

OXYGEN CONTROL

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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Version: 2.3

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

1.1. Product identifier

Product form : Mixture
Product name : OXYGEN CONTROL
Product code : UNIM250
Product group : Blend

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

1.2.1. Relevant identified uses

Main use category : Industrial use
Industrial/Professional use spec : Industrial
Function or use category : Boiler water treatment

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

UNIMARINE SERVICES INC.
60 MARKET SQUARE
PO BOX 364
BELIZE CITY
T +35725331054
info@unimarine-services.com

1.4. Emergency telephone number

Emergency number : +35725331054

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

H312 - Acute Toxicity (Dermal) Category 4, H332 - Acute Toxicity (Inhalation) Category 4, H335 - Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), H412 - Chronic Aquatic Hazard Category 3

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]



Signal Word: **Warning**

Hazard statement(s)

H312 Harmful in contact with skin.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Supplementary statement(s)

Not Applicable

Precautionary statement(s) General

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read carefully and follow all instructions.

Precautionary statement(s) Prevention

P271 Use only outdoors or in a well-ventilated area.
P261 Avoid breathing mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Precautionary statement(s) Response

P312 Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of water.

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2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

See 'Composition on ingredients' in Section 3.2

3.2. Mixtures

Name	1.CAS No 2.EC No 3.Index No 4.REACH No	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Nanoform Particle Characteristics
Diethylhydroxylamine	1.3710-84-7* 2.223-055-4 3.Not Available 4.01-2119962470-39-XXXX	10-30	Flammable Liquid Category 3, Chronic Aquatic Hazard Category 2, Acute Toxicity (Dermal) Category 4, Acute Toxicity (Inhalation) Category 4, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation); H226, H411, H312, H332, H335	Not Available

SECTION 4: First aid measures

4.1. Description of first aid measures

Eye Contact

If this product comes in contact with the eyes:

- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

Inhalation

If fumes or combustion products are inhaled remove from contaminated area.

- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor, without delay.

Ingestion

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

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

Symptoms/injuries after skin contact : None under normal conditions.
Symptoms/injuries after eye contact : Can occur: mild eye irritation.

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

Treat symptomatically.

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SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media : There is no restriction on the type of extinguisher which may be used.
Use extinguishing media suitable for surrounding area.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not flammable.

5.3. Advice for firefighters

Firefighting instructions : Alert Fire Brigade and tell them location and nature of hazard.
Wear breathing apparatus plus protective gloves in the event of a fire.
Prevent, by any means available, spillage from entering drains or water courses.
Use fire fighting procedures suitable for surrounding area.
DO NOT approach containers suspected to be hot.
Cool fire exposed containers with water spray from a protected location.
If safe to do so, remove containers from path of fire.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : See section 8

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : **Minor Spills**
Environmental hazard - contain spillage.
Clean up all spills immediately.
Avoid breathing vapours and contact with skin and eyes.
Control personal contact with the substance, by using protective equipment.
Contain and absorb spill with sand, earth, inert material or vermiculite.
Wipe up.
Place in a suitable, labelled container for waste disposal.

Major Spills
Environmental hazard - contain spillage.
Moderate hazard.
Clear area of personnel and move upwind.
Alert Fire Brigade and tell them location and nature of hazard.
Wear breathing apparatus plus protective gloves.
Prevent, by any means available, spillage from entering drains or water course.
Stop leak if safe to do so.
Contain spill with sand, earth or vermiculite.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid all personal contact, including inhalation.
Wear protective clothing when risk of exposure occurs.
Use in a well-ventilated area.
Avoid contact with moisture.
Avoid contact with incompatible materials.
When handling, DO NOT eat, drink or smoke.
Keep containers securely sealed when not in use.
DO NOT allow clothing wet with material to stay in contact with skin

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7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Polyethylene or polypropylene container.
Packing as recommended by manufacturer.
Check all containers are clearly labelled and free from leaks.

Incompatible products : None known

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
Diethylhydroxylamine	Dermal 70 mg/kg bw/day (Systemic, Chronic) Inhalation 49.3 mg/m ³ (Systemic, Chronic) Inhalation 2.92 mg/m ³ (Local, Chronic) Dermal 47 mg/kg bw/day (Systemic, Acute) Inhalation 45.6 mg/m ³ (Systemic, Acute) Inhalation 8.76 mg/m ³ (Local, Acute) Dermal 25 mg/kg bw/day (Systemic, Chronic) * Inhalation 8.7 mg/m ³ (Systemic, Chronic) * Oral 2.5 mg/kg bw/day (Systemic, Chronic) * Inhalation 0.54 mg/m ³ (Local, Chronic) *	8.2 µg/L (Water (Fresh)) 0.82 µg/L (Water - Intermittent release) 82 µg/L (Water (Marine)) 0.065 mg/kg sediment dw (Sediment (Fresh Water)) 0.007 mg/kg sediment dw (Sediment (Marine)) 6.4 mg/kg soil dw (Soil) 10 mg/L (STP)

* Values for General Population

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Environmental exposure controls:

Avoid release to the environment.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Pale Yellow
Colour	: Pale Yellow
Odour	: odourless.
Odour threshold	: No data available
pH	: 10 - 11
Relative evaporation rate (butylacetate=1)	: Not Available BuAC = 1
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 0.995-1.005
Solubility	: Soluble in water.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Unstable in the presence of incompatible materials.

Product is considered stable.

Hazardous polymerisation will not occur.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Inhaled

Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful.

Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system, in a substantial number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system.

Ingestion

The material is not thought to produce adverse health effects following ingestion (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum.

Skin Contact

Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period.

Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.

The material may accentuate any pre-existing dermatitis condition

Open cuts, abraded or irritated skin should not be exposed to this material

Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

Eye

Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.

Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.

Chronic

Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.

Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

SECTION 12: Ecological information

12.1. Toxicity

OXYGEN CONTROL	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
Diethylhydroxylamine	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	48	Crustacea	2.5mg/l	2
	EC50	48	Crustacea	8.2mg/l	2
	LC50	96	Fish	>134mg/l	2
	EC50	72	Algae or other aquatic plants	>101mg/l	2

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark.

Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

DO NOT discharge into sewer or waterways.

12.2. Persistence and degradability

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Diethylhydroxylamine Persistence: Water/Soil: Low Persistence: Air: Low

12.3. Bioaccumulative potential

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Diethylhydroxylamine Bioaccumulation: Low (LogKOW = 0.4308)

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12.4. Mobility in soil

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Diethylhydroxylamine	Mobility: Low (KOC = 73.83)
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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable
UN-No. (ADN)	: Not applicable
UN-No. (RID)	: Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

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14.6. Special precautions for user

- Overland transport

Not applicable

- Transport by sea

Not applicable

- Air transport

Not applicable

- Inland waterway transport

Not applicable

- Rail transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

ECHA SUMMARY

Ingredient	CAS number	Index No	ECHA Dossier
Diethylhydroxylamine	3710-84-7*	Not Available	01-2119962470-39XXXX

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word	Hazard Statement Code(s)
1	Flam. Liq. 3; Acute Tox. 4; Acute Tox. 4; Resp. STOT SE 3; Aquatic Chronic2	GHS02; GHS09; GHS07; Wng	H226; H312; H332; H335; H411
2	Flam. Liq. 3; Acute Tox. 4; Resp. STOT SE 3; Aquatic Chronic 2; Acute Tox. 4; Eye Irrit. 2; Acute Tox. 3; Muta. 2; Skin Corr. 1C	GHS02; GHS09; GHS07; Wng; GHS06; Dgr; GHS08; GHS05	H226; H312; H335; H411; H302; H319; H331; H341; H314

SECTION 16: Other information

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product