

Safety Data Sheet

According to 1907/2006/EC, Article 31

1 Identificatin of substance :

. Product details :

. Trade Name : **Miller**

. Application of the substance / the preparation : **Disinfectant**

.Manufacture/Supplier :

Rein Product Gmbh

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2 Hazards identification

.Hazards designation :



C Corrosive

O Oxidising

.Information pertaining to particular dangers for man and environment

The Product has to be labeled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R8 Contact with combustibile material may cause fire

R 20/22 Harmful by inhalation and if swallowed

R34 Causes burns .

R37 Irritating to respiratory system .

.Classification system

The classification is in line with current EC lists. It is expanded , however , by information from technical literature and by information furnished bu supplier companies .

.GHS lable elements



Danger

H272 - May intensify fire; oxidizer .



Danger

H314 – Causes severe skin burns and eye damage .



Warning

H302 – Harmful if swallowed .

H332 – Harmful if inhaled .

H335 + H336 – May cause respiratory irritation . May cause drowsiness or dizziness . . Prevention :

P221 Take any precaution to avoid mixing with combustibles .

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. Response :

P303+P361+P353 IF ON SKIN (or hair) : Remove/Takeoff immediately all contaminated clothing.
Rinse skin with water/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 or doctor/physician.

. Storage :

P405 Store locked up .

. Disposal :







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

3 Composition information on ingredients

. Chemical characterization

. Description : Mixture of the substances listed below with harmless additions .

. Dangerous components :

CAS : 7722-84-1 hydrogen peroxide solution
EINECS : 231-765-0  C,  Xn,  O; R8-20/22-35
Danger :  2.13/1;  3.2/1A
Warning :  3.1.O/4, 3.1.I/4

CAS : 7761-88-8 Silver nitrate
EWEC : 231-853-9  C, R8, R34, R50/53

. Additional information For the wording of the listed risk phrases refer to section 16.

4 First aid measures

. General information Instantly remove any clothing soiled by the product .

. After inhalation

Supply fresh air . If required, provide artificial respiration . Keep patient warm . Consult doctor if symptoms persist .

In case of unconsciousness bring patient into stable side position for transport .

. After skin Contact The product is generally no skin irritant .

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

. After swallowing

Instantly call for doctor .

Drink copious amounts of water and provide fresh air . Instantly call for doctor .

5 Fire fighting measures

. Suitable extinguishing agents Use fire fighting measures that suit the environment .

. Protective equipment : Put on breathing apparatus .

6 Accidental release measures

. Person-related safety precautions : Wear protective equipment Keep unprotected persons away .

. Measures for environmental protection : Do not allow product to reach sewage system or water bodies .

. Measures for cleaning/collecting :

Absorb with liquid-binding material (sand , diatomite , acid binders , universal binders , sawdust) Ensure adequate ventilation .

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7 Handling and storage

- . Handling
- . Information for safe handling :
 - Ensure good ventilation/exhaustion at the workplace .
 - Prevent formation of aerosols .
- . Information about protection against explosions and fires :
 - Potentially explosive when mixed with organic substances .
- . Storage
- . Requirements to be met by storerooms and containers : No special requirements .
 - Contact with combustible material may cause fire .
- . Further information about storage conditions : Keep container tightly sealed .

8 Exposer controls

- . Additional information about design of technical systems : No further data ; see item 7 .
- . Components with limit values that require monitoring at the workplace :

7722-84-1 hydrogen peroxide solution (50-100%)	
WEL (Great Britain)	Short-term value : 2.8 mg/m ³ , 2 ppm
	Long-term value : 1.4 mg/m ³ , 1 ppm
OEL (Ireland)	Short-term value : 3 mg/m ³ , 2 ppm
	Long-term value : 1.5 mg/m ³ , 1 ppm
- . Additional information : The lists that were valid during the compilation were used as basis
- . Personal protective equipment .
- . General protective and hygienic measures
 - Keep away from foodstuffs , beverages and food .
 - Take off immediately all contaminated clothing .
 - Wash hands during breaks and at the end of the work .
 - Avoid contact with the eyes and skin .
- . Breathing equipment : Use breathing protection in case of insufficient ventilation .
- . Protection of hands :
 - Protective gloves .
 - The glove material has to be impermeable and resistant to the product/the substance/the preparation .
 - Due to missing tests no recommendation to the glove material can be given for the product/the preparation/the chemical mixture .
 - Selection of the glove material on consideration of the penetration times , rates of diffusion and the degradation .
- . Material of gloves
 - The selection of the suitable gloves does not only depend on the material , but also on further mark of quality and varies from manufacturer to manufacturer . As the product is a preparation of several be checked prior to the application .
- . Penetration time of glove material
 - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed .
- . For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable :
 - Butyl rubber , BR
- . For the permanent contact gloves made of the following materials are suitable : Butyl rubber , BR
- . Eye protection : Tightly sealed safety glasses .
- . Body protection : Protective work clothing .

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9 Physical and chemical properties

. General Information

From : Fluid Colour :
Colourless

Odour : Characteristic

. Change in condition

Melting point/Melting range : < 0°C
Boiling point/Boiling range : ca. 100°C

. Flash point : Not applicable .
. Self-inflammability : Product is not selfigniting .
. Danger of explosion : Explosive when mixed with combustible material .
. Vapour pressure at 20°C : ca.20 hPa
. Density at 20°C : ca.1.23 g/cm³
. Solubility in / Miscibility with water : Soluble
. Solvent content :
Organic Solvents : 0.0 %

10 Stability and reactivity

. Thermal decomposition / conditions to be avoided :
No decomposition if used and stored according to specifications .
. Dangerous product of decomposition : Possible in traces .

11 Toxicological information

. Acute toxicity :
. LD/LC50 values that are relevant for classification :

7722-84-1 hydrogen peroxide solution

Oral LD50 415 mg/kg (rat)
Dermal LD50 >5000 mg/kg (rabbit)
Inhalative LC50 (4 h) > 0.17 mg/l rat

. Primary irritant effect :

. On the skin : Strong caustic effect on skin and mucous membranes .
. On the eye : Strong irritant with the danger of severe eye injury .
. Sensitization : No sensitizing effect known .

. Additional toxicological information :

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach .

12 Ecological information

. Ecotoxicological effects :

. Aquatic toxicity :

7722-84-1 hydrogen peroxide solution

Ec50 (48h) 2.4 mg/l (Daphnia pulex)

EC50 (24h) 7.7 mg/l (Daphnia magna)

IC50 (72h) 2.5 mg/l (Chlorella vulgaris)

IC94 (48h) 1.7 mg/l (Cyanobacteria Blaualgen)

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LC50 (96h) 16.4 mg/l (Pimephales promelas)

LC50 (24h) 31.3 mg/l (Oncorhynchus mykiss)

. Additional ecological information :

. General notes : Water hazard class 1 (Self-assessment) : slightly hazardous fo water .

13 Disposal considerations

. Product :

. Recommendation

Must not be disposed of together with household garnage . Do not allow product to reach sewage system .

. Uncleaned packagings :

. Recommendation : Disposal must be made according to official regulations .

. Recommended cleaning agent : Water , if necessary with cleaning agent

14 Transport information

. Land transport AD R/RID



. AD/RID-GGVS/E Class : 5.1 (OC1) Oxidising substances .

. Kehler Number : 58

. UN-Number : 2014

. Packaging group : II

. Lable : 5.1+8

. Designation of goods : 2014 HYDROGEN PeROXIDE , AQUEOUS SOLUTION

. Tunnel restriction code : E

. Maritime transport IMDG :



. IMDG Class : 5.1

. UN Number : 2014

. Lable : 5.1+8

. Packaging group : II

. Marine pollutant : No

. Correct technical name : HYDROGEN PEROXIDE , AQUEOUS SOLUTION

. Air Transport ICAO-TI and IATA-DGR :



. ICAO/IATA Class : 5.1

. UN/ID Number : 2014

. Lable : 5.1+8

. Packaging group : II

. Marine pollutant : No

. Correct technical name : HYDROGEN PEROXIDE , AQUEOUS SOLUTION

. UN " Model Regulation " : UN2014, HYDROGEN PEROXIDE , AQUEOUS SOLUTION , 5.1 (8), II

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15 Regulatory information

- . Designation according to EC guidelines :
The product has been classified and labeled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)
- . Code letter and hazard designation of product :



C Corrosive
O Oxidising

- . Hazard-determining components of labelling :
Hydrogen peroxide solution
- . Risk phrases :
 - 8 Contact with combustible material may cause fire .
 - 20/22 Harmful by inhalation if swallowed .
 - 34 Causes burns .
 - 37 Irritating to respiratory system .
- . Safety phrases :
 - 9 Keep container in a well-ventilated place .
 - 17 Keep away from combustible material .
 - 20 When using do not eat or drink .
 - 23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer) .
 - 25 Avoid contact with eyes .
 - 26 In case of contact with eyes , rinse immediately with plenty of water and seek medical advice .
 - 27 Take off immediately all contaminated clothing .
 - 36/37/39 Wear suitable protective clothing , gloves and eye/face protection .
- . National regulations
- . Water hazard class : Water hazard class 1 : Slightly hazardous for water .

16 Other information

These data are based on our present knowledge . However , they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship .

- . Relevant R-phrases
 - 20/22 Harmful by inhalation and if swallowed .
 - 35 Causes severe burns .
 - 8 Contact with combustible material may cause fire .
- . Department issuing data specification sheet : Environment protection department .
- . Contact : Abteilung Labor .
- . Abbreviations and acronyms :
 - ADR : Reglement international concernant le transport des marchandises dangereuses par chemin de fer (European Agreement concerning the International carriage of Dangerous Goods by Road) .
 - RID : Reglement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the international Transport of Dangerous Goods by rail) .
 - IMDG : International Maritime Code for Dangerous Goods .
 - IATA : International Air Transport Association .
 - IATA-DGR : Dangerous Goods Regulations by the " International Civil Aviation Organization " (ICAO) .
 - GHS : Globally Harmonized System of Classification and Labelling of Chemicals .
 - LC50 : Lethal concentration, 50 percent
 - LD50 : Lethal dose, 50 percent .
- * Data compared to the previous version altered .