hands before breaks and after work.

Wear suitable coveralls to prevent exposure to the skin.

Use suitable eye protection and gloves.

Other protection measures such as segregation of activity, minimisation of personnel, respiratory protection, impervious suits and face shields should also be considered for high dispersion activities which are likely to lead to substantial aerosol or vapour release, e.g. spraying.

3. Exposure estimation (Environment 1)

No exposure assessment presented for the environment. Qualitative approach used to conclude safe use.

3. Exposure estimation (Health 1)

Assessment method Used ECETOC TRA model.

Exposure

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
 Worker - inhalation: Exposure 0.99 mg/m³, DNEL 2.8 mg/m³, RCR 0.35

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
 Worker - inhalation: Exposure 0.21 mg/m³, DNEL 2.8 mg/m³, RCR 0.075

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
 Worker - inhalation: Exposure 0.71 mg/m³, DNEL 2.8 mg/m³, RCR 0.25



Exposure scenario

Bleaching with hydrogen peroxide solutions

Identification

Product name	Hydrogen Peroxide
REACH registration number	01-2119485845-22-XXXX
CAS number	7722-84-1
EC number	231-765-0
EU index number	008-003-00-9
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Bleaching with hydrogen peroxide solutions
Product category	PC23 Leather treatment products PC24 Lubricants, greases and release products. PC26 Paper and board treatment products PC34 Textile dyes and impregnating products
Main sector	SU3 Industrial uses
Sector of use	SU5 Manufacture of textiles, leather, fur SU6 Manufacture of paper and paper products SU21 Consumer uses SU22 Professional uses

Environment

Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article) ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article) ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8b Widespread use of reactive processing aid (no inclusion into or onto article, indoor) ERC8e Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)
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Worker

Bleaching with hydrogen peroxide solutions

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
	PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
	PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
	PROC4 Chemical production where opportunity for exposure arises
	PROC13 Treatment of articles by dipping and pouring.
	PROC19 Manual activities involving hand contact

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 35 %.

Amounts used

Annual amount per site: 9810 tonnes
Regional use tonnage: 43600 tonnes/year

Frequency and duration of use

Emission days: 360 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (after typical onsite RMMs): 0.01
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0.009
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 0.0001

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 (Default)
	Local marine water dilution factor: 100 (Default)

Risk management measures

Good practice	Common practices vary across sites, thus conservative process release estimates used.
STP type	Municipal STP.

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Air	Filtration.
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Conditions and measures related to external treatment of waste for disposal

Disposal method	Contain and dispose of waste according to local regulations. Hazardous waste incineration.
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2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 35 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
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Bleaching with hydrogen peroxide solutions

Ventilation rate SU3 Industrial uses Local exhaust ventilation - efficiency of at least [%]: 90 SU22 Professional uses Local exhaust ventilation - efficiency of at least [%]: 80

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Provide extract ventilation to points where emissions occur.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Wash hands before breaks and after work.
Wear suitable coveralls to prevent exposure to the skin.
Use suitable eye protection and gloves.
Other protection measures such as segregation of activity, minimisation of personnel, respiratory protection, impervious suits and face shields should also be considered for high dispersion activities which are likely to lead to substantial aerosol or vapour release, e.g. spraying.

2. Conditions of use affecting exposure (Non-industrial - Health 2)

Product characteristics

Physical state Liquid

Concentration details Avoid using at a product concentration greater than 12%.

Amounts used

Amount per use: 100 ml

Frequency and duration of use

Covers daily exposure up to 10minutes

Other given operational conditions affecting Non-industrial exposure

Temperature Assumes activities are at ambient temperature (unless stated differently).

Other given operational conditions affecting Non-industrial exposure

Exposure route Inhalation

Consumer information Do not ingest. If swallowed, then seek immediate medical assistance.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Environmental exposure Fresh water: Exposure 0.0098 mg/l, PNEC 0.0126 mg/l, RCR 0.78
Marine water: Exposure 0.001 mg/l, PNEC 0.0126 mg/l, RCR 0.079
Soil: Exposure 0.000154 mg/kg, PNEC 0.0023 mg/kg, RCR 0.067
STP: Exposure 0.098 mg/l, PNEC 4.66 mg/l, RCR 0.021
Worst case assumption

3. Exposure estimation (Health 1)

Assessment method Used ECETOC TRA model.

Bleaching with hydrogen peroxide solutions

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions

Worker - inhalation: Exposure 0.005 mg/m³, DNEL 2.8 mg/m³, RCR 0.002

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Worker - inhalation: Exposure 0.496 mg/m³, DNEL 2.8 mg/m³, RCR 0.18

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

Worker - inhalation: Exposure 0.298 mg/m³, DNEL 2.8 mg/m³, RCR 0.11

PROC4 Chemical production where opportunity for exposure arises

Worker - inhalation: Exposure 0.992 mg/m³, DNEL 2.8 mg/m³, RCR 0.35

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation: Exposure 0.496 mg/m³, DNEL 2.8 mg/m³, RCR 0.18

PROC19 Manual activities involving hand contact

Worker - inhalation: Exposure 0.85 mg/m³, DNEL 2.8 mg/m³, RCR 0.30

3. Exposure estimation (Health 2)

Exposure

Consumer - inhalation: Exposure 0.13 mg/m³, DNEL 2.8 mg/m³, RCR 0.046



Exposure scenario

Environmental and agricultural use of hydrogen peroxide solutions

Identification

Product name	Hydrogen Peroxide
REACH registration number	01-2119485845-22-XXXX
CAS number	7722-84-1
EC number	231-765-0
EU index number	008-003-00-9
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Environmental and agricultural use of hydrogen peroxide solutions
Product category	PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents PC37 Water treatment chemicals.
Main sector	SU3 Industrial uses SU21 Consumer uses SU22 Professional uses
Sector of use	SU1 Agriculture, forestry, fishery SU2a Mining (without offshore industries) SU2b Offshore industries SU8 Manufacture of bulk, large-scale chemicals (including petroleum products)

Environment

Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article) ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article) ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8b Widespread use of reactive processing aid (no inclusion into or onto article, indoor) ERC8e Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)
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Worker

Environmental and agricultural use of hydrogen peroxide solutions

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
	PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
	PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
	PROC4 Chemical production where opportunity for exposure arises

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 50 %.

Amounts used

Annual amount per site: 4.93 tonnes
Regional use tonnage: 2465 tonnes/year

Frequency and duration of use

Emission days: 360 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (after typical onsite RMMs): 0.1
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0.05
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 0.8

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 (Default)
	Local marine water dilution factor: 100 (Default)

Risk management measures

Good practice	Common practices vary across sites, thus conservative process release estimates used.
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Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Air	Filtration.
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Conditions and measures related to external treatment of waste for disposal

Disposal method	Contain and dispose of waste according to local regulations. Hazardous waste incineration.
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2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 50 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
Ventilation rate	SU3 Industrial uses Local exhaust ventilation - efficiency of at least [%]: 90 SU22 Professional uses Local exhaust ventilation - efficiency of at least [%]: 80

Environmental and agricultural use of hydrogen peroxide solutions

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Provide extract ventilation to points where emissions occur.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Wash hands before breaks and after work.

Wear suitable coveralls to prevent exposure to the skin.

Use suitable eye protection and gloves.

Other protection measures such as segregation of activity, minimisation of personnel, respiratory protection, impervious suits and face shields should also be considered for high dispersion activities which are likely to lead to substantial aerosol or vapour release, e.g. spraying.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Environmental exposure Fresh water: Exposure 0.0085 mg/l, PNEC 0.0126 mg/l, RCR 0.67
Marine water: Exposure 0.000775 mg/l, PNEC 0.0126 mg/l, RCR 0.006
Soil: Exposure 0.000113 mg/kg, PNEC 0.0023 mg/kg, RCR 0.049
STP: Exposure 0.088 mg/l, PNEC 4.66 mg/l, RCR 0.019

Worst case assumption

3. Exposure estimation (Health 1)

Assessment method Used ECETOC TRA model.

Exposure PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
Worker - inhalation: Exposure 0.007 mg/m³, DNEL 2.8 mg/m³, RCR 0.0025
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
Worker - inhalation: Exposure 0.708 mg/m³, DNEL 2.8 mg/m³, RCR 0.25
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
Worker - inhalation: Exposure 0.425 mg/m³, DNEL 2.8 mg/m³, RCR 0.15
PROC4 Chemical production where opportunity for exposure arises
Worker - inhalation: Exposure 1.06 mg/m³, DNEL 2.8 mg/m³, RCR 0.38

Worst case assumption



Exposure scenario

Use of hydrogen peroxide solutions in cleaning agents

Identification

Product name	Hydrogen Peroxide
REACH registration number	01-2119485845-22-XXXX
CAS number	7722-84-1
EC number	231-765-0
EU index number	008-003-00-9
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use of hydrogen peroxide solutions in cleaning agents
Product category	PC21 Laboratory chemicals. PC35 Washing and cleaning products
Main sector	SU21 Consumer uses SU22 Professional uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8b Widespread use of reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) ERC8e Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)
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Worker

Process category	PROC4 Chemical production where opportunity for exposure arises PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring. PROC19 Manual activities involving hand contact
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
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Use of hydrogen peroxide solutions in cleaning agents

Concentration details Covers concentrations up to 50 %.

Amounts used

Regional use tonnage: 6210 tonnes/year

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air Not applicable.

Emission factor - water Release fraction to wastewater from process (initial release prior to RMM): 0.8

Emission factor - soil Not applicable - no direct release to soil.

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10 (Default)
Local marine water dilution factor: 100 (Default)

Risk management measures

Good practice Common practices vary across sites, thus conservative process release estimates used.

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Air Filtration.

Conditions and measures related to external treatment of waste for disposal

Disposal method Household solid waste (e.g. product packaging) is treated at municipal waste disposal sites.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Amounts used

Small scale

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Wash hands before breaks and after work.
Wear suitable coveralls to prevent exposure to the skin.
Use suitable eye protection and gloves.
Other protection measures such as segregation of activity, minimisation of personnel, respiratory protection, impervious suits and face shields should also be considered for high dispersion activities which are likely to lead to substantial aerosol or vapour release, e.g. spraying.

3. Exposure estimation (Environment 1)

Use of hydrogen peroxide solutions in cleaning agents

Assessment method	Used EUSES model.
Environmental exposure	Fresh water: Exposure 0.0085 mg/l, PNEC 0.0126 mg/l, RCR 0.67 Marine water: Exposure 0.000775 mg/l, PNEC 0.0126 mg/l, RCR 0.006 Soil: Exposure 0.000113 mg/kg, PNEC 0.0023 mg/kg, RCR 0.049 STP: Exposure 0.088 mg/l, PNEC 4.66 mg/l, RCR 0.019 Worst case assumption

3. Exposure estimation (Health 1)

Assessment method	Used ECETOC TRA model.
Exposure	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions Worker - inhalation: Exposure 0.007 mg/m ³ , DNEL 2.8 mg/m ³ , RCR 0.0025 PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Worker - inhalation: Exposure 0.708 mg/m ³ , DNEL 2.8 mg/m ³ , RCR 0.25 PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition Worker - inhalation: Exposure 0.425 mg/m ³ , DNEL 2.8 mg/m ³ , RCR 0.15 PROC4 Chemical production where opportunity for exposure arises Worker - inhalation: Exposure 1.06 mg/m ³ , DNEL 2.8 mg/m ³ , RCR 0.38 Worst case assumption



Exposure scenario

Use of hydrogen peroxide solutions for hair bleaching and dyeing and tooth bleaching

Identification

Product name	Hydrogen Peroxide
REACH registration number	01-2119485845-22-XXXX
CAS number	7722-84-1
EC number	231-765-0
EU index number	008-003-00-9
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use of hydrogen peroxide solutions for hair bleaching and dyeing and tooth bleaching
Product category	PC39 Cosmetics, personal care.
Main sector	SU21 Consumer uses SU22 Professional uses

Environment

Environmental release category	ERC8b Widespread use of reactive processing aid (no inclusion into or onto article, indoor)
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Worker

Process category	PROC19 Manual activities involving hand contact
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
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Amounts used

Regional use tonnage: 6210 tonnes/year

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Not applicable.
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Use of hydrogen peroxide solutions for hair bleaching and dyeing and tooth bleaching

Emission factor - water Release fraction to wastewater from process (initial release prior to RMM): 0.8

Emission factor - soil Not applicable - no direct release to soil.

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10 (Default)
Local marine water dilution factor: 100 (Default)

Risk management measures

Good practice Common practices vary across sites, thus conservative process release estimates used.

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Air Filtration.

Conditions and measures related to external treatment of waste for disposal

Disposal method Household solid waste (e.g. product packaging) is treated at municipal waste disposal sites.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Temperature Assumes activities are at ambient temperature (unless stated differently).

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Wash hands before breaks and after work.
Wear suitable coveralls to prevent exposure to the skin.
Use suitable eye protection and gloves.
Other protection measures such as segregation of activity, minimisation of personnel, respiratory protection, impervious suits and face shields should also be considered for high dispersion activities which are likely to lead to substantial aerosol or vapour release, e.g. spraying.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Environmental exposure Fresh water: Exposure 0.0085 mg/l, PNEC 0.0126 mg/l, RCR 0.67
Marine water: Exposure 0.000775 mg/l, PNEC 0.0126 mg/l, RCR 0.006
Soil: Exposure 0.000113 mg/kg, PNEC 0.0023 mg/kg, RCR 0.049
STP: Exposure 0.088 mg/l, PNEC 4.66 mg/l, RCR 0.019

Worst case assumption

3. Exposure estimation (Health 1)

Assessment method Used ECETOC TRA model.

Use of hydrogen peroxide solutions for hair bleaching and dyeing and tooth bleaching

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions

Worker - inhalation: Exposure 0.007 mg/m³, DNEL 2.8 mg/m³, RCR 0.0025

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Worker - inhalation: Exposure 0.708 mg/m³, DNEL 2.8 mg/m³, RCR 0.25

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

Worker - inhalation: Exposure 0.425 mg/m³, DNEL 2.8 mg/m³, RCR 0.15

PROC4 Chemical production where opportunity for exposure arises

Worker - inhalation: Exposure 1.06 mg/m³, DNEL 2.8 mg/m³, RCR 0.38

Worst case assumption