

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date: 29.08.2008

Revision: 29.08.2008

1 Identification of substance:

- **Product details:**
- **Trade name:** **NORDIC AQUADES**
- **Application of the substance / the preparation** Disinfectant
- **Supplier/Manufacturer:**
NORDIC STALD KEMI APS
Rugtoften 47
6630 Rødding
Denmark;
Tel.: +45-(0)506-75852474
Fax: +45-(0)506-75852475
- **Email competent person:** angelika.torges@kft.de
- **Information department:** See supplier/manufacturer
- **Emergency information:** National Poisons Information Centre Tel.: +44 (0)870 6006266

2 Hazards identification

- **Hazard description:**



Xn Harmful

- **Information pertaining to particular dangers for man and environment:**

R 22 Harmful if swallowed.
R 37/38 Irritating to respiratory system and skin.
R 41 Risk of serious damage to eyes.

- **Classification system:**

The classification was made according to the latest editions of the EU-lists, and expanded using company data and specialized literature.

3 Composition/information on ingredients

- **Chemical characterization:**
- **CAS No. Description:**
7722-84-1 hydrogen peroxide solution max 49,9 %
- **Identification number(s):**
- **EINECS Number:** 231-765-0
- **EU Number:** 008-003-01-6

* 4 First aid measures

- **General information:**

First aid personnel should pay attention to their own safety.
Immediately remove any clothing soiled by the product.

Symptoms of poisoning may occur even after several hours; therefore medical observation is suggested for at least 48 hours after the accident.

- **After inhalation:**

Remove victim from contaminated area. If breathing is difficult, give oxygen. If breathing stops, provide artificial respiration. Call a doctor.

- **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.
Or if available rinse with Previn®.

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- Cover wound with a sterile dressing.
Seek medical treatment.
- **After eye contact:**
Protect unharmed eye.
Rinse the eyes with open eyelids for 10 - 15 minutes with water.
Rinse the eyes with open eyelids for 10 - 15 minutes with water. Then consult an eye specialist immediately.
Or if available rinse with Previn® ADI oder Previn® LDP.
Treatment by an ophthalmologist
 - **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting.
If vomiting occurs spontaneously:
Hold the head of the casualty low with the body in a prone position in order to avoid aspiration.
Never give anything by mouth to a unconscious person.
Immediately call an emergency physician to the place of accident.
 - **Information for doctor:**
After inhalation oedema of the lungs may occur. Symptoms can also occur several hours after overexposure.
 - **The following symptoms may occur:**
After skin contact:
Whitening of the skin surface
Local irritation symptoms
After inhalation:
Irritation of mucuous membranes
Cough
watering eyes
Oedema of the lungs
After swallowing:
Extreme irritation of mucous membranes
See chapter 11
 - **Danger:**
Risk of pulmonary oedema.
If swallowed or in case of vomiting, danger of entering the lungs.
 - **Treatment:**
In cases of irritation to the lungs, initial treatment with Dexametason metered aerosol.
Symptomatic treatment
(decontamination, vital functions)

* 5 Fire fighting measures

- **Suitable extinguishing agents:**
Water jet spray
Carbon dioxide (CO₂)
Foam
- **For safety reasons unsuitable extinguishing agents:**
Direct jet water
Organic compounds
- **Special hazards caused by the material, its products of combustion or resulting gases:**
Dangerous decomposition product see chapter 10: stability and reactivity
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information:**
Heating leads to pressure increase entailing danger of bursting and explosion. Immediately cool neighbouring packages and containers with sprayed water and, if possible, remove them out of the danger zone
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

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Collect contaminated fire fighting water separately. It must not enter the sewage system.

* 6 Accidental release measures

· Person-related safety precautions:



Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Use respiratory protective device against the effects of fumes/dust/aerosol.

· Measures for environmental protection:

Do not allow product to reach sewage system or any water course.

Do not allow to penetrate the ground/soil.

· Measures for cleaning/collecting:

Ensure adequate ventilation.

If possible without risk, isolate damaged containers.

Put damaged packagings in plastic salvage packagings. Do not use metall drums.

Do not close packagings airtight - risk of bursting by decomposition of the product.

Small quantities:

Dilute with plenty water.

Absorb with non-combustible material like sand, soil or diatomite.

Dam up larger quantities and pump into containers.

Rinse residues with water.

Send for recovery or disposal in suitable receptacles.

Dispose contaminated material as waste according to item 13.

* 7 Handling and storage

· Handling

· Information for safe handling:

Open and handle receptacle with care.

Ensure good ventilation/exhaustion at the workplace.

Keep away from heat and direct sunlight.

Prevent formation of aerosols.

Restrict the quantity stored at the work place.

Avoid contact with eyes and skin.

Avoid inhalation of vapours.

Do not refill residue into storage receptacles.

· Information about protection against explosions and fires: The product is not flammable

· Storage

· Requirements to be met by storerooms and receptacles:

Store only in the original receptacle.

Use only receptacles specifically permitted for this substance/product.

Provide for suitable venting installations on all containers.

Suitable material for containers and packaging:

VA-steel (passivated)

Polytetrafluoroethylen

Polypropylene

Glass

Ceramic

HDPE (Hig density polyethylene)

Aluminium (passivated)

Aluminium-magnesium-alloy (passivated)

Provide acid-resistant floor.

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Jointless, smooth floor and walls.

- **Information about storage in one common storage facility:**

Store away from foodstuffs.

Store away from feed.

Store away from flammable substances.

Do not store together with alkalies (caustic solutions).

Keep away from solvents.

Do not store together with:

Reducing agents

Metal salts

Store separately from:

Explosives (1)

Compressed, liquefied and pressurized gas (2A)

Substances liable to spontaneous combustion (4.2)

Substances which, in contact with water, emit flammable gases (4.3)

Organic peroxides (5.2)

- **Further information about storage conditions:**

Do not gas tight seal receptacle.

Remove packing material (wood, paper, cardboard) from the storage area.

Protect from contamination

- **Storage class** 5.1 B oxidizing substances (VCI)

- **Specific applications** Follow the directions!

* 8 Exposure controls and personal protection

- **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

WEL (Great Britain) Short-term value: 2.8 mg/m³, 2 ppmLong-term value: 1.4 mg/m³, 1 ppmOEL (Ireland) Short-term value: 3 mg/m³, 2 ppmLong-term value: 1.5 mg/m³, 1 ppm

- **Personal protective equipment**

- **General protective and hygienic measures:**

The usual precautionary measures should 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.

Avoid contact with eyes and skin absolutely.

Do not inhale gases / fumes / aerosols.

Provide eye bath.

If larger quantities are handled provide emergency showers.

- **Breathing equipment:**

Not necessary if room is well-ventilated.

In case of unintentional release of substance, exceeding the occupational exposure limit value:



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Short term filter device:

Filter: CO NO P3

- **Protection of hands:**

Chemical resistant gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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

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Check protective gloves prior to each use for their proper condition.

After use of gloves apply skin-cleaning agents and skin cosmetics.

• **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.

• **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 gloves made of the following materials are suitable:**

For example protection gloves made by KCL GmbH, D-36124 Eichenzell; email: vertrieb@kcl.de, with following specification (tested according to EN 374):

Material: butylrubber

Thickness: 0,7 mm

Permeation time: > 480 minutes

Product name: Butoject (898)

Material: Fluorkautschuk

Thickness: 0,7 mm

Permeation time: > 480 minutes

Product name: Vitoject(890)

These recommendations are valid only for the product mentioned in this safety data sheet.

• **As protection from splashes gloves made of the following materials are suitable:**

Material: Polychloroprene with natural rubber

Thickness: 0,6 mm

permeation time: 30 minutes

Product name: Camapren (720)

• **Eye protection:**

Basket goggles (DIN EN 58211, code number 3) or face protection shield.

If vapours or aerosols arise which may injure the eyes , wearing of a full mask is recommended.

• **Body protection:**

Acid resistant protective clothing

According to hazard:

Boots

Apron

* 9 Physical and chemical properties:

• **General Information**

Form:	Fluid
Colour:	Colourless Clear
Odour:	Characteristic light pungent

• **Change in condition:**

Melting point/Melting range: -52°C

Boiling point/Boiling range: 114°C

• **Flash point:** not applicable

• **Ignition temperature:**

• **Decomposition temperature:** > 100°C

• **Danger of explosion:** Product does not present an explosion hazard.

• **Vapour pressure at 20°C:** 12 mbar

• **Density at 20°C:** ~ 1.196 g/cm³

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- **Solubility in / Miscibility with Water:** Soluble
- **pH-value:** > 1-3
- **Viscosity:**
- dynamic at 0°C: 1.85 mPas

*10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
To avoid thermal decomposition do not overheat.
- **Materials to be avoided:**
metallic salts
metals
Alkalis
Reducing agents
Hydrochloric acid
- **Dangerous reactions:**
Self-accelerating exothermic reaction with oxygen evolution.
Incompatibility with all kinds of contaminations, above all heavy metal salts, alkalis (risk of decomposition) and combustible materials (fire hazard).
- **Dangerous products of decomposition:** Oxygen

*11 Toxicological information

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

Oral	LD ₅₀	801 mg/kg (rat)	Test substance: Hydrogen peroxide 60%
Dermal	LD ₅₀	> 6500 mg/kg (rabbit)	Test substance: Hydrogen peroxide 70 %
Inhalative	LC ₅₀ /4 h	> 0.17 mg/l (rat)	Test substance: hydrogen peroxide 70% maximum obtainable test dosage - no fatality
- **Primary irritant effect:**
- **on the skin:**
Irritating to skin
Repeated or prolonged skin contact may have caustic effects on skin.
Irritating to mucous membrane and respiratory tract.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** Not sensitizing (guinea pig)
- **Other information (about experimental toxicology):**
- **Carcinogenic effects:** A clear proof of an increased risk of tumours could not be delivered, so far.
- **Mutagenic effects and reproductive toxicity:**
In-vitro genotoxicity: In-vitro examinations (microorganisms, cell cultures) reveal mutagenic/genotoxic effects; literature. In the presence of metabolic systems, no mutagenic effects were observed.
In-vivo genotoxicity:
Micronucleus test, mouse, intraperitoneal (i.p.), negative, OECD 474.
Micronucleus test, mouse, oral, negative, literature.
Unscheduled DNA synthesis test (UDS): rat, negative, literature.
- **Subacute to chronic toxicity:**
Drinking water study, mice, (male and female), duration: 90 days, follow-up (recovery): 6 weeks; effects/target organs: development of the body mass negative, irritation of the gastrointestinal tract; OECD 408.
- **Additional toxicological information:**
The toxicity data mentioned in this chapter are literature data. The product itself has not been tested.

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Swallowing may lead to a strong caustic effect on mouth, throat and stomach.

The decomposition beginning in the upper digestive tract with massive oxygen release can lead to severe mechanical damage to the stomach and oesophagus. Depending on the resorbed quantity the gas formation can also extend to the vascular system (e.g. embolism in the portal vein system), which leads to considerable circulatory disorders.

*12 Ecological information

- **Information about elimination (persistence and degradability):**

- **Other information:**

Photochemical degradation of 50% within about 20 hours. Medium: air.
In soil and sewage water a fast reduction to oxygen and water occurs.

- **Behaviour in environmental systems:**

- **Mobility and bioaccumulation potential:** Does not accumulate in organisms

- **Ecotoxic effects:**

- **Aquatic toxicity:**

orfe LC₅₀: 35mg/l (100% hydrogen peroxide)

EC₀/24h 3.8 mg/l (daphnia magna)

EC₁₀ 11 mg/l (16h) (pseudomonas putida)

EC₅₀/24h 7.7 mg/l (daphnia magna)

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

OECD 201

LC₀ 17 mg/l (ictalurus punctatus)

96h

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

LC₅₀/96h 37.4 mg/l (ictalurus punctatus)

NOEC/72 h 0.1 (chlorella vulgaris)

OECD 201

- **Additional ecological information:**

- **AOX-indication:** The product does not contain any organic halogen compound.

- **According to the formulation contains the following heavy metals and compounds from the EU guideline NO. 76/464 EC:**
none

- **General notes:**

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

Danger to drinking water is possible if large quantities leak into the ground or into water course.

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.

13 Disposal considerations

- **Product:**

- **Recommendation:**



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

Disposal according to instructions of local authorities.

- **Uncleaned packagings:**

- **Recommendation:**

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

Disposal must be made according to official regulations.

- **Recommended cleansing agent:** water

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14 Transport information

· Land transport ADR/RID (cross-border)



- ADR/RID class: 5.1 (OC1) Oxidising substances.
- Danger code (Kemler): 58
- UN-Number: 2014
- Packaging group: II
- Label: 5.1+8
- Description of goods: 2014 HYDROGEN PEROXIDE, AQUEOUS SOLUTION
- Remarks: with not less than 20 % but not more than 60 % hydrogen peroxide (stabilized as necessary)
Limited quantity: 500 ml inner packaging, 30 kg gross packaging unit

· Maritime transport IMDG:



- IMDG Class: 5.1
- UN Number: 2014
- Label: 5.1+8
- Packaging group: II
- EMS Number: F-H,S-Q
- Proper shipping name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION
- Remarks: with not less than 20 % but not more than 60 % hydrogen peroxide (stabilized as necessary)

· Air transport ICAO-TI and IATA-DGR:



- ICAO/IATA Class: 5.1
- UN/ID Number: 2014
- Label: 5.1+8
- Packaging group: II
- Proper shipping name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION
- Remarks: Transport by aircraft is forbidden!!
Air transport of hydrogen peroxide aqueous solution with more than 40 % but 60 % or less hydrogen peroxide (stabilized as necessary) is forbidden!

- Transport/Additional information: Heat sensitive

*15 Regulations

· Markings according to EC guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

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· **Code letter and hazard designation of product:**



Xn Harmful

· **Risk phrases:**

- 22 Harmful if swallowed.
- 37/38 Irritating to respiratory system and skin.
- 41 Risk of serious damage to eyes.

· **Safety phrases:**

- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 28 After contact with skin, wash immediately with plenty of soap and water.
- 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

· **Special labelling of certain preparations:**

- If sold to private consumers further safety phrases are required:
- Keep out of the reach of children.
- If swallowed, seek medical advice immediately and show this container or label.
- The container has to be fitted with a tactile warning of danger according to directive 1999/45/EC if the product is sold to the general public.

· **National regulations**

· **Information about limitation of use:**

- Restrictions on juvenile employment must be observed.
- Employment restrictions concerning pregnant and lactating women must be observed.

· **Water hazard class:** Water hazard class 1 (Assessment by list): slightly hazardous for water.

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.

· **Reasons for amendments:**

- General revision
- Completion of toxicity data
- Regulation (EC) No. 1907/2006

· **Department issuing MSDS:**

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Tel.: +49-6155-823241

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· **Contact:** Angelika Torges

· **Sources:** ESIS (EU Existing Substances Information System)

· *** Data compared to the previous version altered.**

Changes have been made to chapters marked with a *, as compared to the previous version.