

SAFETY DATA SHEET

Bio-Protect 2

1. Identification of the substance/preparation and of the company/undertaking

Date issued	01.07.2010
Product name	Bio-Protect 2
Use of the substance/preparation	Additive for diesel oil, hydraulic oil, metalworking fluids, etc.
Function	Prevents growth of bacteria

Producer

Company name	Maritim Consultants AS
Postal address	P.O. Box 83
Postcode	NO-5346
Place name	Aagotnes
Country	Norway
Tel	+47 56311760
Fax	+47 56311761
E-mail	post@maritim.as
Website	http://www.maritim.as
Emergency telephone	NHS Direct (UK):0845 4647 (24h/24h)

2. Hazards identification

Classification	R10 Xn; R20/22,R42/43 Xi; R37/38,R41 R67
Description of hazard	Health: Harmful by inhalation and if swallowed. May cause asthma attacks in asthmatics. Irritating to respiratory system, skin and mucous membranes. Risk of serious damage to eyes/cornea. May cause sensitisation by inhalation and skin contact. Vapours may cause drowsiness and dizziness. Fire and explosion: Flammable. The product may form explosive vapours/air mixtures even at normal room temperatures. Environment: The product is not classified as harmful to the environment.

3. Composition/information on ingredients

Component name	Identification	Classification	Contents
2-propanol	CAS no.: 67-63-0 EC no.: 200-661-7	Xi, F; R11, R36, R67	30 - 50 %
Glutaraldehyde	CAS no.: 111-30-8 EC no.: 203-856-5	T,C,N; R23/25, R34, R42/43, R50	5 - 9 %
Formaldehyde	CAS no.: 50-00-0 EC no.: 200-001-8	T; R23/24/25, R34, R40, R43	0,1 - 1 %
Column headings	CAS no. = Chemical Abstracts Service; EU (Einecs or Elincs number) = European inventory of Existing Commercial Chemical Substances; Ingredient name = Name as specified in the substance list (substances that are not included in the substance list must be translated, if possible). Contents given in; %, %wt/wt, %vol/wt, %vol/vol, mg/m3, ppb, ppm, weight%, vol%		
HH/HF/HE	T+ = Very toxic, T = Toxic, C = Corrosive, Xn = Harmful, Xi = Irritating, E = Explosive, O = Oxidizing, F+ = Extremely flammable, F = Very flammable,		

	N = Environmental hazard
Component comments	The remaining ingredients up to 100 % consist of not 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 listed above.

4. First-aid measures

General	If in doubt, get 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. Get medical attention.
Other Information	Acute poisoning: if possible, give a suspension of activated charcoal as soon as possible, preferably within 5-10 minutes.

5. Fire-fighting measures

Suitable extinguishing media	Dry-powder, carbon dioxide (CO ₂), water mist, foam.
Improper extinguishing media	Do not use water jet.
Fire and explosion hazards	Flammable. Vapours are heavier than air and may spread near ground to sources of ignition. Fire or high temperatures causes formation of: Carbon dioxide (CO ₂). Carbon monoxide (CO).
Personal protective equipment	Self-contained breathing apparatus may be required by rescue workers. In case of evacuation, use escape mask where possible.
Other Information	Containers close to fire should be removed immediately or cooled with water. Prevent discharge of extinguishing water down the drain.

6. Accidental release measures

Personal precautions	Ventilate well. Do not breathe vapour. Use protective equipment as referred to in section 8.
Environmental precautions	Do not allow to enter into sewer, water system or soil. Contact local authorities in case of spillage to drain/aquatic environment.
Methods for cleaning	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.

7. Handling and storage

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. Keep away from sources of ignition - No smoking.
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.

8. Exposure controls/personal protection

Exposure limit values

Component name	Identification	Value	Year
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2-propanol	CAS no.: 67-63-0 EC no.: 200-661-7	8h: 400 ppm 8h: 999 mg/m ³	2007
Glutaraldehyde	CAS no.: 111-30-8 EC no.: 203-856-5	8h: 0,05 ppm 8h: 0,2 mg/m ³ 15 min.: 0,05 ppm 15 min.: 0,2 mg/m ³ Sen	2007
Formaldehyde	CAS no.: 50-00-0 EC no.: 200-001-8	8h: 2 ppm 8h: 2,5 mg/m ³ 15 min.: 2 ppm 15 min.: 2,5 mg/m ³	2007

Exposure controls

Other Information about threshold limit values	Explanation of the notation given above: Sen = Sensitizing
Occupational 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 protection	Wear safety goggles or face shield (conforming to EN 166). Contact lenses should not be worn when handling this product.
Skin protection (other than of the hands)	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 must be available when handling this product. Do not eat, drink or smoke during work.

9. Physical and chemical properties

Physical state	Fluid
Odour	Pungent
Colour	Green
Solubility description	Miscible with oil products
Solubility in water	Miscible.
Specific gravity	Value: 0,94 g/cm ³
Melting point/melting range	Value: -15 °C
Boiling point	Value: 89 °C
Flash point	Value: ≥ 23 °C
Explosion limit	Value: 8-16 vol %
Spontaneous combustability	Value: ~ 420 °C
Vapour pressure	Value: 26 mmHg (20 °C)
Vapour density	Value: 1,55 Comments: (air=1)

10. Stability and reactivity

Conditions to avoid	Avoid heat, flames and other sources of ignition.
Materials to avoid	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.
Hazardous decomposition products	During fire or heating, toxic gases (CO, CO ₂ , NO _x) are formed.
Stability	Stable under normal temperature conditions and recommended use.

11. Toxicological information

Components' toxicological data

Other information regarding health hazards

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.
Chronic effects	Frequent ingestion may cause permanent damage to the nervous system, including the brain, and possibly to the liver and kidneys, too.
Sensitisation	May cause sensitisation by inhalation and skin contact.
Carcinogenicity	The product contains small amounts of formaldehyde, that is a suspected carcinogen in humans.

12. Ecological information

Components' toxicological data

Component	Glutaraldehyde
Acute aquatic, fish	Value: 5 mg/l Method of testing: LC50 Species: Pimephales promelas Duration: 96h
Acute aquatic, algae	Value: 0,61 mg/l Method of testing: IC50 Species: Scenedesmus subspicatus Duration: 72h
Acute aquatic, Daphnia	Value: 11,5 mg/l Method of testing: EC50 Duration: 48h
Biodegradability	Value: 96% Test period: 28 days Method of testing: OECD 301A
Biological oxygen demand (BOD)	Comments: BOD5/COD: 0,11 - 0,63
Distribution coefficient	Value: 0,98 Method of testing: Log Pow

Other ecological information

Ecotoxicity	The product is not classified as dangerous for the environment. Toxic to fungi, algae and certain bacteria.
Mobility	The product is miscible with water. May spread in water systems.
Persistence and degradability	The organic substances, 2-propanol, glutaraldehyde and formaldehyde, in this product are readily biodegradable.
Bioaccumulative potential	The product is not bioaccumulating.

13. Disposal considerations

EWC waste code	EWC: 07 07 04 other organicsolvents, washing liquids and mother liquors
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Product classified as hazardous waste	Yes
Packaging classified as hazardous waste	Yes
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.
Other Information	The package has EWC code 15 01 10 - Packaging containing residues of or contaminated by dangerous substances

14. Transport information

Other applicable information.	Not considered as dangerous goods under UN, IMO, ADR/RID or IATA/ICAO regulations.
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15. Regulatory information

Hazard symbol



Harmful

Composition on the label	2-propanol: 30 - 50 %, Glutaraldehyde: 5 - 9 %
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.
References (laws/regulations)	CHIP Regulations. 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. Directive (EC) No 1907/2006 (REACH) Annex II: Safety data sheets. The Hazardous Waste Regulations Dangerous Goods regulations Occupational Exposure Limits. EH40/2007. The Safety Data Sheet is based on information provided by the producer.

16. Other information

List of relevant R phrases (under headings 2 and 3).	R10 Flammable. R11 Highly flammable. R20/22 Harmful by inhalation and if swallowed. R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
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	R23/25 Toxic by inhalation and if swallowed. R34 Causes burns. R36 Irritating to eyes. R37/38 Irritating to respiratory system and skin. R40 Limited evidence of a carcinogenic effect. R41 Risk of serious damage to eyes. R42/43 May cause sensitization by inhalation and skin contact. R43 May cause sensitization by skin contact. R50 Very toxic to aquatic organisms. R67 Vapours may cause drowsiness and dizziness.
Sources of key data used to compile the safety data sheet	Suppliers Safety data sheet dated: 2009/04/15
Supplier's notes	The information contained in this SDS must be made available to all those who handle the product.
Checking quality of information	This SDS is quality controlled by National Institute of Technology in Norway, certified according to the Quality Management System requirements specified in ISO 9001:2008.
Responsible for safety data sheet	Maritim Consultants AS