

Printing date 04.04.2024 Version: 9 (replaces version 8) Revision: 10.02.2023

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

· 1.1 Product identifier

PEROXAN AHP · Trade name:

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

No further relevant information available.

· Application of the substance /

the mixture

Reaction initiator For industrial use

· 1.3 Details of the supplier of the safety data sheet

· Manufacturer/Supplier: PERGAN GmbH

Hilfsstoffe für industrielle Prozesse

Schlavenhorst 71 D-46395 Bocholt Tel: +49 2871 9902-0 Fax: +49 2871 9902-50

· Further information obtainable

Environment protection / Security of labour Qualified person: E-mail: msds@pergan.com

1.4 Emergency telephone

number: - Tel: +49 2871 9902-0

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 3 H226 Flammable liquid and vapour. Org. Perox. E H242 Heating may cause a fire. Acute Tox. 4 H302 Harmful if swallowed. Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

2.2 Label elements

Labelling according to

Regulation (EC) No 1272/2008

Hazard pictograms

The product is classified and labelled according to the GB CLP regulation.



· Signal word Danger

· Hazard-determining

components of labelling:

tert-pentyl hydroperoxide 2-methylbutan-2-ol

hydrogen peroxide solution

Flammable liquid and vapour. · Hazard statements H226

H242 Heating may cause a fire.

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.

H314 Causes severe skin burns and eye damage.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No P210 · Precautionary statements

smokina.

P220 Keep away from dirt, rust, chemicals in particular concentrated acids, alkalis and

accelerators (e. g. heavy metal compounds and amines).

Keep only in original packaging. P234 Take action to prevent static discharges. P243 P264 Wash thoroughly after handling.

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

protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P405 Store locked up. P410 Protect from sunlight.

P411+P235 Store at temperatures not exceeding +30°C. Keep cool.

P420 Store separately.

Dispose of contents/container in accordance with local/regional/national/international P501

regulations.

(Contd. on page 2)



Printing date 04.04.2024 Version: 9 (replaces version 8) Revision: 10.02.2023

Trade name: PEROXAN AHP

(Contd. of page 1)

· 2.3 Other hazards

· Results of PBT and vPvB assessment

PBT: The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH, annex XIII.
 vPvB: The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH, annex XIII.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· Dangerous components:					
CAS: 3425-61-4 EINECS: 222-321-7					
CAS: 75-85-4 EINECS: 200-908-9 Index number: 603-007-00-2	2-methylbutan-2-ol Flam. Liq. 2, H225; Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Irrit. 2, H315; STOT SE 3, H335				
CAS: 3052-70-8	2,2-bis (t-amyl peroxy) propane Org. Perox. C, H242				
	hydrogen peroxide solution Ox. Liq. 1, H271; Skin Corr. 1A, H314; Acute Tox. 4, H302; Acute Tox. 4, H332; STOT SE 3, H335; Aquatic Chronic 3, H412 Specific concentration limits: Skin Corr. 1A; H314: $C \ge 70$ % Skin Corr. 1B; H314: 50 % $\le C < 70$ % Skin Irit. 2; H315: 35 % $\le C < 50$ % Eye Dam. 1; H318: $C \ge 8$ % Eye Irrit. 2; H319: 5 % $\le C < 8$ % STOT SE 3; H335: $C \ge 35$ % Ox. Liq. 1; H271: $C \ge 70$ % Ox. Liq. 2; H272: 50 % $\le C < 70$ %	0.1-1%			

• Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

• General information: Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48

hours after the accident.

+

Take care of personal protection for the first aider.

• After inhalation: Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms

persist.

In case of unconsciousness place patient stably in side position for transportation.

Take affected persons into fresh air and keep quiet.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

Immediately remove contaminated clothing.

• After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

• After swallowing: Call for a doctor immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

 4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate

medical attention and special treatment needed

No further relevant information available.

No further relevant information available

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· For safety reasons unsuitable extinguishing agents:

Water with full jet

5.2 Special hazards arising from

the substance or mixture Under certain fire conditions, traces of other toxic gases cannot be excluded.

Hydrocarbons, carbondioxide and -monoxid.

5.3 Advice for firefighters

Protective equipment: Mouth respiratory protective device.

Do not inhale explosion gases or combustion gases.

(Contd. on page 3)



Printing date 04.04.2024 Version: 9 (replaces version 8) Revision: 10.02.2023

Trade name: PEROXAN AHP

· Additional information Cool endangered receptacles with water spray.

Self-protection first!

(Contd. of page 2)

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from ignition sources.

In case of further temperature should be cooled with waterspray from a safe distance.

Wear breathing apparatus with filter A during decomposition of materials. Wear protective equipment. Keep unprotected persons away.

· 6.2 Environmental precautions:

Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

Large quantities should be diluted with suitable desensitation agent to a concentration below 10 % before

disposal.

Soak up with absorbant material (e. g. Vermiculit) and dispose of in accordance with government

regulations.

· 6.4 Reference to other sections See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

In case of large spillage the environmental authority should be informed.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Keep away from heat and direct sunlight.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

Wear suitable respiratory protective device when decanting larger quantities without extractor facilities.

Do not refill residue into storage receptacles. Restrict the quantity stored at the work place.

Use only in well ventilated areas.

Before break and at the end of work hands should be thoroughly washed.

Only use tools made of suitable materials (e. g. polyethylene or stainless steel). Keep away from dirt, rust, chemicals in particular concentrated acids, alkalis and accelerators (e. g. heavy-

metal compounds and amines). While using do not eat, drink or smoke.

Do not generate flames or sparks.

Keep product and emptied container away from heat and sources of ignition.

Avoid shock and friction

Take precautionary measures against static discharges.



Do not smoke.

· Information about fire - and explosion protection:

Protect from heat.

Protect against electrostatic charges.

Prevent impact and friction

Use explosion-proof apparatus / fittings and spark-proof tools. Fumes can combine with air to form an explosive mixture.



Wear shoes with conductive soles.

Formation of flammable or explosive gas/air-mixtures is possible.



Avoid open flames, sparks, direct sunlight and other sources of ignition.

Keep ignition sources away - Do not smoke.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage: Requirements to be met by Pay attention to the special requirements of your local autorithies for storing dangerous goods.

storerooms and receptacles:

Store only in the original receptacle. Prevent any seepage into the ground.

Use only receptacles specifically permitted for this substance/product.

(Contd. on page 4)



(Contd. of page 3)

Printing date 04.04.2024 Version: 9 (replaces version 8) Revision: 10.02.2023

Trade name: PEROXAN AHP

· Information about storage in one common storage facility:

Do not store or park organic peroxide together with heavy metal compounds and amines.

Store away from foodstuffs, drinks and feeding stuffs.

· Further information about

storage conditions:

Keep container tightly sealed. Protect from heat and direct sunlight. Protect from contamination

Store under lock and key and out of the reach of children.

Recommended storage temperature (To maintain

quality):

+5 +30 °C

7.3 Specific end use(s) No further relevant information available

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

7722-84-1 hydrogen peroxide solution

WEL (Great Britain) Short-term value: 2.8 mg/m³, 2 ppm

Long-term value: 1.4 mg/m³, 1 ppm

·DNELs

7722-84-1 hydrogen peroxide solution

Inhalative DNEL Longterm Local 1.4 mg/m3 (Worker)

· PNECs

7722-84-1 hydrogen peroxide solution

PNEC Marinewater sed | 0.047 mg/kg sed dw **PNEC Freshwater** 0.013 mg/l (AF 50) PNEC Freshwater sed 0.047 mg/kg sed dw PNEC Soil 0.002 mg/kg soil dw PNEC STP 4.66 mg/l (AF 100) **PNEC Marinewater** 0.013 mg/l (AF 50)

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls Appropriate engineering

controls No further data; see section 7.

Individual protection measures, such as personal protective equipment

General protective and

hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work.

Store protective clothing separately. Avoid contact with the eyes and skin.

Do not eat, drink, smoke or sniff while working. Use skin protection cream for skin protection.

Be sure to clean skin thoroughly after work and before breaks.

· Respiratory protection: In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer

exposure use self-contained respiratory protective device.

Use suitable respiratory device when it exceed exposure limit and when insufficiently ventilated.

Only use chemical-protective gloves with CE-labelling of category III. · Hand protection

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Protective gloves

· Material of gloves The selection of the suitable gloves does not only depend on the material, but also on further marks of

quality and varies from manufacturer to manufacturer.

Butyl rubber, BR

Fluorocarbon rubber (Viton)

Nitrile rubber, NBR

Neoprene

Penetration time of glove

material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be

observed.

(Contd. on page 5)



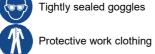
(Contd. of page 4)

Printing date 04.04.2024 Version: 9 (replaces version 8) Revision: 10.02.2023

Trade name: PEROXAN AHP

· Eye/face protection

· Body protection:



SECTION 9: Physical and chemical proportion

SECTION 9: Physical and chemical properties							
9.1 Information on basic physical and chemical properties							
· General Information							
· Colour:	Colourless						
· Odour:	Characteristic						
· Odour threshold:	Not determined.						
· Melting point/freezing point:	Not applicable.						
Boiling point or initial boiling point and boiling range	Not applicable.						
Flammability	Not applicable.						
Lower and upper explosion limit	• •						
Lower:	Not determined.						
· Upper:	Not determined.						
Flash point:	41 °C						
Decomposition temperature:	+80 °C (SADT)						
· pH	Not determined.						
· Viscosity:							
Kinematic viscosity	Not determined.						
Dynamic at 20 °C:	6 mPas						
Solubility							
· water:	Undetermined.						
· Partition coefficient n-octanol/water (log value)	not determined						
· Vapour pressure:	Not determined.						
Density and/or relative density							
D	0.04 / 3						

· Density at 20 °C: 0.91 g/cm³ Relative density Not determined. · Vapour density Not determined.

9.2 Other information No further relevant information available.

· Appearance:

· Form: Fluid Important information on protection of health and environment,

and on safety.

· Ignition temperature:

Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour

mixtures are possible. · Change in condition

Evaporation rate Not determined.

· Information with regard to physical hazard classes · Explosives Void Flammable gases Void · Aerosols Void · Oxidising gases Void · Gases under pressure Void

Flammable liquids Flammable liquid and vapour.

· Flammable solids Void · Self-reactive substances and mixtures Void · Pyrophoric liquids Void Pyrophoric solids Void · Self-heating substances and mixtures Void Substances and mixtures, which emit flammable gases in Void

contact with water

· Oxidising liquids Void Oxidising solids Void

Heating may cause a fire. Organic peroxides

Corrosive to metals Void · Desensitised explosives Void

(Contd. on page 6)



Printing date 04.04.2024 Version: 9 (replaces version 8) Revision: 10.02.2023

Trade name: PEROXAN AHP

(Contd. of page 5)

Other safety characteristics

· Active oxygen 12.0 - 13.5 %

SECTION 10: Stability and reactivity

· 10.1 Reactivity

No further relevant information available.

· 10.2 Chemical stability

· Thermal decomposition / conditions to be avoided:

SADT (Self Accelerating Decomposition Temperature) is the lowest temperature at which self accelerating decomposition may occur with substance in the packaging as used in transport. A dangerous selfaccelerating decomposition reaction and, under certain circumstances, explosion or fire can be cause decomposition at and above the temperature. Contact with incompatible substances can cause

decomposition at or below the SADT.

No decomposition if used and stored according to specifications.

To avoid thermal decomposition do not overheat.

· 10.3 Possibility of hazardous

reactions

Self-accelerating decomposition at SADT. No further relevant information available

10.4 Conditions to avoid · 10.5 Incompatible materials:

Additional information:

Rapid decomposition by dirt, rust, chemicals in particular concentrated acids, alkalis and accelerators (e. g.

heavy-metal compounds and amines).

· 10.6 Hazardous decomposition

products:

Hydrocarbons, carbondioxide and -monoxid.

No hazardous decomposition products if used and stored according to specifications.

Emergency procedures will vary depending on conditions. The customer should have an emergency

response plane in place.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Harmful if swallowed, in contact with skin or if inhaled. · Acute toxicity

· LD/LC50 values relevant for classification:

75-85-4 2-methylbutan-2-ol

Oral LD50 1,000 mg/kg (rattus)

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/irritation

Respiratory or skin

sensitisation Based on available data, the classification criteria are not met. Germ cell mutagenicity Based on available data, the classification criteria are not met. · Carcinogenicity Based on available data, the classification criteria are not met. · Reproductive toxicity Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met. STOT-single exposure Based on available data, the classification criteria are not met. STOT-repeated exposure Aspiration hazard Based on available data, the classification criteria are not met.

Causes serious eye damage.

· 11.2 Information on other hazards

· Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability

Degree of elimination:

· Classification:

3425-61-4 tert-pentyl hydroperoxide

Degradation (Not readily biodegradable) (OECD 301 D)

7722-84-1 hydrogen peroxide solution

Degradation (Readily biodegradable)

12.3 Bioaccumulative potential

10508-09-5 di-tert-pentyl peroxide

Partition coefficient: nOctanol/water: [Log Kow]

7722-84-1 hydrogen peroxide solution

-1,57 (20°C) 4,7 (25 °C)

(Contd. on page 7)

GB



Printing date 04.04.2024 Version: 9 (replaces version 8) Revision: 10.02.2023

Trade name: PEROXAN AHP

· 12.4 Mobility in soil No further relevant information available (Contd. of page 6)

· 12.5 Results of PBT and vPvB assessment

· PBT: The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH, annex XIII.

· vPvB:

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH, annex XIII.

12.6 Endocrine disrupting

properties

The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects No further relevant information available.

· Additional ecological information:

· General notes: Must not reach sewage water or drainage ditch undiluted or unneutralised.

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage

system.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation



After diluting with a suitable desentisation agent to 10 %, the solution must be supplied to a special treatment (e. g. thermal utilization) under observance of all official regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage

system.

· Waste disposal key: Please contact your hazardous waste disposers to assign the right EWC-(European waste catalog)-

number.

Uncleaned packaging:

· Recommendation: This material and its container must be disposed of as hazardous waste.

S	FCI	FION	14.	Transp	ort i	nform	ation
•			14.	Hallon	ULLI	шош	Iauvii

· 14.1 UN number or ID number

UN3107 · ADR, IMDG, IATA

· 14.2 UN proper shipping name

· ADR UN3107 ORGANIC PEROXIDE TYPE E, LIQUID (tert-AMYL

HYDROPEROXIDE)

· IMDG, IATA ORGANIC PEROXIDE TYPE E, LIQUID (tert-AMYL HYDROPEROXIDE)

· 14.3 Transport hazard class(es)

· ADR



· Class 5.2 (P1) Organic peroxides.

Label

· IMDG, IATA



Class 5.2 Organic peroxides.

· 14.4 Packing group

· ADR, IMDG, IATA Void

· 14.5 Environmental hazards:

· Marine pollutant: No

· 14.6 Special precautions for user

Hazard identification number (Kemler code):

Warning: Organic peroxides.

Stowage Category

D · Stowage Code SW1 Protected from sources of heat.

· Segregation Code SG35 Stow "separated from" SGG1-acids SG36 Stow "separated from" SGG18-alkalis.

SG72 See 7.2.6.3.2.

· 14.7 Maritime transport in bulk according to IMO instruments Not applicable.

(Contd. on page 8)



Printing date 04.04.2024 Version: 9 (replaces version 8) Revision: 10.02.2023

Trade name: PEROXAN AHP

(Contd. of page 7)

· Transport/Additional information:

· ADR

· Limited quantities (LQ) Excepted quantities (EQ) Code: E0

Not permitted as Excepted Quantity

· Transport category · Tunnel restriction code

· RID / GGVSEB: like ADR

· IMDG

· Limited quantities (LQ) 125 ml Code: E0 Excepted quantities (EQ)

Not permitted as Excepted Quantity

 Additional provisions for organic peroxides of Class 5.2 "Carriage in accordance with ADR 2.2.52.1.8."

SECTION 15: Regulatory information

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

Poisons Act

· Regulated explosives precursors

7722-84-1 hydrogen peroxide solution 12%

Regulated poisons

None of the ingredients is listed.

· Reportable explosives precursors

None of the ingredients is listed.

· Reportable poisons

None of the ingredients is listed.

Directive 2012/18/EU

 Qualifying quantity (tonnes) for the application of lower-tier requirements

50 t

Qualifying quantity (tonnes) for the application of upper-tier

requirements

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment - Annex

None of the ingredients is listed.

· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

· National regulations:

Other regulations, limitations and prohibitive regulations

· Please note: Take care of the respective local regulations.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases H225 Highly flammable liquid and vapour.

H242 Heating may cause a fire.

H271 May cause fire or explosion; strong oxidiser.

H272 May intensify fire; oxidiser. H302 Harmful if swallowed.

(Contd. on page 9)



Printing date 04.04.2024 Version: 9 (replaces version 8) Revision: 10.02.2023

Trade name: PEROXAN AHP

(Contd. of page 8)

H312 Harmful in contact with skin.

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.

H412 Harmful to aquatic life with long lasting effects.

Department issuing SDS: Environment protection / Security of labour

Tel: +49 2871 9902-0 · Contact: E-mail: mail@pergan.com

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) · Abbreviations and acronyms:

ICAO: International Civil Aviation Organisation
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (UK REACH)
PNEC: Predicted No-Effect Concentration (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Flam. Liq. 2: Flammable liquids – Category 2 Flam. Liq. 3: Flammable liquids – Category 3 Ox. Liq. 1: Oxidizing liquids – Category 1 Org. Perox. C: Organic peroxides – Type C/D Org. Perox. E: Organic peroxides – Type E/F Acute Tox. 4: Acute toxicity – Category 4 Skin Corr. 18: Skin corrosion/irritation – Category 1A Skin Corr. 18: Skin corrosion/irritation – Category 18 Skin Ird. 2: Skin corrosion/irritation – Category 1

Skin Irrit. 2: Skin corrosion/irritation – Category 19
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

·* Data compared to the previous version altered.

GB -