



SAFETY DATA SHEET

Biosan ® Aqua Satin

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

1.1 Product identifier

Product name : Biosan ® Aqua Satin
Product description : Paint.
Product type : Liquid.

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

Identified uses	
Industrial uses Professional uses	
Uses advised against	Reason
Consumer use	Product is not intended for consumer use.

1.3 Details of the supplier of the safety data sheet

Rust-Oleum Europe - Martin Mathys NV, Kolenbergstraat 23, B-3545 Zelem, Belgium
 Telephone no.: +32 (0) 13 460 200
 Fax no.: +32 (0) 13 460 201

e-mail address of person responsible for this SDS : rpmeurohas@ro-m.com

1.4 Emergency telephone number

Supplier

Telephone number : +44 (0) 207 858 1228
Hours of operation : 24 / 7

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Signal word : No signal word.
Hazard statements : Harmful to aquatic life with long lasting effects.
Precautionary statements
General : Not applicable.
Prevention : P273 - Avoid release to the environment.

SECTION 2: Hazards identification

Response	: Not applicable.
Storage	: Not applicable.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. Not applicable.
Supplemental label elements	: Contains a biocidal substance. Contains Reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1), 1,2-benzisothiazol-3(2H)-one and 2-octyl-2H-isothiazol-3-one. May produce an allergic reaction.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: Reserved for industrial and professional use.
Special packaging requirements	
Containers to be fitted with child-resistant fastenings	: Not applicable.
Tactile warning of danger	: Not applicable.

2.3 Other hazards

Other hazards which do not result in classification	: None known.
------------------------------------------------------------	---------------

SECTION 3: Composition/information on ingredients**3.2 Mixtures** : Mixture

Product/ingredient name	Identifiers	%	Classification	
			Regulation (EC) No. 1272/2008 [CLP]	Type
propane-1,2-diol	REACH #: 02-2119752808-26 EC: 200-338-0 CAS: 57-55-6	≤10	Not classified.	[2]
2-(2-butoxyethoxy) ethanol	REACH #: 01-2119475104-44 EC: 203-961-6 CAS: 112-34-5 Index: 603-096-00-8	≤3	Eye Irrit. 2, H319	[1] [2]
Alkanes, C9-12-iso-	REACH #: 01-2119472146-39 EC: 292-459-0 CAS: 90622-57-4	≤3	Flam. Liq. 3, H226 Asp. Tox. 1, H304 EUH066	[1] [2]
Alkanes, C11-15-iso-	REACH #: 01-2119456810-40 EC: 920-901-0 CAS: 90622-58-5	≤3	Asp. Tox. 1, H304 EUH066	[1] [2]
ammonia	REACH #: 01-2119488876-14 EC: 215-647-6 CAS: 1336-21-6 Index: 007-001-01-2	≤1	Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 (M=1)	[1]
2-octyl-2H-isothiazol-3-one	REACH #: 17-2119390467-28 EC: 247-761-7 CAS: 26530-20-1	≤0,1	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 2, H330 Skin Corr. 1B, H314	[1]

SECTION 3: Composition/information on ingredients

pyrithione zinc	Index: 613-112-00-5 EC: 236-671-3 CAS: 13463-41-7	≤0,1	Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1) Acute Tox. 3, H301 Acute Tox. 3, H331 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1) Acute Tox. 4, H302 Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100) See Section 16 for the full text of the H statements declared above.	[1]
terbutryn	EC: 212-950-5 CAS: 886-50-0	≤0,1	Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1) Acute Tox. 3, H301 Acute Tox. 3, H331 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1) Acute Tox. 4, H302 Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100) See Section 16 for the full text of the H statements declared above.	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

SECTION 4: First aid measures

Contains 2-octyl-2H-isothiazol-3-one, 1,2-benzisothiazol-3(2H)-one, Reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

Over-exposure signs/symptoms

Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.
Ingestion	: No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.

See toxicological information (Section 11)

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media	: Recommended: alcohol-resistant foam, CO ₂ , powders, water spray.
Unsuitable extinguishing media	: Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Additional information	: No unusual hazard if involved in a fire.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

SECTION 6: Accidental release measures

- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- 6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
- 6.3 Methods and material for containment and cleaning up**
- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dyke spilt material or otherwise contain it to ensure runoff does not reach a waterway. Place spilt material in an appropriate container for disposal. Preferably clean with a detergent. Avoid using solvents. Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.
- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance.

- 7.1 Precautions for safe handling** : Keep away from heat, sparks and flame.
Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Put on appropriate personal protective equipment (see Section 8).
Never use pressure to empty. Container is not a pressure vessel.
Always keep in containers made from the same material as the original one.
Comply with the health and safety at work laws. Do not allow to enter drains or watercourses.

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Notes on joint storage

Keep away from: oxidising agents, strong alkalis, strong acids.

Additional information on storage conditions

Observe label precautions. Do not store below the following temperature: 0°C (32°F). Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight.

Keep container tightly closed.

Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

SECTION 7: Handling and storage**7.3 Specific end use(s)****Recommendations** : Not available.**Industrial sector specific solutions** : Not available.**SECTION 8: Exposure controls/personal protection**

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters**Occupational exposure limits**

Product/ingredient name	Exposure limit values
propane-1,2-diol	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m ³ 8 hours. Form: Particulate TWA: 474 mg/m ³ 8 hours. Form: Sum of vapour and particulates TWA: 150 ppm 8 hours. Form: Sum of vapour and particulates
2-(2-butoxyethoxy)ethanol	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 ppm 8 hours. STEL: 15 ppm 15 minutes. TWA: 67,5 mg/m ³ 8 hours. STEL: 101,2 mg/m ³ 15 minutes.
Alkanes, C9-12-iso-	CEFIC-ESIG (Europe, 11/2012). Notes: Recommended by manufacturer TWA: 1200 mg/m ³ , ((177 ppm)) 8 hours. Form: Vapour
Alkanes, C11-15-iso-	CEFIC-ESIG (Europe, 11/2012). Notes: Recommended by manufacturer TWA: 1200 mg/m ³ , ((170 ppm)) 8 hours. Form: Vapour

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
2-(2-butoxyethoxy)ethanol	DNEL	Long term Inhalation	67,5 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	67,5 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	20 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	50,6 mg/m ³	Consumers	Local
	DNEL	Long term Inhalation	34 mg/m ³	Consumers	Local
	DNEL	Long term Inhalation	34 mg/m ³	Consumers	Systemic
	DNEL	Long term Dermal	10 mg/kg bw/day	Consumers	Systemic

SECTION 8: Exposure controls/personal protection

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
2-(2-butoxyethoxy)ethanol	Fresh water	1 mg/l	-
	Marine	0,1 mg/l	-
	Fresh water sediment	4 mg/kg	-
	Marine water sediment	0,4 mg/kg	-
	Sewage Treatment Plant	200 mg/l	-

8.2 Exposure controls

Appropriate engineering controls : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. Recommended: safety glasses with side-shields (EN 166)

Skin protection

Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Gloves : For prolonged or repeated handling, use the following type of gloves:

Recommended: > 8 hours (breakthrough time): nitrile rubber (0.5mm)

The recommendation for the type or types of glove to use when handling this product is based on information from the following source:

EN 374-3 : 2003

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Wear overalls or long sleeved shirt. (EN 467)

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

SECTION 8: Exposure controls/personal protection

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: organic vapour (Type A) and particulate filter (EN 141).
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Colour** : Various
- Odour** : Not available.
- Odour threshold** : Not available.
- pH** : 8 to 9
- Melting point/freezing point** : 0°C
- Initial boiling point and boiling range** : >100°C
- Flash point** : [Product does not sustain combustion.]
- Evaporation rate** : <1 (butyl acetate = 1)
- Flammability (solid, gas)** : Non-flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat and shocks and mechanical impacts. Non-flammable but will burn on prolonged exposure to flame or high temperature.
- Upper/lower flammability or explosive limits** : Not available.
- Vapour pressure** : Not available.
- Vapour density** : >1 [Air = 1]
- Relative density** : 1,2 to 1,3
- Solubility(ies)** : Soluble in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/ water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Dynamic (room temperature): 4000 to 6500 mPa·s
- Explosive properties** : Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and heat. No unusual hazard if involved in a fire.
- Oxidising properties** : Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : Stable under recommended storage and handling conditions (see Section 7).
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : When exposed to high temperatures may produce hazardous decomposition products.
- 10.5 Incompatible materials** : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced. If involved in a fire, toxic gases including CO, CO₂ and smoke can be generated.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-(2-butoxyethoxy)ethanol	LD50 Dermal	Rabbit	2700 mg/kg	-
	LD50 Oral	Rat	4500 mg/kg	-
Alkanes, C9-12-iso-	LC50 Inhalation Vapour	Rat	>5000 mg/m ³	8 hours
	LD50 Oral	Rat	>10 g/kg	-
Alkanes, C11-15-iso-	LC50 Inhalation Vapour	Rat	>5000 mg/m ³	8 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
ammonia	LD50 Oral	Rat	>5000 mg/kg	-
	LC50 Inhalation Vapour	Human/30 min	5000 mg/m ³	0,5 hours
	LC50 Inhalation Vapour	Rat	7035 mg/m ³	30 minutes
2-octyl-2H-isothiazol-3-one	LC50 Inhalation Vapour	Rat	2000 mg/m ³	4 hours
	LD50 Oral	Rat	350 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	0,27 mg/l	4 hours
	LD50 Dermal	Rabbit	311 mg/kg	-
pyrithione zinc	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	248 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	140 mg/m ³	4 hours
	LD50 Dermal	Rabbit	100 mg/kg	-
terbutryn	LD50 Oral	Rat	177 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	>2200 mg/l	4 hours
	LD50 Dermal	Rabbit	>10200 mg/kg	-
	LD50 Oral	Rat	2045 mg/kg	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Acute toxicity estimates

Not available.

Irritation/Corrosion

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-(2-butoxyethoxy)ethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
Alkanes, C9-12-iso-ammonia	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	-	-
	Eyes - Mild irritant	Rabbit	-	-	-
	Eyes - Severe irritant	Rabbit	-	250 Micrograms	-
2-octyl-2H-isothiazol-3-one terbutryn	Eyes - Severe irritant	Rabbit	-	0,5 minutes 1 milligrams	-
	Eyes - Severe irritant	Rabbit	-	-	-
	Eyes - Moderate irritant Skin - Mild irritant	Rabbit Rabbit	- -	76 milligrams 380 milligrams	- -

Conclusion/Summary

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

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

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

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
Alkanes, C9-12-iso-	Respiratory	Rat	Not sensitizing
2-octyl-2H-isothiazol-3-one	skin	Rabbit	Not sensitizing
	skin	Rat	Sensitising

Conclusion/Summary

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

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

Mutagenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Carcinogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Reproductive toxicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Teratogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ammonia	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Product/ingredient name	Result
Alkanes, C9-12-iso-	ASPIRATION HAZARD - Category 1
Alkanes, C11-15-iso-	ASPIRATION HAZARD - Category 1

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

SECTION 11: Toxicological information

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : Based on available data, the classification criteria are not met.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

There are no data available on the mixture itself.

Do not allow to enter drains or watercourses.

Product/ingredient name	Result	Species	Exposure
2-(2-butoxyethoxy)ethanol	Acute EC50 2850 mg/l	Daphnia spec.	48 hours
	Acute IC50 >100 mg/l	Algae	96 hours
	Acute LC50 1300000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
Alkanes, C9-12-iso-	Acute EC50 >100 mg/l	Crustaceans - Chaetogammarus marinus	24 hours
	Acute LC50 >2500 mg/l	Fish	96 hours
	Acute LOAEL >1000 mg/l	Fish	96 hours
	Acute NOEC 1000 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
Alkanes, C11-15-iso-	Chronic NOEC 0,011 mg/l	Daphnia spec.	21 days
	Acute LC50 >2500 mg/l	Fish	96 hours
	Acute LC50 >2000 mg/l	Fish	48 hours
	Acute LOAEL >1000 mg/l	Fish	96 hours
	Acute NOEC 1000 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
ammonia	Chronic NOEC 1 mg/l	Daphnia spec.	21 days
	Acute EC50 110 mg/l	Daphnia spec.	48 hours
	Acute LC50 7 mg/l	Fish	48 hours
	Acute LC50 17 mg/l	Fish	24 hours
	Acute LC50 15000 µg/l Fresh water	Fish - Gambusia affinis - Adult	96 hours
2-octyl-2H-isothiazol-3-one	Acute EC50 0,32 to 0,834 mg/l Fresh water	Daphnia spec. - Daphnia magna	48 hours
	Acute IC50 0,084 mg/l	Algae	72 hours
	Acute LC50 0,14 to 0,202 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 0,0655 to 0,104 mg/l Fresh water	Fish	96 hours
pyrithione zinc	Acute EC50 0,51 µg/l Marine water	Algae - Thalassiosira pseudonana	96 hours
	Acute EC50 38 µg/l Fresh water	Crustaceans - Ilyocypris dentifera	48 hours
	Acute EC50 80 µg/l Fresh water	Crustaceans - Chydorus sphaericus	48 hours

SECTION 12: Ecological information

terbutryn	Acute EC50 8,25 ppb Fresh water	Daphnia spec. - Daphnia magna	48 hours
	Acute EC50 61 µg/l Fresh water	Daphnia spec. - Daphnia magna - Nauplii	48 hours
	Acute LC50 2,68 ppb Fresh water	Fish - Pimephales promelas	96 hours
	Chronic EC10 0,36 µg/l Marine water	Algae - Thalassiosira pseudonana	96 hours
	Chronic NOEC 2,7 ppb Marine water	Daphnia spec. - Daphnia magna	21 days
	Acute EC50 0,1 µg/l Fresh water	Algae - Fragilaria capucina ssp. rumpens	96 hours
	Acute EC50 2 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 2,66 ppm Fresh water	Daphnia spec. - Daphnia magna	48 hours
	Acute IC50 0,0055 mg/l	Algae	72 hours
	Acute LC50 579,3 mg/l Fresh water	Crustaceans - Pacifastacus leniusculus - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
Acute LC50 1,8 to 1400 µg/l Fresh water	Fish - Carassius carassius	96 hours	
Acute LC50 0,82 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours	
Chronic EC10 0,015 µg/l Fresh water	Algae - Fragilaria capucina ssp. rumpens	96 hours	

Conclusion/Summary : Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Alkanes, C9-12-iso-2-octyl-2H-isothiazol-3-one	-	31,3 % - Inherent - 28 days	-	-
	OECD 309	90 % - Readily - 4 days	0,01 to 0,1 mg/l	-
	OECD 303A	>80 % - Readily - 4 days	-	-
	OECD 309	50 % - Readily - 2 days	0,01 to 0,1 mg/l	-

Conclusion/Summary : This product has not been tested for biodegradation. Based on available data, the classification criteria are not met.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2-(2-butoxyethoxy)ethanol	-	-	Readily
C11-12 Isoalkanes	-	-	Inherent
C11-13 Isoalkanes	-	-	Not readily
ammonia	-	-	Readily
2-octyl-2H-isothiazol-3-one	Fresh water 2 days	-	Readily
1,2-benzisothiazol-3(2H)-one	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
2-(2-butoxyethoxy)ethanol	1	-	low
Alkanes, C9-12-iso-	>5	>100	low
Alkanes, C11-15-iso-	>5	>100	low
ammonia	-1,3	-	low
2-octyl-2H-isothiazol-3-one	2,9	-	low
pyrithione zinc	0,9	11	low
terbutryn	3,74	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

SECTION 12: Ecological information

- PBT** : Not applicable.
vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance.

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.

Disposal considerations : Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

European waste catalogue (EWC)

The European Waste Catalogue classification of this product, when disposed of as waste, is:

Waste code	Waste designation
08 01 15*	aqueous sludges containing paint or varnish containing organic solvents or other hazardous substances

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Disposal considerations : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of split material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-

Biosan ® Aqua Satin

SECTION 14: Transport information

14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Reserved for industrial and professional use.

Other EU regulations

VOC : The provisions of Directive 2004/42/EC on VOC apply to this product. Refer to the product label and/or technical data sheet for further information.

VOC for Ready-for-Use Mixture : 2004/42/EC - IIA/i: 140g/l (2010). ≤ 110g/l VOC.

Europe inventory : All components are listed or exempted.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

References : EH40/2005 Workplace exposure limits
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2016/918

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

SECTION 15: Regulatory information

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

CN code : 3209 10 00

UFI Code : 03F0-40R4-N00J-A8NE

International lists

National inventory

Australia	: At least one component is not listed.
Canada	: Not determined.
China	: Not determined.
Japan	: Japan inventory (ENCS) : Not determined. Japan inventory (ISHL) : Not determined.
Malaysia	: Not determined.
New Zealand	: At least one component is not listed.
Philippines	: Not determined.
Republic of Korea	: At least one component is not listed.
Taiwan	: Not determined.
Turkey	: Not determined.
United States	: At least one component is not listed.

15.2 Chemical safety assessment : No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms

: ATE = Acute Toxicity Estimate
: CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
: DMEL = Derived Minimal Effect Level
: DNEL = Derived No Effect Level
: EUH statement = CLP-specific Hazard statement
: PBT = Persistent, Bioaccumulative and Toxic
: PNEC = Predicted No Effect Concentration
: RRN = REACH Registration Number
: vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Aquatic Chronic 3, H412	Expert judgment

Full text of H-phrases referred to in sections 2 and 3

SECTION 16: Other information

Full text of abbreviated H statements	: H226 H301 H302 H304 H311 H314 H317 H318 H319 H330 H331 H335 H400 H410 H412	Flammable liquid and vapour. Toxic if swallowed. Harmful if swallowed. May be fatal if swallowed and enters airways. Toxic in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Causes serious eye irritation. Fatal if inhaled. Toxic if inhaled. May cause respiratory irritation. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects.
Full text of classifications [CLP/GHS]	: Acute Tox. 2, H330 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Acute Tox. 4, H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Aquatic Chronic 3, H412 Asp. Tox. 1, H304 EUH066 Eye Dam. 1, H318 Eye Irrit. 2, H319 Flam. Liq. 3, H226 Skin Corr. 1B, H314 Skin Sens. 1, H317 Skin Sens. 1A, H317 STOT SE 3, H335	ACUTE TOXICITY (inhalation) - Category 2 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 ACUTE TOXICITY (oral) - Category 4 ACUTE AQUATIC HAZARD - Category 1 LONG-TERM AQUATIC HAZARD - Category 1 LONG-TERM AQUATIC HAZARD - Category 3 ASPIRATION HAZARD - Category 1 Repeated exposure may cause skin dryness or cracking. SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 1B SKIN SENSITISATION - Category 1 SKIN SENSITISATION - Category 1A SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3
Date of printing	: 2/02/2018	
Date of issue/ Date of revision	: 2/02/2018	
Date of previous issue	: 2/02/2018	
Version	: 2.01	

Notice to reader

The information in this Safety Data Sheet is based on the present state of knowledge and current legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications. The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.