

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

1.1. Product identifier

Trade name	Marisol HE
Article No.	24-4072
UFI code	4CP5-X0N0-A00W-9CN8

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

Product type	Cleaning agent for heat exchangers.
Relevant identified uses	Restricted to professional users.
Not suitable for use in	Do not use in conjunction with other products. Contains oxygen based bleach.

1.3. Details of the supplier of the safety data sheet

Supplier	AB DFS
Street address	Fiskebäcks Hamn 7 426 58 Västra Frölunda Sweden
Telephone	031-29 14 35
Email	order@dfs-ab.se
Web site	www.dfs-ab.se

1.4. Emergency telephone number

Emergency phone number	112
Available outside office hours	Yes

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Classification	Serious eye damage, hazard category 1 Acute toxicity, oral, hazard category 4
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Hazard statements	H302, H318
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2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms	
Signal word	Danger

Marisol HE

Precautionary statements

P310 Immediately call a POISON CENTER/doctor
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P280 Wear eye protection.
P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P264 Wash hands thoroughly after handling.

More information

Contains: Hydrogen peroxide solution 8-34%

2.3. Other hazards

Other hazards

This mixture does not contain any REACH registered substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-phrase M factor acute M factor chronic	Note
Hydrogen peroxide solution	7722-84-1 231-765-0 01-2119485845-22 -	8 - 34%	Ox. Liq. 1, Acute Tox. 4 - oral, Skin Corr. 1A, Acute Tox. 4 - inhalation, STOT SE 3 - resp. tract irrit., Aquatic Chronic 3	H271, H302, H314, H332, H335, H412 - -	STOT SE 3; H335; C ≥ 35 % Eye Dam. 1; H318: 8 % ≤ C < 50 % Eye Irrit. 2; H319: 5 % ≤ C < 8 % Ox. Liq. 1; H271: C ≥ 70 %**** Ox. Liq. 2; H272: 50 % ≤ C < 70 % **** Skin Corr. 1A; H314: C ≥ 70 % Skin Corr. 1B; H314: 50 % ≤ C < 70 % Skin Irrit. 2; H315: 35 % ≤ C < 50 %

Substance additional information

Section 16 for the full text of H-phrases mentioned in this section.

SECTION 4: First aid measures

4.1. Description of first aid measures

Description of first aid measures

In uncertainty or when symptoms persist, seek medical attention.

Inhalation

Potential for exposure by inhalation if aerosols or mists are generated. Move person into fresh air. With labored breathing: Provide with oxygen. Consult a doctor. If the casualty is not breathing: Perform mouth-to-mouth resuscitation, notify emergency physician immediately.

Skin contact

Wash off affected area immediately with plenty of water for at least 15 minutes. If symptoms persist, consult a physician for treatment.

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Eye contact

With eye held open, thoroughly rinse immediately with plenty of water for at least 10 minutes. Consult an ophthalmologist immediately if the symptoms persist. When dealing with caustic substances, notify emergency physician immediately (key words: burns in eye).

Ingestion

Rinse mouth. Immediately give large quantities of water to drink. Obtain medical attention. When dealing with caustic substances, notify emergency physician immediately.

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

Most important symptoms and effects, both acute and delayed

May cause serious eye damage.
Harmful if swallowed.

Inhalation

In case of substances with high water solubility, irritations up to formation of necrosis in the upper respiratory tract may result after inhalation of caustic/ irritating aerosols and mists. The initial focus is on the local action: signs of irritation of the respiratory tract such as coughing, burning behind the sternum, tears, burning in the eyes or nose. There is a risk of pulmonary edema!

Skin contact

Superficial irritations and damage up to ulcerations and scarring develop on the skin.

Eye contact

In the eye, caustic/ irritating and harmful liquids cause, depending on the intensity of exposure, various levels of irritation, destruction, and ablation of the epithelium of the conjunctiva and cornea, corneal clouding, edema and ulcerations. Danger! Possible loss of eyesight!

Ingestion

May cause burning in the mouth and throat. May cause nausea, vomiting, diarrhea and abdominal pain.

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

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media

Do not use a direct jet of water.

5.2. Special hazards arising from the substance or mixture

Special hazards arising from the substance or mixture

Emits oxygen easily and, in the event of contact with organic substances, can cause fire or explosion. Decompose rapidly into oxygen and water upon contact with certain metals and their salts. Risk of explosion in closed containers if pressure rises rapidly. Note that contaminated clothing may pose a risk of fire.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

Containers in the vicinity of fire should be moved immediately or cooled with water. Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face mask. Firefighter equipment (eg helmet, safety boots and gloves) that complies with the European standard EN 469, provides basic protection in the event of chemical accidents.

Measures in case of fire

Immediately isolate the area by dismissing people in the vicinity of the fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions, protective equipment and emergency procedures

Ensure good ventilation. Wear suitable protective equipment. Avoid inhalation and contact with the skin and eyes. Prevent further leakage or spillage if safe to do so.

6.2. Environmental precautions

Environmental precautions

Prevent entry to sewers and public waters. Notify the responsible authority in the event of contamination of soil or water, or discharges into sewage systems.

6.3. Methods and material for containment and cleaning up

Methods and material for containment and cleaning up

Small quantities may be flushed away with water. Major spillage should be banked with sand, earth or similar material and collected into suitable enclosed containers for further destruction.

6.4. Reference to other sections

Reference to other sections

Personal protection see section 8 and for disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Preventive handling precautions

Ensure good ventilation. Avoid the inhalation of fumes as well as contact with skin and eyes. Wear personal protective equipment.

General hygiene

Emergency shower and eyewash shall be available at the work site. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Conditions for safe storage, including any incompatibilities

The product is not flammable. Keep locked-up. Keep in a frost-free place. The product should be stored in sealed containers at room temperature or cooler. Keep in properly labelled containers. Advice on common storage: Do not store together with: alkalis, reductants, metallic salts (risk of decomposition). Do not store together with: inflammable substances (risk of fire). Do not store together with: organic solvents (risk of explosion).

7.3. Specific end use(s)

Specific end use(s)

Identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits

Contains no substances with occupational exposure limit values.

8.2. Exposure controls

Appropriate engineering controls

Eye washes must be available. Provide adequate ventilation.

Eye / face protection

Use goggles or face shield (EN 166).

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Hand protection

For prolonged or repeated contact use protective gloves.
Protective gloves complying with EN 374. Protective gloves (PVC, neoprene, nitrile).

Other skin protection

Wear suitable protective clothing.

Respiratory protection

Breathing protection is not normally required.
In case of inadequate ventilation wear respiratory protection. Type NO-P3, code colour blue-white.

Environmental exposure controls

Do not discharge into drains, water courses or onto the ground.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Colour

Colourless

Odour

Pungent

Melting point / freezing point

-52 °C

Boiling point or initial boiling point and boiling range

114 °C

Flammability

No information available

Lower and upper explosion limit

No information available

Flash point

No data available

Auto-ignition temperature

No information available

Decomposition temperature

No information available

pH

Approx. 2 (concentrate)

Kinematic viscosity

No information available

Solubility

Soluble in water.

Partition coefficient n-octanol/water

-1.57

Vapour pressure

13 hPa

Density and/or relative density

1.14 kg/m³

Relative vapour density

No information available

Particle characteristics

Not relevant.

9.2. Other information

Other information

Viscosity, dynamic : 1.17 mPa · s

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Stable under normal usage and storage conditions.

10.2. Chemical stability

Chemical stability Stable under normal usage and storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Stable under normal usage and storage conditions.

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods.

10.5. Incompatible materials

Incompatible materials Combustible materials, reducing agents, acids, bases, metallic powders.

10.6. Hazardous decomposition products

Hazardous decomposition products Oxygen

SECTION 11: Toxicological information

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

Acute toxicity Harmful if swallowed.

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/irritation Causes serious eye damage.

Germ cell mutagenicity Based on the available data, the classification criteria are not met.

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

Repeated dose toxicity Based on the available data, the classification criteria are not met.

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

STOT-single exposure Based on the available data, the classification criteria are not met.

STOT-repeated exposure Based on the available data, the classification criteria are not met.

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

LD50 Oral LD50 (35% Hydrogen peroxide): 1200 mg/kg (rat)

LD50 Dermal LD50 (70% Hydrogen peroxide): 6500 mg/kg (rabbit)

LC50 Inhalation LC50 (4h) (50% Hydrogen Peroxide): >0.17 mg/l (rat)

11.2. Information on other hazards

Endocrine disrupting properties Contains no substances with endocrine disrupting properties.

Other information No information available

SECTION 12: Ecological information

12.1. Toxicity

Toxicity The product is not classified as environmentally harmful.

Acute fish toxicity LC50 (96h) (Hydrogen peroxide solution): 16.4 mg/l (fathead minnows)

Acute algae toxicity NOEC: 0.63 mg/l. (Hydrogen peroxide solution) (Skeletonema costatum).

Acute crustacean toxicity EC50 (48h) (Hydrogen peroxide solution): 2.4 mg/l (Daphnia pulex)

12.2. Persistence and degradability

Persistence and degradability Readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulative potential Bio-accumulation is unlikely.

12.4. Mobility in soil

Mobility No information available

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment The product and its agents are not expected to be PBT and/or vPvB.

12.6. Endocrine disrupting properties

Endocrine disrupting properties Contains no substances with endocrine disrupting properties.

12.7. Other adverse effects

Other adverse effects No information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal considerations The product should be disposed of as hazardous waste. Dispose of any product, residue or packing material according to national and local regulations. Do not dispose of waste into sewer.

Packaging Contaminated packaging must be disposed of as product. Empty, cleaned packaging can be sorted for recycling.

Waste code	Description
16 09 03*	peroxides, for example hydrogen peroxide

Please note - an asterisk (*) next to a code denotes that it is HAZARDOUS WASTE.

Other

Waste code The waste code is a recommendation. Depends on business area and use. Appropriate classification of waste is the user's responsibility.

SECTION 14: Transport information

14.1. UN number

UN number	2984
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14.2. UN proper shipping name

HYDROGEN PEROXIDE, AQUEOUS SOLUTION

IMDG proper shipping name	HYDROGEN PEROXIDE, AQUEOUS SOLUTION
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14.3. Transport hazard class(es)

Label	5.1
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ADR / RID Class	5.1
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ADR / RID Classification code	O1
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ADR / RID hazard identification number	50
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IMDG Class	5.1
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14.4. Packing group

Packing group	III
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14.5. Environmental hazards

Environmental hazards	The product is not classified as environmentally hazardous.
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IMDG Marine Pollutant	No.
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14.6. Special precautions for user

Special precautions for user	Tunnel restriction code: E IMDG EmS: F-H, S-Q
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14.7. Maritime transport in bulk according to IMO instruments

Maritime transport in bulk according to IMO instruments	The load is not intended for bulk transport.
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SECTION 15: Regulatory information

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

EU regulations	Regulation (EC) No 1907/2006 of the European Parliament and of the Council, (REACH). Regulation (EC) No 1272/2008 of the European Parliament and of the Council. EUROPEAN PARLIAMENT AND COUNCIL REGULATION (EC) No 648/2004 on detergents. The International Maritime Dangerous Goods (IMDG) Code, 2020 Edition. ADR 2021: Agreement concerning the International Carriage of Dangerous Goods by Road, ECE/TRANS/300.
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National regulations	Local laws and regulations should be carefully observed.
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15.2. Chemical safety assessment

Chemical safety assessment

A chemical safety assessment has been performed for:
Hydrogen peroxide

SECTION 16: Other information

Changes to previous revision

1

Abbreviations

PBT: Persistent, Bioaccumulative and Toxic.
vPvB: very Persistent and very Bioaccumulative.
LD50: Lethal dose, the dose that kills 50% of a population.
LC50: Lethal concentration for 50% of a test population.
NOEC: No Observed Effect Concentration

References to key literature and data sources

<http://echa.europa.eu>
<http://eur-lex.europa.eu>

Evaluation methods for classification

The classification is based on the addition method according to Regulation (EC) No 1272/2008 (CLP).

Phrase meaning

Ox. Liq. 1 - Oxidising liquids, hazard category 1
Acute Tox. 4 - oral - Acute toxicity, oral, hazard category 4
Skin Corr. 1A - Skin corrosion, hazard category 1A
Acute Tox. 4 - inhalation - Acute toxicity, inhalation, hazard category 4
STOT SE 3 - resp. tract irrit. - Specific Target Organ Toxicity — Single exposure, hazard category 3 - respiratory tract irritation
Aquatic Chronic 3 - Hazardous to the aquatic environment — Chronic hazard category 3
H271 May cause fire or explosion; strong oxidiser.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.