

SAFETY DATA SHEET

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

- 1.1 Product identifier
 - Product Name: OXYGEN SCAVENGER PLUS
 - Product Part Number: 698712 (25 liter)
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
 - Use of the substance/mixture: Water treatment
- 1.3 Details of the supplier of the safety data sheet
 - Name of Supplier: Wilhelmsen Ships Service AS
 - Address of Supplier: Willem Barentszstraat 50, 3165AB Rotterdam, The Netherlands
 - Telephone: Telephone: +31 4877 777 Fax: +31 4877 888
 - Head office: Wilhelmsen Ships Service AS
 - Strandveien 20, N1324 Lysaker
 - Norway, Tel: (47) 6349 440 35
 - -
 - Other suppliers SEE SECTION 16!!!
 - For quotations contact your local Customer Services
 - Responsible Person: Product HSE Manager
 - Telephone: +31 10 4877775
 - Email: WSS.GLOBAL.SDSINFO@wilhelmsen.com
 - Email: WSS.GLOBAL.SDSINFO@wilhelmsen.com
- 1.4 Emergency telephone number
 - ****ONLY TO BE USED IN CASE OF AN INCIDENT****
 - International 24hrs Emergency NCEC:+ 44 1865 407333
 - American 24hrs Emergency CHEMTREC (800) 424 9300
 - American Chemistry Council 24hrs +1 703 527 3887
 - Greece: Poisoning emergency center, +30 210 7793777
 - Norway: Poison information centre, +47 22591300
 - Sweden: Poison information centre, +46 08 33 12 31
 - China NRCC 24hrs emergency telephone number: +86-0532-8388 9090
 - Wilhelmsen Ships Service, Melbourne, AUSTRALIA Emergency 24hrs: +61 3 9630 0998

SECTION 2 Hazards identification

- 2.1 Classification of the substance or mixture
 - Counsil Directive 1999/45/EEC Classification, packing and labelling of dangerous preparations.
 - Refer to current The Dangerous Substances Directive (67/548/EEC)
 - Symbols: Xn
 - Harmful by inhalation and in contact with skin (R20/21)
 - Irritating to eyes, respiratory system and skin (R36/37/38)
 - Regulations 1272/2008/EEC. Classification, labeling and packing of dangerous substances and preparations

SECTION 2 Hazards identification (....)

- Symbols: GHS07
- Signal Word: Warning
- Acute Tox. 4
- Eye Irrit. 2
- Skin Irrit. 2
- Harmful if swallowed (H302).
- Causes serious eye irritation (H319).
- Causes skin irritation (H315).
- 2.2 Label elements



- Signal Word: Warning
- Contains:
- Diethylhydroxylamine
- -
- Hazard phrases Harmful if swallowed (H302).
 - Causes serious eye irritation (H319).
 - Causes skin irritation (H315).
- Precautionary Phrases
 - Wear protective gloves/protective clothing/eye protection/face protection (P280). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing (P305+P351+P338). If eye irritation persists: Get medical advice/attention (P337+P313). IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician (P301+P310).

2.3 Other hazards

- Not applicable
- Not a PBT according to REACH Annex XIII
- Odour: Amine odour
- Appearance: Liquid, pale yellow, soluble in water

SECTION 3 Composition/information on ingredients

3.1 Mixtures

- Diethylhydroxylamine Concentration: 10-30%
 - CAS Number: 3710-84-7 EC Number: 223-055-4 Symbols: Xn, GHS07, GHS02 R/H Phrases: R10, R20/21, R36/37/38 - H226, H302, H319, H315 Categories: Flam. Liq. 3, Acute Tox. 4, Eye Irrit. 2, Skin Irrit. 2

SECTION 4 First aid measures

4.1 Description of first aid measures

SECTION 4 First aid measures (....)

- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower (P303+P361+P353).
- IF ON SKIN: Wash with plenty of soap and water (P302+P352).
- Contaminated clothing should be laundered before reuse
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing (P305+P351+P338).
- If eye irritation persists: Get medical advice/attention (P337+P313).

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- IF SWALLOWED: rinse mouth. Do NOT induce vomiting (P301+P330+P331).
- Give 200-300mls (half pint) water to drink
- Obtain immediate medical attention

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- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
- When in doubt or symptoms persist, seek medical attention
- 4.2 Most important symptoms and effects, both acute and delayed
 - Causes irritation
 - May cause gastro-intestinal disturbances
- 4.3 Indication of any immediate medical attention and special treatment needed
 - No information available

SECTION 5 Fire-fighting measures

- 5.1 Extinguishing media
 - Not flammable. In case of fire use extinguishing media appropriate to surrounding conditions
- 5.2 Special hazards arising from the substance or mixture
 - Smoke from fires is irritating
- 5.3 Advice for firefighters

- Wear chemical protection suit and positive-pressure breathing apparatus

SECTION 6 Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
 - Wear protective clothing as per section 8
- 6.2 Environmental Precautions
 - Do not allow to enter public sewers and watercourses
 - Do not flush spilt material into any public water system
- 6.3 Methods and material for containment and cleaning up
 - Absorb spillage in inert material and shovel up
 - Ventilate the area and wash spill site after material pick-up is complete
- 6.4 Reference to other sections
 - See Section 13

SECTION 7 Handling and storage

- 7.1 Precautions for safe handling
 - Wear protective clothing as per section 8
 - Do not get in eyes, on skin, or on clothing (P262).
 - Eyewash bottles should be available
- 7.2 Conditions for safe storage, including any incompatibilities

SECTION 7 Handling and storage (....)

- Store in a dry place. Store in a closed container (P402+P404).
- Store in a well-ventilated place (P403).
- 7.3 Specific end use(s)
 - Proper chemicals handling procedures should be adopted

SECTION 8 Exposure controls/personal protection

- 8.1 Control parameters
 - Diethylhydroxylamine
 - No exposure limits have been set for this substance
- 8.2 Exposure controls
 - No special precautions are required for this product
- 8.3 Occupational exposure controls



- Wear suitable protective clothing, including eye/face protection and gloves (plastic or rubber are recommended)
- 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.
- Respiratory protection may be required under exceptional circumstances when excessive air contamination exists
- Wear suitable respiratory protection. Gas cartridge (organic substances).

SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Odour: Amine odour
- Appearance: Liquid, pale yellow, soluble in water
- pH 10 11 at 100 % concentration
- Density 0,995 1,005 g/cm3 at 20 deg C
- Flash point > 62 deg C (CC)
- Partition Coefficient (n-Octanol/Water): Log Pow -1,5
- Non combustible
- 9.2 Other information
 - No information available

SECTION 10 Stability and reactivity

- 10.1 Reactivity
 - No information available
- 10.2 Possibility of hazardous reactions
 - No hazardous reactions known if used for its intended purpose
- 10.3 Incompatible materials
 - Incompatible with amines
 - Incompatible with oxidizing substances
 - Incompatible with reducing agents
 - Incompatible with acid
- 10.4 Conditions to avoid

SECTION 10 Stability and reactivity (....)

- Avoid contact with water
- No special precautions are required for this product

10.5 Hazardous Decomposition Products

- Decomposition products may include toxic gas
- Decomposition products may include Nitrous gases (NOX)
- Decomposition products may include amines
- Decomposition products may include ammonia
- Decomposition products may include hydrogen

SECTION 11 Toxicological information

- 11.1 Information on toxicological effects
 - LD50 (oral,rat) >2190 mg/kg
 - LD50 (skin,rabbit) 1300 mg/kg
 - LC50 (inhalation, rat) 3140 ppm /4h
- 11.2 Contact with eyes
 - Causes irritation
- 11.3 Contact with skin

- Causes irritation

11.4 Ingestion

- May cause gastro-intestinal disturbances

- 11.5 Inhalation
 - Vapours or aerosols may cause irritation of eyes, nose and respiratory tract

SECTION 12 Ecological information

- 12.1 Toxicity
 - LC50 (fish) Diethylhydroxylamine 150 mg/l (96 hr)
 - EC50 (daphnia) Diethylhydroxylamine 130.1 mg/l (48 hr)
 - Biodegradability. OECD-test. 28 days 20 % (Diethylhydroxylamine)

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- This product does not contain ingredients which are classified in the EU as dangerous for the environment.
- 12.2 Persistence and degradability
 - Degrades rapidly on exposure to air
- 12.3 Bioaccumulation Potential
 - Bioaccumulation of the components in this product is insignificant.
- 12.4 Mobility in soil
 - Completely soluble in water
- 12.5 Results of PBT and vPvB assessment
 - Not a PBT according to REACH Annex XIII
- 12.6 Other Adverse Effects
 - No environmental problems are expected when the product is used / handled correctly.

SECTION 13 Disposal considerations

- 13.1 Waste treatment methods
 - Do not discharge into drains or the environment, dispose to an authorised waste collection point
 - Disposal should be in accordance with local, state or national legislation

SECTION 13 Disposal considerations (....)

13.2 Classification

- EU Waste class: 07.01.99

SECTION 14 Transport information

14.1 UN

- UN No.: Not applicable
- Proper Shipping Name: Not applicable
- Hazard Class: Not applicable
- Packing Group: Not applicable
- Not classified as hazardous for transport

14.2 Environmental hazards

- Not Classified
- Presents little or no hazard to the environment
- 14.3 Special precautions for user
 - Not classified as hazardous for transport
- 14.4 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code
 - Not applicable

14.5 Road/Rail (ADR/RID)

- ADR UN No.: Not applicable
- Proper Shipping Name: Not applicable
- ADR Hazard Class: Not applicable
- ADR subrisk: Not applicable
- ADR Packing Group: Not applicable
- ADR Flashpoint: Not applicable
- 14.6 Sea (IMDG)
 - IMDG UN No.: Not applicable
 - Proper Shipping Name: Not applicable
 - IMDG Hazard Class: Not applicable
 - IMDG subrisk: Not applicable
 - IMDG Pack Group .: Not applicable
 - IMDG EmS: Not applicable
 - IMDG Flashpoint: Not applicable
- 14.7 Air (ICAO/IATA)
 - ICAO UN No.: Not applicable
 - Proper Shipping Name: Not applicable
 - ICAO Packing Group: Not applicable
 - ICAO Hazard Class: Not applicable
 - ICAO subrisk: Not applicable
 - ICAO Flashpoint: Not applicable
- 14.8 DOT / CFR (US Department of Transportation)
 - Identification Number: Not applicable
 - DOT Proper Shipping Name: Not applicable
 - DOT Labels: Not applicable
 - Product RQ (lbs): Not applicable
 - Hazardous Material: Not applicable

SECTION 14 Transport information (....)

- Hazard Class: Not applicable
- DOT subrisk: Not applicable
- DOT Flashpoint: Not applicable

SECTION 15 Regulatory information

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

- Counsil Directive 1999/45/EEC Classification, packing and labelling of dangerous preparations.
- This Safety Data Sheet is provided in compliance with The Dangerous Substances Directive (67/548/EEC)
- Regulations 1272/2008/EEC. Classification, labeling and packing of dangerous substances and preparations
- Norwegian Productregistration no: 52696
- This Safety Data Sheet has been prepared in accordance with article 31 and annex II in REACH and Directive 453/2010/EU.

15.2 Chemical Safety Assessment

- None

SECTION 16 Other information

Text not given with phrase codes where they are used elsewhere in this safety data sheet:- H226: Flammable liquid and vapour. H302: Harmful if swallowed. H315: Causes skin irritation. H319: Causes serious eye irritation. R10: Flammable. R20/21: Harmful by inhalation and in contact with skin. R36/37/38: Irritating to eyes, respiratory system and skin.

The data given here is based on current knowledge and experience. This Safety Data Sheet describes the product in terms of safety requirements and does not signify any warranty with regard to the product's properties

The data given here only applies when product used for proper application(s). The product is not sold as suitable for other applications - usage in such may cause risks not mentioned in this sheet. Do not use for other application(s) without seeking advice from manufacturer

The information provided about the product on this Safety Data Sheet has been compiled from knowledge of the individual constituents

The most up-to-date version of this MSDS can be found on www.wilhelmsen.com/shipsservice

OTHER CONTACT INFORMATION MAJOR CHEMICAL OFFICES

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SECTION 16 Other information (....)

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