

SAFETY DATA SHEET

Bio-Protect 2

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

Date issued 01.07.2010

Revision date 06.09.2012

1.1. Product identifier

Product name Bio-Protect 2

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

Use of the substance/preparation Additive for diesel oil, hydraulic oil, metalworking fluids, etc.

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name Maritim Consultants AS

Company address P.O. Box 83

NO-5346 Aagotnes

Norway

Phone +47 56311760

Fax +47 56311761

E-mail post@maritim.as

Website <http://www.maritim.as>

1.4. Emergency telephone number

NHS Direct (UK): 0845 4647 (24h/24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to 67/548/EEC or 1999/45/EC R10
Xn; R20/22,R42/43
Xi; R37/38,R41
R67

Substance / mixture hazardous properties The product is flammable and toxic by inhalation and ingestion. The product may irritate the respiratory tract and skin and cause sensitization by inhalation and skin contact. Liquid splashes from the product may seriously damage the eye (cornea). Vapors may cause drowsiness and dizziness.

2.2. Label elements

Hazard symbol



R phrases R10 Flammable.
R20/22 Harmful by inhalation and if swallowed.
R37/38 Irritating to respiratory system and skin.
R41 Risk of serious damage to eyes.
R42/43 May cause sensitization by inhalation and skin contact.
R67 Vapours may cause drowsiness and dizziness.

S phrases S2 Keep out of the reach of children.
S24/25 Avoid contact with skin and eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 After contact with skin, wash immediately with plenty of soap and water.
S37/39 Wear suitable gloves and eye/face protection.
S38 In case of insufficient ventilation, wear suitable respiratory equipment.
S51 Use only in well-ventilated areas.
S63 In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Contains Glutaraldehyde

2.3. Other hazards

PBT / vPvB PBT/vPvB assessment has not been performed.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Component name	Identification	Classification	Contents
2-Propanol	CAS no.: 67-63-0 EC no.: 200-661-7 Index no.: 603-064-00-3 Synonyms: Isopropanol, Propan-2-ol	Xi, F; R11, R36, R67 Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE3; H336	30 - 50 %
1,5-Pentanedial	CAS no.: 111-30-8 EC no.: 203-856-5 Index no.: 605-022-00-X Synonyms: Glutaraldehyde	T; R23/25 C; R34 R42/43 N; R50 Acute tox. 3; H331 Acute tox. 3; H301 Skin Corr. 1B; H314 Resp. Sens. 1; H334 Skin Sens. 1; H317 Aquatic Acute 1; H400	5 - 9 %
Component comments	The remaining ingredients up to 100 % consist of non-classified components or of components in concentrations below the limit to be included in the calculation of hazard class. See section 16 for explanation of Risk-phrases (R) and hazard statements (H) listed above.		

SECTION 4: First aid measures

4.1. Description of first aid measures

General	If in doubt, seek medical advice.
Inhalation	Remove victim immediately from source of exposure. Fresh air and rest. If respiratory problems, artificial respiration/oxygen. Consult a physician for specific advice.
Skin contact	Remove contaminated clothing. Wash the skin immediately with soap and water. Contact physician if irritation continues.
Eye contact	Immediately rinse with water for several minutes. Remove any contact lenses. Hold eyelids apart. Obtain medical attention. Continue flushing during transport to hospital.
Ingestion	Rinse mouth thoroughly. Drink a few glasses of water or milk. Do not induce vomiting. Seek medical attention.

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

Information for health personnel	May cause asthma attacks in asthmatics. Risk of serious damage to eyes.
Acute symptoms and effects	Inhalation: irritation of the respiratory system, coughing, difficulties in breathing, headache, fatigue and nausea may appear. Skin contact: may cause redness, itching, cracking of the skin and allergic eczema. Eye contact: may cause redness and severe eye pain. Ingestion: may irritate mucous membranes and cause nausea, stomach pain and vomiting.

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

	Acute poisoning: if possible, give a suspension of activated charcoal as soon as possible, preferably within 5-10 minutes.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Dry-powder, carbon dioxide (CO ₂), water mist, foam.
Improper extinguishing media	Do not use water jet.

5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	Flammable. Vapours are heavier than air and may spread near ground to sources of ignition.
Hazardous combustion products	Can include, but are not limited to: Carbon dioxide and carbon monoxide.

5.3. Advice for firefighters

Personal protective equipment	Self-contained breathing apparatus may be required by rescue workers. In case of evacuation, use escape mask where possible.
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Other Information Containers close to fire should be removed immediately or cooled with water. Prevent discharge of extinguishing water down the drain.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ventilate well. Do not breathe vapour. Use protective equipment as referred to in section 8.

6.2. Environmental precautions

Do not allow to enter into sewer, water system or soil. Contact local authorities in case of spillage to drain/aquatic environment.

6.3. Methods and material for containment and cleaning up

Remove spillage with inert absorbent materials. Collect in a suitable container and dispose as hazardous waste according to section 13. After cleaning, flush contaminated area with plenty of water.

6.4. Reference to other sections

See also sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Mechanical ventilation or local exhaust ventilation may be required. Avoid inhalation of vapours. Avoid contact with eyes and skin. Persons susceptible for asthma and allergic reactions should not handle this product.

Protective Measures

Measures To Prevent fire Smoking and naked flames and other ignition sources are prohibited.

Advice on general occupational hygiene Do not eat, drink or smoke during work.

7.2. Conditions for safe storage, including any incompatibilities

Storage Store in a tightly closed container in a cool, well-ventilated room, protected from direct sunlight.

Special risks and properties The vapours are heavier than air and will spread along the floor.

7.3. Specific end use(s)

See section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Other Information about threshold limit values Explanation of the notation given above:
Sen = Sensitizing

Exposure limit values

Component name	Identification	Value	Year
Propan-2-ol	CAS no.: 67-63-0	8 h.: 400 ppm	2011
	EC no.: 200-661-7	8 h.: 999 mg/m ³	
	Index no.: 603-064-00-3	15 min.: 500 ppm	
	Synonyms: Isopropanol	15 min.: 1250 mg/m ³	
Glutaraldehyde	CAS no.: 111-30-8	8 h.: 0,05 ppm	2011
	EC no.: 203-856-5	8 h.: 0,2 mg/m ³	
		15 min.: 0,05 ppm 15 min.: 0,2 mg/m ³ Sen	

8.2. Exposure controls

Provide adequate ventilation. Observe Occupational Exposure Limits and minimise the risk of inhalation of vapours/spray mist. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment

Respiratory protection

In case of inadequate ventilation, use suitable respiratory equipment with gas filter (type A2). Check that mask fits tight and change filter regularly. Wear air-supplied mask in confined areas.

Hand protection

Laminate (PE/EVOH) gloves are recommended. Other resistant glove materials are: Nitrile. Polyvinyl chloride (PVC). Multi-layer material (eg 4H, Saranex). Penetration time > 8 hours.

Eye / face protection

Wear safety goggles or face shield (conforming to EN 166). Contact lenses should not be worn when handling this product.

Skin protection

Long sleeved workware.

Other Information

The listed protective equipment is a recommendation. A risk assessment of the actual risk may lead to other requirements. Isolate contaminated clothing and wash before reuse. Eye wash facilities and emergency shower should be available when handling this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Fluid
Colour	Green
Odour	Pungent
Odour limit	Not determined.
pH (as supplied)	Not determined.
Melting point/melting range	-15 °C
Boiling point / boiling range	89 °C
Flash point	≥ 23 °C
Evaporation rate	Not determined.
Flammability (solid, gas)	Not determined.
Explosion limit	8-16 vol % in air
Vapour pressure	26 mmHg (20 °C)
Vapour density	1,55 (air=1)
Specific gravity	0,94 g/cm ³
Solubility description	Miscible with oil products and water
Partition coefficient: n-octanol / water	Not applicable.
Spontaneous combustability	~ 420 °C
Viscosity	Not determined.

Physical hazards

Explosive properties	Not explosive, but vapors may form explosive mixtures with air
Oxidising properties	Not oxidising.

9.2. Other information

Other physical and chemical properties

No further information is available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No test data available. Vapors may form explosive mixtures with air.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

No hazardous reactions known.

10.4. Conditions to avoid

Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Avoid contact with painted or lacquered surfaces and rubber seals, etc. This can lead to a breakdown of the surface paint, lacquer layers or rubber seals over time.

10.6. Hazardous decomposition products

None under normal conditions. See also section 5.2.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Components' toxicological data

	Glutaraldehyd
LD50 oral	66 mg/kg (rat: literature value)
LC50 inhalation	0,096 mg/l / 4h (rat: literature value)

Other information regarding health hazards

General	The product itself has not been tested. The classification is based on information about the ingredients.
Potential acute effects	
Inhalation	Vapours irritate the respiratory system, and may cause coughing and difficulties in breathing. May cause asthma attacks in asthmatics. Harmful by inhalation. Symptoms like headache, fatigue and nausea may appear. May cause sensitisation by inhalation.
Skin contact	Irritating to skin and mucous membranes. Repeated exposure may cause skin dryness or cracking. May cause sensitisation by skin contact.
Eye contact	Irritating and may cause redness and pain. Risk of corneal damage.
Ingestion	Harmful if swallowed. May irritate mucous membranes and cause nausea, stomach pain and vomiting.
Aspiration hazard	Not classified with respect to aspiration toxicity. The classification criteria are not met.

Delayed effects / Repeated exposure

Sensitisation	May cause sensitisation by inhalation and skin contact.
Chronic effects	Frequent ingestion may cause permanent damage to the nervous system, including the brain, and possibly to the liver and kidneys, too.

Carcinogenic, Mutagenic or Reprotoxic effects

Carcinogenicity	Based on available data, the classification criteria are not met.
Mutagenicity	Based on available data, the classification criteria are not met.
Teratogenic properties	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity	The product is not classified as dangerous for the environment. Toxic to fungi, algae and certain bacteria.
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Components' toxicological data

Component	2-Propanol
Acute aquatic, fish	LC50 (96h): 4200 mg/l Species: Rasbora heteromorpha
Acute aquatic, Daphnia	EC50 (48h): 13299 mg/l Species: Daphnia magna
Ecotoxicity, other effects	PNEC (Predicted No-Effect Concentration) for aquatic organisms: 1,4 mg/l
Persistence and degradability	Readily biodegradable.
Bioaccumulation	Log Pow: 2,97
Component	Glutaraldehyde
Acute aquatic, fish	LC50 (96h): 5 mg/l Species: Pimephales promelas
Acute aquatic, algae	IC50 (72h): 0,61 mg/l Species: Scenedesmus subspicatus
Acute aquatic, Daphnia	EC50 (48h): 11,5 mg/l
Biodegradability	96%, 28 days (OECD 301A)
Biological oxygen demand (BOD)	BOD5/COD: 0,11 - 0,63
Distribution coefficient	Log Pow : 0,98

12.2. Persistence and degradability

	The organic substances, 2-propanol and glutaraldehyde, in this product are readily biodegradable.
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12.3. Bioaccumulative potential

	Not expected to bioaccumulate.
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12.4. Mobility in soil

	The product is miscible with water. May spread in water systems.
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12.5. Results of PBT and vPvB assessment

	PBT/vPvB assessment has not been performed.
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12.6. Other adverse effects

	Do not allow to enter into sewer, water system or soil.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Specify the appropriate methods of disposal	Disposed of as hazardous waste by approved contractor. The waste code (EWC-Code) is intended as a guide. The code must be chosen by the user, if the use differs from the one mentioned above.
Product classified as hazardous	Yes

waste	
Packaging classified as hazardous waste	Yes
EWC waste code	EWC: 07 07 04* other organicsolvents, washing liquids and mother liquors
	EWC: 15 01 10 - Packaging containing residues of or contaminated by dangerous substances

SECTION 14: Transport information

14.1. UN number

Not dangerous goods.

14.2. UN proper shipping name

Not relevant.

14.3. Transport hazard class(es)

Not relevant.

14.4. Packing group

Not relevant.

14.5. Environmental hazards

Not relevant.

14.6. Special precautions for user

Not relevant.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant.

SECTION 15: Regulatory information

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

References (laws/regulations) CHIP Regulations. The Chemicals (Hazard Information and Packaging for Supply) Regulation.
Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
Regulation (EC) No 1907/2006 (REACH) Annex II: Safety data sheets.
The Hazardous Waste (England and Wales) Regulations 2005 with amendments.
Dangerous Goods regulations
Occupational Exposure Limits. EH40/2010.
Directive 98/8/EC of the European Parliament and of the Council of 16 February 1998 concerning the placing of biocidal products on the market.

The Safety Data Sheet is based on information provided by the producer.

15.2. Chemical safety assessment

Chemical safety assessment has been carried out No

CSR required No

SECTION 16: Other information

Supplier's notes	The information contained in this SDS must be made available to all those who handle the product.
List of relevant R phrases (under headings 2 and 3).	R10 Flammable. R11 Highly flammable. R20/22 Harmful by inhalation and if swallowed. R23/25 Toxic by inhalation and if swallowed. R34 Causes burns. R36 Irritating to eyes. R37/38 Irritating to respiratory system and skin. R41 Risk of serious damage to eyes. R42/43 May cause sensitization by inhalation and skin contact. R50 Very toxic to aquatic organisms. R67 Vapours may cause drowsiness and dizziness.
List of relevant H-phrases (Section 2 and 3).	H225 Highly flammable liquid and vapour. H301 Toxic if swallowed. H314 Causes Severe skin burns and eye damage. H317 May cause an allergic skin reaction. H319 Causes Serious eye irritation. H331 Toxic if inhaled.

	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H336 May cause drowsiness or dizziness. H400 Very toxic to aquatic life.
Abbreviations and acronyms used	PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative
Sources of key data used to compile the safety data sheet	Suppliers Safety data sheet dated: 2009/04/15
Information which has been added, deleted or revised	Sections being revised since previous version: all (new format)
Quality control of information	This SDS is quality controlled by National Institute of Technology in Norway or by Teknologisk Lab AB in Sweden, certified according to the Quality Management System requirements specified in ISO 9001:2008.
Responsible for safety data sheet	Maritim Consultants AS