Aperlan Range

Aperlan Poka-Yoke Agent B

SECTION 1: Identification of the substance/mixture and company

1.1 Product identifier

Product code:	41010057
UFI:	RTG0-90TN-200W-JD1Y
Name:	Aperlan Poka-Yoke Agent B

1.2 Product uses

Additive. Restricted to professional users.

1.3 Supplier

Details of the supplier of the Safety Data Sheet.

Supplier:
Getinge Disinfection AB
Ljungadalsgatan 11
352 46 Växjö
SWEDEN
Phone: +46 (0)10 335 98 00
Web: www.getinge.com
E-mail: info@getinge.com

Supplier Australia
Getinge Australia Pty Ltd
Level 7, 11 Help Street
Chatswood NSW 2067 Australia
Telephone: 1800 438 464

Supplier New Zealand
Getinge Australia (NZ Branch)
Level 2, Building B, Millenium Centre
Ellersie, Auckland 1051 New Zealand
Telephone: +64 9 272 9039

1.4 Emergency telephone number

For emergency event of spillage, inhalation or ingestion of products, please contact the emergency hotline.

EU: +44 (0) 123 523 96 70
Australia: +61 2 8014 4558 or 131126
Japan: +81 345 789 341
China: +86 105 100 30 39
Middle East: +44 (0) 123 523 96 71
New Zealand: +64 9 727 9039 or 0800 764 766

SECTION 2: Hazards identification (undiluted product)

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

H290	Corrosive to metals, Category 1. May be corrosive to metals.
H314	Skin corrosion, Category 1B. Causes severe skin burns and eye damage.
H318	Serious eye damage, Category 1. Causes serious eye damage.
H412	Long-term (chronic) aquatic hazard, Category 3. Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms:



Signal word:	Danger
Hazard statements:	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H412 Harmful to aquatic life with long lasting effects.
Precautionary statements:	P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Hazardous components which must be listed on the label:

1310-58-3 Potassium hydroxide

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

No special risks known.

SECTION 3: Composition/information on ingredients

Chemical nature: Solution of the following substances

Chemical name	CAS number EC-No. Index-No. Registration number	Concentration (% w/w)	Classification
Potassium hydroxide	1310-58-3 215-181-3 019-002-00-8 01-2119487136-33-XXXX	< 10	Met. Corr. 1; H290 Acute Tox. 4; H302 Skin Corr. 1A; H314
Benzotriazole	95-14-7 202-394-1 - - - 01-21199790779-20-XXXX	< 5	Acute Tox. 4; H302 Eye Irrit. 2; H319 Aquatic Chronic 2; H411

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:	Take off all contaminated clothing immediately.
Eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Protect unharmed eye. Obtain medical attention.
Skin contact:	Wash off immediately with plenty of water for at least 15 minutes.
Inhalation:	Move the victim to fresh air and keep him calm.
Ingestion:	Do NOT induce vomiting. Rinse mouth with water. Give small amounts of water to drink. Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Treat symptomatically.

4.3 Indication of any immediate medical attention and special treatment needed

For specialist advice physicians should contact the Poisons Information Service.

SECTION 5: Fire fighting measures

5.1 Suitable Extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. The product itself does not burn.

5.2 Unsuitable Extinguishing media

None known.

5.3 Special hazards arising from the substance or mixture

Gives off hydrogen by reaction with metals. Risk of explosion.

Contaminated surfaces will be extremely slippery.

No hazardous combustion products are known

5.4 Advice for firefighters

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Increased risk of slipping in the presence of leaked / spilled product.

Handle in accordance with good industrial hygiene and safety practice.

Avoid contact with skin and eyes.

6.2 Environmental precautions

Avoid subsoil penetration.

6.3 Methods and material for containment and cleaning up

Wipe up with absorbent material (e.g. cloth, fleece).

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Clean contaminated surface thoroughly.

Flush with water.

6.4 Reference to other sections

Observe the advice given in sections 8 and 13.

SECTION 7: Handling and storage

After opening, use within: 14 days.

7.1 Precautions for safe handling

Handle and open container with care. Never return unused material to storage receptacle.

No special protective measures against fire required.

Keep away from food and drink. Take off all contaminated clothing immediately.

7.2 Conditions for safe storage, including any incompatibilities

Store at room temperature in the original container.

Recommended storage temperature: 5 - 30°C

Do not store near acids.

7.3 Specific end use(s)

None.

SECTION 8: Exposure controls and personal protection

8.1 Control parameters

Occupational Exposure Limits

Potassium hydroxide CAS-No. 1310-58-3

Value type (Form of exposure)	Control parameters	Basis
Short term exposure limit	2 mg/m3	United Kingdom. Workplace Exposure Limits (EH40/2005): Table 1:

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006

Potassium hydroxide

End Use	Exposure routes	Potential health effects	Value
Workers	Inhalation	Long-term local effects	1 mg/m3

Benzotriazole

End Use	Exposure routes	Potential health effects	Value
Workers	Skin contact	Long-term systemic effects	1.08 mg/kg
Workers	Inhalation	Long-term systemic effects	19 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

Benzotriazole

Environmental Compartment	Value
Fresh water	0.0194 mg/l
Marine water	0.0194 mg/l
Intermittent use/release	0.158 mg/l
Effects on waste water treatment plants	39.4 mg/kg
Fresh water sediment	0.00375 mg/kg
Marine sediment	0.00375 mg/kg
Soil	0.003 mg/kg

8.2 Exposure controls

Engineering measures

Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye protection:	Safety glasses with side-shields conforming to EN166 Face-shield
Hand protection:	Directive: The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. Remarks: Splash protection: disposable nitrile rubber gloves e.g. Dermatril (layer thickness: 0.11 mm) made by KCL or gloves from other manufacturers offering the same protection. Prolonged contact: Nitrile rubber gloves e.g. Camatril (>480 Min., layer thickness: 0,40 mm) or butyl rubber gloves e.g. Butoject (>480 Min., layer thickness: 0,70 mm) made by KCL or gloves from other manufacturers offering the same protection.
Skin and body protection:	Choose body protection according to the amount and concentration of the dangerous substance at the work place. Wear as appropriate: • Chemical resistant apron • Boots
Protective measures:	Avoid contact with skin and eyes. When using do not eat or drink.
Personal protective equipment:	Exact PPE requirements should be determined from a specific risk assessment of the processes being carried out. 

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Liquid
Colour:	Light yellow
Odour:	Odourless
Odour Threshold:	Not determined
pH:	> 13 (20 °C)
Melting point/freezing point:	< -5 °C
Decomposition temperature:	No data available
Boiling point/boiling range:	Approx. 100 °C
Flash point:	N/A
Evaporation rate:	No data available
Flammability (solid, gas):	N/A
Upper explosion limit:	N/A
Lower explosion limit:	N/A
Vapour pressure:	No data available
Vapour density:	No data available
Relative density:	Approx. 1.1 g/cm3 (20 °C)
Water solubility:	In all proportions (20 °C)
Partition coefficient: noctanol/water	N/A
Auto-ignition temperature	N/A
Viscosity, dynamic	No data available
Explosive properties	No data available
Oxidizing properties	N/A

9.2 Other information

Flammability (liquids): The product is not flammable.

Metal corrosion rate: Corrosive to metals Aluminium and Mild steel.

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

Gives off hydrogen by reaction with metals. Reaction with acids.

10.4 Conditions to avoid

Protect from frost, heat and sunlight.

10.5 Incompatible materials

Possible incompatibility with alkali sensitive materials. Acids.

10.6 Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

11.1.1 Acute toxicity

Product

Acute oral toxicity:	Acute toxicity estimate: > 5,000 mg/kg
Acute inhalation toxicity:	Acute toxicity estimate: > 5 mg/l
Acute dermal toxicity:	Acute toxicity estimate: > 15,000 mg/kg

Components

Potassium hydroxide

Acute oral toxicity:	LD50 (Rat): 365 mg/kg Method: OECD Test Guideline 425 Assessment: Harmful if swallowed.
Acute inhalation toxicity:	Remarks: No data available
Acute dermal toxicity:	Remarks: No data available

Benzotriazole

Acute oral toxicity:	LD50 (Rat): 560 mg/kg Method: OECD Test Guideline 423 Assessment: Harmful if swallowed.
Acute inhalation toxicity:	Remarks: No data available
Acute dermal toxicity:	LD50 (Rabbit): > 2,000 mg/kg

11.1.2 Skin corrosion/irritation

Product

Assessment:	Causes severe skin burns and eye damage
Method:	Calculation method

Components

Potassium hydroxide

Assessment:	Causes severe skin burns and eye damage

Components

Benzotriazole

Remarks:	May cause skin irritation in susceptible persons.

11.1.3 Serious eye damage/eye irritation

Product

Assessment:	Causes serious eye damage
Method:	Calculation method

Components

Potassium hydroxide

Assessment:	Causes serious eye damage.

Benzotriazole

Assessment:	Causes serious eye irritation.

11.1.4 Respiratory or skin sensitization

Components

Potassium hydroxide

Species:	Guinea pig
Result:	Did not cause sensitization on laboratory animals

Benzotriazole

Species:	Guinea pig
Test Type:	Maximization Test
Result:	Did not cause sensitization on laboratory animals

11.1.5 Germ cell mutagenicity

Components

Potassium hydroxide

Genotoxicity in vitro:	Result: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
Germ cell mutagenicity Assessment:	Animal testing did not show any mutagenic effects.

Benzotriazole

Genotoxicity in vitro:	Method: Mutagenicity (Escherichia coli - reverse mutation assay). Result: Non mutagenic.
Genotoxicity in vivo:	Method: Mutagenicity (micronucleus test). Remarks: Non mutagenic.
Germ cell mutagenicity Assessment:	Experiments showed mutagenic effects in cultured bacterial cells.

11.1.6 Carcinogenicity

Components

Potassium hydroxide

Carcinogenicity Assessment:	No data available.

Benzotriazole

Carcinogenicity Assessment:	Animal testing did not show any carcinogenic effects.

11.1.7 Reproductive toxicity

Components

Potassium hydroxide

Reproductive toxicity - Assessment:	No data available.

Benzotriazole

Reproductive toxicity - Assessment:	According to experience not expected.

11.1.8 STOT - single exposure

Components

Potassium hydroxide

Assessment:	The substance or mixture is not classified as specific target organ toxicant, single exposure.

Benzotriazole

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

11.1.9 STOT - repeated exposure

Components

Potassium hydroxide

Assessment:	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Benzotriazole

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

Aspiration toxicity

No data available.

Further information

Product

No data is available on the product itself. If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

SECTION 12: Ecological information

12.1 Toxicity

Product

Ecotoxicology Assessment

Chronic aquatic toxicity:	Harmful to aquatic life with long lasting effects.

Components

Potassium hydroxide

Toxicity to fish:	LC50 (Gambusia affinis (Mosquito fish)): 80 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates:	Remarks: No data available
Toxicity to algae:	Remarks: No data available

Benzotriazole

Toxicity to fish:	LC50 (Lepomis macrochirus (Bluegill sunfish)): 26 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC50 (Daphnia magna): 91 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae:	IC50 (Desmodesmus subspicatus (green algae)): 231 mg/l Exposure time: 72 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	EC10: 0.97 mg/l Exposure time: 21 d Species: Daphnia galeata (water flea)

12.2 Persistence and degradability

Components

Potassium hydroxide

Biodegradability	Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

Benzotriazole

Biodegradability	Result: Not rapidly biodegradable Exposure time: 28 d Method: OECD Test Guideline 301D

12.3 Bioaccumulative potential

Components

Potassium hydroxide

Bioaccumulation:	Remarks: Does not bioaccumulate

Benzotriazole

Bioaccumulation:	Bioconcentration factor (BCF): 4.14 Remarks: Accumulation in aquatic organisms is unlikely.
Partition coefficient: noctanol/ water	Pow: 1.34 (22.7 °C) Remarks: Due to the distribution coefficient noctanol/water, accumulation in organisms is possible.

12.4 Mobility in soil

Components

Potassium hydroxide

Mobility:	Remarks: Mobile in soils

Benzotriazole

Mobility:	Remarks: No data available.

12.5 Results of PBT and vPvB assessment

Product

Assessment:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1 % or higher.

12.6 Other adverse effects

Product

Additional ecological information:	No data is available on the product itself

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product:	Dispose of the product according to the defined EWC (European Waste Code) No. Dispose of as hazardous waste in compliance with local and national regulations.
Contaminated packaging:	Take empty packaging to the recycling plant.
Waste key for the unused product:	European waste catalog (EWC) 070601
Waste key for the unused product (Group):	Waste material of HZVA from fats, lubricants, soaps, detergents, disinfectants and personal protection products.

SECTION 14: Transport information

14.1 UN number

ADR/IMDG/IATA (Cargo): UN 1814.

14.2 UN proper shipping name

ADR/IMDG/IATA (Cargo): POTASSIUM HYDROXIDE, SOLUTION

14.3 Transport hazard class(es)

ADR/IMDG/IATA (Cargo): 8

14.4 Packing group

ADR

Packing group: II
Classification Code: C5
Hazard Identification Number: 80
Labels: 8

IMDG

Packing group: II
Labels: 8
EmS Code: F-A, S-B

IATA (Cargo)

Packing instruction (cargo aircraft): 855
Packing group: II
Labels: Corrosive

14.5 Environmental hazards

ADR Not environmentally hazardous
IMDG Not marine pollutant

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.
For personal protection see section 8.

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

N/A for product as supplied.

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorization (Article 59): N/A

Regulation (EC) No 850/2004 on persistent organic pollutants: N/A

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances: N/A

Other Regulations

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values.

15.2 Chemical safety assessment

Exempt

SECTION 16: Other information

16.1 Full text of H-Statements

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.

16.2 Full text of other abbreviations

Acute Tox.	Acute toxicity
Aquatic Chronic	Long-term (chronic) aquatic hazard
Eye Irrit.	Eye irritation
Met. Corr.	Corrosive to metals
Skin Corr.	Skin corrosion.

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Cooperation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

16.3 Further information

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No. 1272/2008.

Met. Corr. 1, H290	Expert judgement and weight of evidence determination.
Skin Corr. 1B, H314	Calculation method.
Eye Dam. 1, H318	Calculation method.
Aquatic Chronic 3, H412	Calculation method.

Date of issue:
2021-03-25

This product should be stored, handled and used in accordance with good industrial practice and in conformity with legal regulations. The information in this data sheet is based on the present state of our knowledge and is intended to describe products from the point of view of safety requirements and thus should not be construed as guaranteeing specific properties. It is for users to satisfy themselves of the suitability of this product for their own applications.

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