



Material Safety Data Sheet

Accepta 8101

Date issued: 01-06-2008

1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY

Product Name:	ACCEPTA 8101
Application:	Biocide: Hydrogen peroxide/silver blend
Company Identification:	Accepta Ltd. Statham House Trafford Wharf Road Manchester M32 0FP United Kingdom
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2. COMPOSITION/INFORMATION ON INGREDIENTS

* Chemical characterisation:		
<u>CAS-Nr.Designation:</u>		
7722-84-1	Hydrogen peroxide	
* EC Number:	231-765-0	
* Description:	aqueous solution of hydrogen peroxide	
* Chemical formula:	H ₂ O ₂	
* Molecular mass:	34.02	
* Content:	weight 50 %	
* Indies letter:	R-phrases C	R 34

3. HAZARD IDENTIFICATION

Description of dangers: Causes burns. Irritating to respiratory system.

Special guidelines concerning dangers to humans and the environment:

Product is an oxidising agent.

Danger of decomposition when exposed to heat.

Risk of decomposition in contact with incompatible substances, e.g. metals, metal ions, alkalis, reducing agents.

Danger of explosion with organic solvents. (see also section 10)



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4. FIRST AID MEASURES

General information:

Bring affected persons out of danger area. Observe self-protection (body protection, eye protection, respiratory protection).

After inhalation:

Take affected persons out into the fresh air. Keep patient half sitting with upper body raised. Keep warm in a comfortable position and cover with blanket. In case of breathing difficulties supply oxygen. Employ mouth-to-mouth resuscitation if breathing ceases. Consult doctor immediately.

After skin contact:

On skin contact, rinse thoroughly with water. Remove contaminated or saturated clothing immediately. If irritation persists, supply with medical care immediately. Keep warm in a comfortable position and cover with blanket. Wash contaminated clothing immediately with water.

After eye contact:

With eye held open, thoroughly rinse immediately with plenty of water for at least 15 minutes. Remove contact lenses if easily possible. Further treatment by eye doctor/eye hospital.

After swallowing:

Have patient rinse out mouth with water. Have patient drink plenty of water in small sips (for dilution). Do not force patient to vomit. Consult doctor immediately. Keep warm in a comfortable position and cover with blanket

5. FIRE FIGHTING MEASURES

Suitable extinguishing agents:

water: (water, spray jet; water, full jet)
quenching foam.

Unsuitable extinguishing agents:

quenching powder, carbon dioxide.

Particular danger caused by material, its combustion products or gases produced:

Product is incombustible.
Involved in fire, it may decompose yielding oxygen.
Release of oxygen supports combustion.
Risk of overpressure and burst due to decomposition in confined spaces.
In case of fire, cool the containers that are at risk with water or dilute with water (flooding).

Special protective equipment:

In case of fire, wear respiratory protective equipment independent of surrounding air and chemical protective suit.

6. ACCIDENTAL RELEASE MEASURES

Person-related safety precautions:

Wear personal protective equipment; see section 8. Bring persons in safety. Keep unprotected persons at a distance.

Measures for environmental protection:

Observe regulations on prevention of water pollution (collect, dam up, cover up). Collect, damp up product with sand or earth. Do not use: combustible substances, saw dust, cloth. Keep hydrogen peroxide away from incompatible substances; see section 10.

Measures for cleaning/collecting:

Do not permit to enter into drainage systems, stretches of water, soil undiluted; see also section 13.

Additional information:

Never return spilt product to original container for recycling purposes. (Risk of decomposition)



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7. HANDLING AND STORAGE

HANDLING: *Information for safe handling:*

The usual precautionary measures for dealing with chemicals should be observed. Protect from impurities and heat effect. Never return spilt product to original container for recycling purposes. (Risk of decomposition) Wear personal protective equipment; see section 8. Avoid contact with skin, eyes and clothing. Do not inhale vapour and aerosols/mist. Ensure there is good room ventilation. Provide for installation of emergency shower and eye bath. Change work clothes that have been moistened or saturated with product. Wash contaminated clothing immediately with water.

Information about protection against explosions and fires:

Protect from sun rays, heat, heat effect. Keep away from incompatible substances; see section 10.

STORAGE CONDITIONS: *Requirements to be met by storerooms and containers:*

Only use containers which are suitable for hydrogen peroxide. For transport, storage and tank installation only use suitable materials. Suitable materials are: specific stainless steel (e.g. 1.4571), pure aluminium (at least 99,5%, quality), certain aluminium magnesium alloys, polyethylene material (HDPE). Use adequate venting devices on all packages, containers and tanks and check correct operation periodically. Do not confine product in unvented vessels or between closed valves. Risk of overpressure and burst due to decomposition in confined spaces. Do not empty container by means of pressure. Packages, containers and tanks should be regularly checked by visual observation for any sign of abnormality, e.g. corrosion, exert pressure (bulging), temperature increase etc. Always close container tightly after removal of product. Ensure tightness at all times.

Information about storage in one common storage facility:

Do not store together with: alkalis, reducing agents, metallic salts, combustible substances.

Further information about storage conditions:

Bulk storage of hydrogen peroxide should include at least: compatible materials, adequate separation, adequate venting area, venting devices, temperature measurement, earthing (grounding), bound in case of leakage. For further and detailed information on design specifications ask the producer for advice. Prior to the first filling and operation of a tank installation, all parts of the facility including all pipes must be thoroughly cleaned and flushed through. Metal elements of the installation must first be pickled and passivated sufficiently. Set up safety and operation procedures. Regularly verify the availability of water to deal with emergencies (for cooling, tank flooding, fire) and check correct operation periodically.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Additional information about design of technical systems:

Ensure suitable suction/aeration at the work place and with operational machinery.

Components with limit values that require monitoring at the workplace:

<u>CAS-Number.</u>	<u>Designation of material</u>	<u>%</u>	<u>Type</u>	<u>Value</u>
<u>Unit</u>				
7722-84-1	Hydrogen peroxide		MAK (D)	1 ml/m ³ 1,4 mg/m ³
			MAK (GB)	1 ml/m ³ 1,4 mg/m ³
			MAK (USA)	1 ml/m ³ 1,4 mg/m ³

General protective and hygienic measures

The usual precautionary measures for dealing with chemicals should be observed. Wear suitable protective clothing, gloves and eye/face protection. Avoid contact with skin, eyes and clothing. Ensure there is good room ventilation. If workplace exposure limit is exceeded and/or larger amounts are released (leakage, spilling, etc.), the indicated respiratory protection should be used.

Breathing equipment:

Do not inhale vapour and aerosols/mist. If workplace exposure limit is exceeded, apply respirator with grey B-type filter or respiratory protective equipment independent of surrounding air. (concerning filter type recommendations: German legislation).



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8. EXPOSURE CONTROL/PERSONAL PROTECTION (cont...)

Protection of hands:

wear protective gloves made of PVC, neoprene or natural rubber.
Avoid protective gloves made of cotton or leather.
(Risk of spontaneous ignition)

Eye protection:

Wear basket-shaped glasses or eye protectors with protective screen.

Body protection:

wear flame-retarding protective clothing.
Suitable materials are: PVC, neoprene, nitrile rubber, natural rubber.
Wear rubber or plastic boots. Avoid footwear, protective clothing and protective gloves made of cotton or leather. (Risk of spontaneous ignition)
Avoid contaminating clothes with product.
Change work clothes that have been moistened or saturated with product.
Wash contaminated clothing immediately with water.
All protective equipment that has been contaminated should be cleaned before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: liquid

Colour: colourless

Odour: odourless

	<u>Value/Range</u>	<u>Unit</u>	<u>Method</u>
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Change in condition:

Melting point/Melting range:

- 52 °C

Boiling point/boiling range:

114 °C

Flash point:

incombustible

Inflammability (solid, gaseous):

incombustible

Ignition temperature:

no

Danger of explosion:

not applicable

Vapour pressure: at 30 °C

ca. 0,3 mbar (partial pressure)

Density: at 20 °C

1,196 g/cm³

Solubility in/miscibility with Water :

completely

pH-value: 100 g/l ca.

1,2

Viscosity:

< 20mPa



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10. STABILITY AND REACTIVITY

Materials to be avoided:

Product is an oxidising agent and reactive. Stable at room temperature.
 Danger of decomposition when exposed to heat. Risk of self-accelerating exothermic decomposition yielding oxygen in substances; see below. *Mixtures with combustible materials (e.g. solvents) can have explosive properties (above a certain concentration).*

Conditions to be avoided: sun rays, heat, heat effect.

Substances to be avoided:

Impurities, metal ions, metallic salts, metals.
 Alkalies, hydrochloric acid, reducing agents, combustible substances, solvents.

Dangerous products of decomposition:

Steam and oxygen. Risk of overpressure and burst due to decomposition in confined spaces, including pipes. Release of oxygen supports combustion.

Additional information

Commercial products are stabilised to reduce risk of decomposition due to contamination.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

LD/LC₅₀ values that are relevant for classification:

Components	Type	Value	Species
LC ₅₀ (rat, 4 h):	>	2000 mg/kgTNO-Report V 93.311	

Primary irritant effect:

on the skin: caustic, rabbit, no OECD method.

On the eye: highly irritative, rabbit, no OECD method.

Sensitisation:

Not sensitising, guinea pig, maximisation test, OECD Method.

Other information (about experimental toxicology):

Mutagenic potential: in vitro: without metabolic mechanism (activation) mutagenic effects have been observed; with metabolic mechanism (activation) not mutagenic. In vitro, oral: negative (there are no effects being observed).

Subacute to chronic toxicity:

Reproduction effects/Teratogenicity:

Teratogenicity studies, various species:
have not been demonstrated.

Carcinogenicity:

Clues to possible carcinogenic effects in animal experiments, various species: none
 Hydrogen peroxide is not listed as a carcinogen by MAK, IARC, NTP, OSHA, ACGIH.

Experience with humans:

Effect on Skin: Causes burns. The effects, that increase with the duration of exposure, can be severe irritation (white coloration), reddening or even blistering (burning).

Effect on eyes: May cause severe conjunctivitis, cornea injury or irreversible damage to the eyes.

Symptoms may occur with delay.

Effect of ingestion: Swallowing may lead to burning necrosis of the mucous membranes of mouth, esophagus and stomach. Rapid liberation of oxygen may cause gastric distension and bleeding and may lead to severe damage to the internal organs, especially if a large amount has been swallowed.

Effect of Inhalation: Inhalation of vapours/aerosols may lead to severe irritation of the respiratory tract and may cause inflammation and pulmonary. Symptoms may occur with delay.



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12. ECOLOGICAL INFORMATION

- * **Information about elimination (persistence and degradability):**
Rapid decomposition into oxygen and water.
Medium: water, soil

- * **Behaviour in environmental systems:**
Components:
Water/soil:
Hydrogen peroxide is generally regarded as not endangering water courses.
In the environment it readily degrades forming oxygen and water or is reduced, generally exerting no significant adverse effects on the environment.

Air:
No limits to industrial emissions have been set up.

- * **Mobility and bioaccumulation potential:**
Bioaccumulation:
Decomposition, Reduction in oxygen and water.

- * **Ecotoxicological effects:**

- * **Acquatic toxicity:**
Fish toxicity:
Fish toxicity (Goldfrosen, 48 h):

LC ₀	20 mg/l
LC ₅₀	70 mg/l
LC ₁₀₀	80 mg/l

- * **Behaviour in sewage processing plants:**
Rapid decomposition into oxygen and water.

- * **Additional ecological information:**
According to recipe contains the following heavy metals and compounds according to EC guideline No. 76/464 EC: none

13. DISPOSAL CONSIDERATIONS

- Product:**
Recommendation:
May be disposed of as sewage water in accordance with local legal regulations when previously diluted with plenty of water (drainage systems, waste water treatment plant), or may be disposed of into surface waters in accordance with local legal regulations when previously diluted with plenty of water and after permission given by the responsible local legal authority.
- Uncleaned packaging:**
Recommendation:
Rinse empty containers with water prior to disposal.
Take decontaminated packing to local recycling centre.



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14. TRANSPORT INFORMATION

Land transport ADR/RID (cross border)

ADR/RID-GGVS/E Class:	5.1
Number/Letter:	1 b
Kemler-Number:	58
UN-Number:	2014
Designation of goods:	2014 Hydrogen peroxide, aqueous solution concentration < 50% H ₂ O ₂

Maritime transport IMDG:

IMDG/GGVSea:	5.1
UN-Number:	2014
Packaging group:	PG. II
EmS-Number:	5.1-02
MFAG--Number:	735
Marine pollutant:	no
Correct technical name:	Hydrogen peroxide, aqueous solution

Remarks:

Protect from heat. Keep separate from powdered metals, permanganates, class 4.1.
On deck only.

Air transport ICAO-TI und IATA-DGR:

ICAO/IATA Class:	prohibited
Correct technical name:	Hydrogen peroxide, aqueous solution

Keep separate from food, semi luxuries and feed.

Transport/Additional information:

Dangerous according to the transport regulations GGVS/GGVE/RID/ADR/IMDG Gode/ICAO-TI:
Yes

15. REGULATORY INFORMATION

Labelling in accordance with EC directive:

Labelling of substances in line with EC Directive 67/548/EEC and amendments.

Index letter and indication of danger posed by product: C = corrosive

Risk phrases: R 34 - Causes burns

Safety phrases:

- 28 - 36/39 - 45
- After contact with skin, wash immediately with plenty of water.
 - Wear suitable protective clothing and eye/face protection.
 - In case of accident or if you feel unwell, seek medical advice immediately (show the label if possible).

Additional Information:

EEC-grading EC-Number 008-003-00-9

National regulations

Additional classification according to Decree on Hazardous Materials, Annex II:

Additional classification according to regulations on dangerous substances.

Classification according to VbF:

Information concerning employment restrictions: no



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16. OTHER INFORMATION

Emergency Telephone Number +44 (0) 161 877 2334