gigasept PAA concentrate base

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

1.1 Product identifier

Trade name : gigasept PAA concentrate base

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

Use of the Substance/Mixture : Disinfectant for medical device

Recommended restrictions on use : Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Producer :
BIOXAL
ZI Sud Secteur A
Route des Varennes

71100 Chalon-sur-Saône
France
Telephone: + 33 (0) 3 85 92 30 00
Telefax: + 33 (0) 3 85 92 30 12

Supplier :
Schülke & Mayr UK Ltd.
Cygnet House
1, Jenkin Road, Meadowhall

Sheffield S9 1AT
United Kingdom
Telephone: +44 114 254 35 00
Telefax: +44 114 254 35 01
mail.uk@schulke.com

1.4 Emergency telephone number

Emergency telephone number : Carechem 24 International: +44 1235 239670

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019)

Oxidizing liquids, Category 2	H272: May intensify fire; oxidizer.
Corrosive to metals, Category 1	H290: May be corrosive to metals.
Acute toxicity, Category 4	H302: Harmful if swallowed.

Acute toxicity, Category 4	H332: Harmful if inhaled.
Skin corrosion, Sub-category 1A	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Specific target organ toxicity - single exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019)

Hazard pictograms :

Signal word : Danger

Hazard statements :
H272 May intensify fire; oxidizer.
H290 May be corrosive to metals.
H302 + H332 Harmful if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage.
H410 Very toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements : EUH071 Corrosive to the respiratory tract.

Precautionary statements :

Prevention:

P220 Keep away from clothing and other combustible materials.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P310 Immediately call a POISON CENTER/ doctor.
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.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

acetic acid
hydrogen peroxide
peracetic acid

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.
Organic peroxide. Hazardous decomposition may occur.
Oxidizer. Contact with other material may cause fire.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Solution of the following substances

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
acetic acid	64-19-7 200-580-7 607-002-00-6 01-2119475328-30-XXXX	Flam. Liq. 3; H226 Skin Corr. 1A; H314 Eye Dam. 1; H318 ——————— specific concentration limit Skin Corr. 1A; H314 >= 90 % Skin Corr. 1B; H314 25 - < 90 % Skin Irrit. 2; H315 10 - < 25 % Eye Irrit. 2; H319 10 - < 25 %	>= 10 - < 20
hydrogen peroxide	7722-84-1 231-765-0 008-003-00-9 01-2119485845-22-XXXX	Ox. Liq. 1; H271 Acute Tox. 4; H302 Acute Tox. 4; H332 Skin Corr. 1A; H314	>= 10 - < 20

		Eye Dam. 1; H318 STOT SE 3; H335 (Respiratory system) Aquatic Chronic 3; H412 --- specific concentration limit Ox. Liq. 1; H271 >= 70 % Ox. Liq. 2; H272 50 - < 70 % Skin Corr. 1A; H314 >= 70 % Skin Corr. 1B; H314 50 - < 70 % Skin Irrit. 2; H315 35 - < 50 % Eye Dam. 1; H318 8 - < 50 % Eye Irrit. 2; H319 5 - < 8 % STOT SE 3; H335 >= 35 %	
peracetic acid	79-21-0 201-186-8 607-094-00-8 01-2119531330-56-XXXX	Flam. Liq. 3; H226 Org. Perox. D; H242 Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 4; H312 Skin Corr. 1A; H314 Eye Dam. 1; H318 STOT SE 3; H335 (Respiratory system) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 --- M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 10 --- specific concentration limit STOT SE 3; H335 >= 1 %	>= 5 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	:	Take off immediately all contaminated clothing and wash it before reuse.
If inhaled	:	Move the victim to fresh air and keep him calm. If symptoms persist, call a physician.
In case of skin contact	:	Wash off immediately with plenty of water. Call a physician immediately.
In case of eye contact	:	In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.
If swallowed	:	Do NOT induce vomiting. Rinse mouth with water. Give small amounts of water to drink. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	:	Treat symptomatically.
Risks	:	Harmful if swallowed or if inhaled. Causes serious eye damage. Corrosive to the respiratory tract. Causes severe burns.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	For specialist advice physicians should contact the Poisons Information Service.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Water spray jet Foam Dry powder
Unsuitable extinguishing media	:	Carbon dioxide (CO2) Do NOT use water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting	:	Cool closed containers exposed to fire with water spray.

Hazardous combustion products	:	No hazardous combustion products are known

5.3 Advice for firefighters

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

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Ensure adequate ventilation. Avoid contact with skin and eyes. Do not breathe vapour. Remove all sources of ignition.

6.2 Environmental precautions

Environmental precautions	:	Avoid subsoil penetration. Do not flush into surface water or sanitary sewer system.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Soak up with inert absorbent material. Unsuitable material for picking up: Absorbent material, organic Kieselguhr Sawdust Keep in suitable, closed containers for disposal. Clean contaminated surface thoroughly. Flush with water.

6.4 Reference to other sections

see Section 8 + 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Provide sufficient air exchange and/or exhaust in work rooms. Handle and open container with care. Never return unused material to storage receptacle.
Advice on protection against fire and explosion	:	Keep away from sources of ignition - No smoking. Keep away from combustible material. May cause or intensify fire; oxidizer.
Hygiene measures	:	When using do not eat or drink. Take off all contaminated clothing immediately.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep only in the original container. Suitable container and packaging materials for safe storage Plastic container of HDPE Polyethylene glass Unsuitable materials for containers Metals Store in a receptacle equipped with a vent. Keep in a bunded area.

Further information on storage conditions : Keep away from heat. Keep away from direct sunlight. Store in cool place. Do not keep the container sealed. Store in upright position only. Recommended storage temperature: 5 - 30°C

Advice on common storage : Do not store together with metals.
Do not store together with reducing agents.
Do not store together with combustible substances.
Do not store near acids.

7.3 Specific end use(s)

Specific use(s) : none

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
acetic acid	64-19-7	STEL	20 ppm 50 mg/m3	GB EH40
		TWA	10 ppm 25 mg/m3	GB EH40
		TWA	10 ppm 25 mg/m3	2017/164/EU
	Further information: Indicative			
		STEL	20 ppm 50 mg/m3	2017/164/EU
	Further information: Indicative			
hydrogen peroxide	7722-84-1	TWA	1 ppm 1.4 mg/m3	GB EH40
		STEL	2 ppm 2.8 mg/m3	GB EH40
		PEL	1.25 mg/m3	Biocide dossier
		STEL	1.25 mg/m3	Biocide dossier
peracetic acid	79-21-0	PEL	0.16 ppm 0.5 mg/m3	Biocide dossier
		STEL	0.16 ppm 0.5 mg/m3	Biocide dossier

Derived No Effect Level (DNEL):

Substance name	End Use	Exposure routes	Potential health effects	Value
hydrogen peroxide	Workers	Inhalation	Long-term local effects	1.4 mg/m3
acetic acid	Workers	Inhalation	Acute local effects	25 mg/m3
	Workers	Inhalation	Long-term local effects	25 mg/m3

Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
hydrogen peroxide	Fresh water	0.0126 mg/l
	Marine water	0.0126 mg/l
	Effects on waste water treatment plants	4.66 mg/l
	Fresh water sediment	0.047 mg/kg
	Marine sediment	0.047 mg/kg
	Soil	0.0023 mg/kg
acetic acid	Fresh water	3.058 mg/l
	Marine water	0.306 mg/l
	Fresh water sediment	11.36 mg/kg
	Marine sediment	1.136 mg/kg
	Intermittent use/release	30.58 mg/l
	Soil	0.478 mg/kg
	Effects on waste water treatment plants	85 mg/l
peracetic acid	Fresh water	0.0069 µg/l
	Marine water	0.069 µg/l
	Effects on waste water treatment plants	0.051 mg/l
	Effects on terrestrial organisms	0.282 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/face 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 : Prolonged contact: Nitrile rubber gloves e.g. Camatril (>120 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. 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.

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 Neoprene
Respiratory protection	:	If the occupational exposure limits cannot be met, in exceptional cases suitable respiratory equipment should be worn only for a short period of time. Combination filter: A2B2E2K2 Hg NO P3 P D/ CO 20 P3 R D
Protective measures	:	Do not breathe vapour. Avoid contact with skin and eyes.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	colourless
Odour	:	vinegar-like
Odour Threshold	:	not determined
pH	:	2.8 (20 °C) Concentration: 10 g/l in water
Melting point/freezing point	:	< -33 °C
Decomposition temperature		No data available
Boiling point/boiling range	:	ca. 105 °C
Flash point	:	94 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	21 hPa (ca. 20 °C)
Relative vapour density	:	No data available
Density	:	1.10 g/cm3 (20 °C)
Solubility(ies)		
Water solubility	:	completely soluble

Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	> 435 °C
Viscosity		
Viscosity, dynamic	:	1.56 mPa*s (20 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is classified as oxidizing with the category 2.

9.2 Other information

Metal corrosion rate	:	> 6.25 mm/a Corrosive to metals Aluminium and Mild steel

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

Self-Accelerating decomposition temperature (SADT): >60°C

10.3 Possibility of hazardous reactions

Hazardous reactions	:	To avoid thermal decomposition, do not overheat. Keep away from combustible material.

10.4 Conditions to avoid

Conditions to avoid	:	Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Materials to avoid	:	Strong acids and strong bases Reducing agents Acid chlorides Aldehydes Metals

10.6 Hazardous decomposition products

Oxygen

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Harmful if swallowed or if inhaled.

Product:

Acute oral toxicity	:	Acute toxicity estimate: 1,200 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 4.85 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method

Components:

acetic acid:

Acute oral toxicity	:	LD50 (Rat): 3,310 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 39.8 mg/l Exposure time: 4 h Test atmosphere: vapour
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg

hydrogen peroxide:

Acute oral toxicity	:	LD50 (Rat): 801 mg/kg Remarks: Harmful if swallowed.
Acute inhalation toxicity	:	Assessment: The component/mixture is moderately toxic after short term inhalation. Remarks: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, Annex VI, Table 3.1
Acute dermal toxicity	:	LD50 (Rat): 6,500 mg/kg

peracetic acid:

Acute oral toxicity	:	LD50: 300 - 2,000 mg/kg Assessment: Harmful if swallowed.
Acute inhalation toxicity	:	LC50: 1 - 5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: Harmful if inhaled.
Acute dermal toxicity	:	LD50: 1,000 - 2,000 mg/kg Assessment: Harmful if inhaled.

Skin corrosion/irritation

Causes severe burns.

Components:

acetic acid:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	Corrosive after 3 minutes or less of exposure

hydrogen peroxide:

Species	:	Rabbit
Result	:	Corrosive after 3 minutes or less of exposure

peracetic acid:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	Corrosive after 3 minutes or less of exposure

Serious eye damage/eye irritation

Causes serious eye damage.

Components:

acetic acid:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Irreversible effects on the eye

hydrogen peroxide:

Species	:	Rabbit
Result	:	Irreversible effects on the eye

peracetic acid:

Species	:	Rabbit
Result	:	Irreversible effects on the eye

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

acetic acid:

Result	:	No data available

hydrogen peroxide:

Species	:	Guinea pig
Result	:	Did not cause sensitisation on laboratory animals.

peracetic acid:

Species	:	Mouse

Result	:	Did not cause sensitisation on laboratory animals.
Remarks	:	Substance is not considered to be potential skin sensitiser.

Germ cell mutagenicity

Not classified based on available information.

Components:

acetic acid:

Genotoxicity in vitro	:	Test Type: Ames test Result: negative

hydrogen peroxide:

Genotoxicity in vitro	:	Test Type: Ames test Result: negative
Genotoxicity in vivo	:	Test Type: in vivo assay Result: Non mutagenic

peracetic acid:

Germ cell mutagenicity- Assessment	:	Germ cell effects are not relevant., The substance has been tested for mutagenicity and other types of genotoxic effects in in vitro and in vivo experiments and is evaluated as being non-mutagenic.

Carcinogenicity

Not classified based on available information.

Components:

acetic acid:

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

hydrogen peroxide:

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

peracetic acid:

Carcinogenicity - Assessment	:	No structural alerts for carcinogenicity were found.

Reproductive toxicity

Not classified based on available information.

Components:

acetic acid:

Reproductive toxicity - Assessment	:	Animal testing did not show any effects on fertility.

hydrogen peroxide:

Reproductive toxicity - Assessment	:	Animal testing did not show any effects on fertility.

peracetic acid:

Effects on foetal development	:	Species: Rat Application Route: Oral General Toxicity Maternal: NOAEL: 100 mg/l Teratogenicity: NOAEL F1: 100 mg/l
Reproductive toxicity - Assessment	:	Animal testing did not show any effects on fertility.

STOT - single exposure

Corrosive to the respiratory tract.

Components:

acetic acid:

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

hydrogen peroxide:

Target Organs	:	Respiratory Tract
Assessment	:	May cause respiratory irritation.

peracetic acid:

Assessment	:	May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Components:

acetic acid:

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

hydrogen peroxide:

Assessment	:	No data available

peracetic acid:

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

Repeated dose toxicity

Components:

acetic acid:

Species	:	Rat
NOAEL	:	1,800 mg/kg
Application Route	:	Oral
Exposure time	:	14-days

hydrogen peroxide:

Species	:	Rat
NOAEL	:	26 mg/kg
Application Route	:	Oral
Exposure time	:	3 months
Remarks	:	No adverse effect has been observed in chronic toxicity tests.

Species	:	Rat
NOAEL	:	0.0029 mg/l
Application Route	:	inhalation (vapour)
Method	:	OECD Test Guideline 407

peracetic acid:

Species	:	Rat
NOAEL	:	15 mg/kg
Exposure time	:	90-day
Remarks	:	No adverse effect has been observed in sub chronic toxicity tests.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks	:	Description of possible hazardous to health effects is based on experience and/or toxicological characteristics of several components. 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

Components:

acetic acid:

Toxicity to fish	:	LC50 (Gambusia affinis (Mosquito fish)): 251 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna): 95 mg/l Exposure time: 24 h
Toxicity to algae/aquatic	:	EC100 (Euglena gracilis): 720 mg/l

plants		Exposure time: 0.25 h

hydrogen peroxide:

Toxicity to fish	:	LC50 (Fish): 16.4 - 37.4 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia pulex (Water flea)): 2.4 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Skeletonema costatum (marine diatom)): 1.38 mg/l Exposure time: 72 h NOEC (Skeletonema costatum (marine diatom)): 0.63 mg/l Exposure time: 72 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0.63 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)

peracetic acid:

Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): 1.1 mg/l Exposure time: 96 h Test Type: semi-static test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna): 0.73 mg/l Exposure time: 48 h Test Type: static test
Toxicity to algae/aquatic plants	:	NOEC (Pseudokirchneriella subcapitata (green algae)): 0.061 mg/l Exposure time: 72 h Test Type: static test
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to fish (Chronic toxicity)	:	NOEC: 0.00069 mg/l Exposure time: 33 d Species: Danio rerio (zebra fish)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0.0121 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)
M-Factor (Chronic aquatic toxicity)	:	10

12.2 Persistence and degradability

Components:

acetic acid:

Biodegradability	:	Result: Totally biodegradable

		Method: OECD 301D / EEC 84/449 C6

hydrogen peroxide:

Biodegradability	:	Result: Totally biodegradable Method: OECD Test Guideline 301

peracetic acid:

Biodegradability	:	Result: Readily biodegradable. Method: OECD Test Guideline 301

12.3 Bioaccumulative potential

Components:

acetic acid:

Bioaccumulation	:	Remarks: Bioaccumulation is unlikely.

hydrogen peroxide:

Bioaccumulation	:	Remarks: Does not bioaccumulate.
Partition coefficient: n-octanol/water	:	log Pow: -1.57

peracetic acid:

Bioaccumulation	:	Remarks: Does not bioaccumulate.
Partition coefficient: n-octanol/water	:	log Pow: -0.26 (20 °C) Method: Calculated value

12.4 Mobility in soil

Components:

acetic acid:

Mobility	:	Remarks: No data available

hydrogen peroxide:

Mobility	:	Medium: Water Remarks: Hydrolyses readily.

peracetic acid:

Mobility	:	Medium: Water Remarks: Hydrolyses readily.

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:

Endocrine disrupting potential	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Additional ecological information	:	No data is available on the product itself.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	Disposal together with normal waste is not allowed. Special disposal required according to local regulations.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number

ADR	:	UN 3149
IMDG	:	UN 3149
IATA	:	UN 3149

14.2 UN proper shipping name

ADR	:	HYDROGEN PEROXIDE AND PEROXYACETIC ACID MIXTURE, STABILIZED
IMDG	:	HYDROGEN PEROXIDE AND PEROXYACETIC ACID MIXTURE, STABILIZED
IATA	:	Hydrogen peroxide and peroxyacetic acid mixture stabilized

14.3 Transport hazard class(es)

ADR	:	5.1
IMDG	:	5.1
IATA	:	5.1

14.4 Packing group

ADR

Packing group	:	II
Classification Code	:	OC1
Hazard Identification Number	:	58
Labels	:	5.1 (8)
Tunnel restriction code	:	(E)

IMDG

Packing group	:	II
Labels	:	5.1 (8)
EmS Code	:	F-H, S-Q

IATA (Cargo)

Packing instruction (cargo aircraft)	:	554
Packing instruction (LQ)	:	Y540
Packing group	:	II
Labels	:	Oxidizer, Corrosive

IATA (Passenger)

Packing instruction (passenger aircraft)	:	550
Packing instruction (LQ)	:	Y540
Packing group	:	II
Labels	:	Oxidizer, Corrosive

14.5 Environmental hazards

ADR

Environmentally hazardous	:	yes

IMDG

Marine pollutant	:	yes

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.

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

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

UK REACH List of restrictions (Annex 17)	:	Conditions of restriction for the following entries should be considered: Number on list 3
UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation	:	Not applicable
The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain)	:	Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1148 on the marketing and use of explosives precursors	:	hydrogen peroxide
UK REACH List of substances subject to authorisation (Annex XIV)	:	Not applicable
Volatile organic compounds	:	Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) Volatile organic compounds (VOC) content: 5.64 %
according to Detergents Regulation EC 648/2004	:	less than 5 %: Non-ionic surfactants

The components of this product are reported in the following inventories:

TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	Product contains substance(s) not listed on TSCA inventory.
AIIC	:	On the inventory, or in compliance with the inventory
DSL	:	All components of this product are on the Canadian DSL
ENCS	:	Not in compliance with the inventory
ISHL	:	Not in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
NZIoC	:	Not in compliance with the inventory
TECI	:	Not in compliance with the inventory

15.2 Chemical safety assessment

Exempt

SECTION 16: Other information

Full text of H-Statements

H226	:	Flammable liquid and vapour.
H242	:	Heating may cause a fire.
H271	:	May cause fire or explosion; strong oxidizer.
H301	:	Toxic if swallowed.
H302	:	Harmful if swallowed.
H312	:	Harmful in contact with skin.
H314	:	Causes severe skin burns and eye damage.

H318	:	Causes serious eye damage.
H330	:	Fatal if inhaled.
H332	:	Harmful if inhaled.
H335	:	May cause respiratory irritation.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Flam. Liq.	:	Flammable liquids
Org. Perox.	:	Organic peroxides
Ox. Liq.	:	Oxidizing liquids
Skin Corr.	:	Skin corrosion
STOT SE	:	Specific target organ toxicity - single exposure
2017/164/EU	:	Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
2017/164/EU / STEL	:	Short term exposure limit
2017/164/EU / TWA	:	Limit Value - eight hours
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; 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 Co-operation 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; TECI -

Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:		**Classification procedure:**
Ox. Liq. 2	H272	Based on product data or assessment
Met. Corr. 1	H290	Based on product data or assessment
Acute Tox. 4	H302	Calculation method
Acute Tox. 4	H332	Calculation method
Skin Corr. 1A	H314	Calculation method
Eye Dam. 1	H318	Calculation method
STOT SE 3	H335	Calculation method
Aquatic Chronic 1	H410	Calculation method

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

gigasept PAA concentrate additive

Version	Revision Date:	Date of last issue: 08.10.2019
04.00	17.02.2023	

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

1.1 Product identifier

Trade name : gigasept PAA concentrate additive

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

Use of the Substance/Mixture : Disinfectants, Additive

Recommended restrictions on use : Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Producer :
BIOXAL
ZI Sud Secteur A
Route des Varennes

71100 Chalon-sur-Saône
France
Telephone: + 33 (0) 3 85 92 30 00
Telefax: + 33 (0) 3 85 92 30 12

Supplier :
Schülke & Mayr UK Ltd.
Cygnet House
1, Jenkin Road, Meadowhall

Sheffield S9 1AT
United Kingdom
Telephone: +44 114 254 35 00
Telefax: +44 114 254 35 01
mail.uk@schulke.com

1.4 Emergency telephone number

Emergency telephone number : Carechem 24 International: +44 1235 239670

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019)

Corrosive to metals, Category 1	H290: May be corrosive to metals.
Skin corrosion, Sub-category 1A	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.

Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019)

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 :

Prevention:

P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P310 Immediately call a POISON CENTER/ doctor.
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 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Hazardous components which must be listed on the label:
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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Solution of the following substances

Components

Chemical name	CAS-No.	Classification	Concentration

	EC-No. Index-No. Registration number		(% w/w)
potassium hydroxide	1310-58-3 215-181-3 019-002-00-8 01-2119487136-33-XXXX	Met. Corr. 1; H290 Acute Tox. 4; H302 Skin Corr. 1A; H314 Eye Dam. 1; H318 ——————— specific concentration limit Skin Corr. 1A; H314 >= 5 % Skin Corr. 1B; H314 2 - < 5 % Skin Irrit. 2; H315 0.5 - < 2 % Eye Irrit. 2; H319 0.5 - < 2 %	>= 10 - < 20
benzotriazole	95-14-7 202-394-1 - - - 01-2119979079-20-XXXX	Acute Tox. 4; H302 Eye Irrit. 2; H319 Aquatic Chronic 2; H411	>= 2.5 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Take off immediately all contaminated clothing and wash it before reuse.

If inhaled : Move the victim to fresh air and keep him calm.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Protect unharmed eye.
Obtain medical attention.

If swallowed : 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

Symptoms	:	Treat symptomatically.
Risks	:	Causes serious eye damage. Causes severe burns.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	For specialist advice physicians should contact the Poisons Information Service.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. The product itself does not burn.
Unsuitable extinguishing media	:	None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting	:	Gives off hydrogen by reaction with metals. Risk of explosion. Contaminated surfaces will be extremely slippery.
Hazardous combustion products	:	No hazardous combustion products are known

5.3 Advice for firefighters

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

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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

6.2 Environmental precautions

Environmental precautions	:	Avoid subsoil penetration.

6.3 Methods and material for containment and cleaning up

Methods for 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

see Section 8 + 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Handle and open container with care. Never return unused material to storage receptacle.
Advice on protection against fire and explosion	:	No special protective measures against fire required.
Hygiene measures	:	Keep away from food and drink. Take off all contaminated clothing immediately.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Store at room temperature in the original container.
Further information on storage conditions	:	Keep away from heat. Keep away from direct sunlight. Keep container tightly closed. Recommended storage temperature: 5 - 30°C
Advice on common storage	:	Do not store near acids.

7.3 Specific end use(s)

Specific use(s)	:	none

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
potassium hydroxide	1310-58-3	STEL	2 mg/m3	GB EH40

Derived No Effect Level (DNEL):

Substance name	End Use	Exposure routes	Potential health effects	Value
potassium hydroxide	Workers	Inhalation	Long-term local effects	1 mg/m3
benzotriazole	Workers	Skin contact	Long-term systemic effects	0.24 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects	4.2 mg/m3
potassium dihydrogenorthophosphate	Workers	Inhalation	Long-term systemic effects	4.07 mg/m3

Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
benzotriazole	Fresh water	0.019 mg/l
	Marine water	0.019 mg/l
	Marine sediment	0.22 mg/kg
	Fresh water sediment	0.22 mg/kg
	Soil	0.03 mg/kg
	Sewage treatment plant	0.1 mg/l
potassium dihydrogenorthophos-phate	Fresh water	0.05 mg/l
	Marine water	0.005 mg/l
	Intermittent use/release	0.5 mg/l
	Sewage treatment plant	50 mg/l

8.2 Exposure controls

Engineering measures

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

Personal protective equipment

Eye/face protection : 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

Respiratory protection : No personal respiratory protective equipment normally required.

Protective measures : Avoid contact with skin and eyes.
When using do not eat or drink.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour	:	yellow
Odour	:	odourless
Odour Threshold	:	not determined
pH	:	12.3 (20 °C) Concentration: 10 g/l in water
Melting point/freezing point	:	< -5 °C
Decomposition temperature		Not applicable
Boiling point/boiling range	:	ca. 100 °C
Flash point	:	Not applicable
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit / Upper flammability limit	:	Not applicable
Lower explosion limit / Lower flammability limit	:	Not applicable
Vapour pressure	:	23 hPa (20 °C)
Relative vapour density	:	Not applicable
Density	:	1.18 g/cm3 (20 °C)
Solubility(ies)		
Water solubility	:	completely soluble (20 °C)
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	Not applicable
Viscosity		
Viscosity, dynamic	:	1.73 mPa*s (20 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

9.2 Other information

Metal corrosion rate	:	> 6.25 mm/a 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

Hazardous reactions : reaction with acids.
Gives off hydrogen by reaction with metals.

10.4 Conditions to avoid

Conditions to avoid : Protect from frost, heat and sunlight.

10.5 Incompatible materials

Materials to avoid : Possible incompatibility with alkali sensitive materials.

10.6 Hazardous decomposition products

none

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

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

Method: OECD Test Guideline 402

Skin corrosion/irritation

Causes severe burns.

Product:

Remarks : Causes severe skin burns and eye damage.

Components:

potassium hydroxide:

Species : reconstructed human epidermis (RhE)
Method : OECD Test Guideline 431
Result : Corrosive after 3 minutes or less of exposure

benzotriazole:

Remarks : May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation

Causes serious eye damage.

Components:

potassium hydroxide:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Irreversible effects on the eye

benzotriazole:

Result : Eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

potassium hydroxide:

Species : Guinea pig
Result : Did not cause sensitisation on laboratory animals.

benzotriazole:

Test Type : Maximisation Test
Species : Guinea pig
Result : Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Not classified based on available information.

Components:

potassium hydroxide:

Genotoxicity in vitro	:	Test Type: Microbial mutagenesis assay (Ames test) Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Result: negative
Germ cell mutagenicity- Assessment	:	Animal testing did not show any mutagenic effects.

benzotriazole:

Genotoxicity in vitro	:	Test Type: Microbial mutagenesis assay (Ames test) Result: negative
Genotoxicity in vivo	:	Method: Mutagenicity (micronucleus test) Result: Non mutagenic
Germ cell mutagenicity- Assessment	:	Experiments showed mutagenic effects in cultured bacterial cells.

Carcinogenicity

Not classified based on available information.

Components:

potassium hydroxide:

Carcinogenicity - Assessment	:	No data available

benzotriazole:

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

Reproductive toxicity

Not classified based on available information.

Components:

potassium hydroxide:

Reproductive toxicity - Assessment	:	No data available

benzotriazole:

Reproductive toxicity - Assessment	:	According to experience not expected

STOT - single exposure

Not classified based on available information.

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.

STOT - repeated exposure

Not classified based on available information.

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.

Repeated dose toxicity

Components:

benzotriazole:

Species	:	Rat
LOAEL	:	335 mg/kg
Application Route	:	Oral
Exposure time	:	1.5 yr
Method	:	OECD Test Guideline 451

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks	:	No data is available on the product itself.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Ecotoxicology Assessment

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/aquatic plants	:	Remarks: No data available

Ecotoxicology Assessment

Chronic aquatic toxicity	:	This product has no known ecotoxicological effects.

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 galeata (water flea)): 15.8 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC10 (Pseudokirchneriella subcapitata (green algae)): 1.18 mg/l Exposure time: 72 h EC50 (Pseudokirchneriella subcapitata (green algae)): 29 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EC10: 0.97 mg/l Exposure time: 21 d Species: Daphnia galeata (water flea) Method: OECD Test Guideline 211

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 Biodegradation: 0 % 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: n-octanol/water	:	Pow: 1.34 (22.7 °C) Remarks: Due to the distribution coefficient n-octanol/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:

Endocrine disrupting potential	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Additional ecological information	:	No data is available on the product itself.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	Disposal together with normal waste is not allowed. Special disposal required according to local regulations.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number

ADR	:	UN 1814
IMDG	:	UN 1814
IATA	:	UN 1814

14.2 UN proper shipping name

ADR	:	POTASSIUM HYDROXIDE SOLUTION
IMDG	:	POTASSIUM HYDROXIDE SOLUTION
IATA	:	Potassium hydroxide solution

14.3 Transport hazard class(es)

ADR	:	8
IMDG	:	8
IATA	:	8

14.4 Packing group

ADR

Packing group	:	II
Classification Code	:	C5
Hazard Identification Number	:	80
Labels	:	8
Tunnel restriction code	:	(E)

IMDG

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

IATA (Cargo)

Packing instruction (cargo aircraft)	:	855
Packing instruction (LQ)	:	Y840
Packing group	:	II
Labels	:	Corrosive

IATA (Passenger)

Packing instruction (passenger aircraft)	:	851
Packing instruction (LQ)	:	Y840
Packing group	:	II
Labels	:	Corrosive

14.5 Environmental hazards

ADR

Environmentally hazardous	:	no

IMDG

Marine pollutant	:	no

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.

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

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

UK REACH List of restrictions (Annex 17)	:	Conditions of restriction for the following entries should be considered: Number on list 3
UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation	:	Not applicable
The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain)	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
UK REACH List of substances subject to authorisation (Annex XIV)	:	Not applicable
Volatile organic compounds	:	Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) Volatile organic compounds (VOC) content: 3.34 %

The components of this product are reported in the following inventories:

TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	All substances listed as active on the TSCA inventory

AIIC	:	On the inventory, or in compliance with the inventory
DSL	:	All components of this product are on the Canadian DSL
ENCS	:	On the inventory, or in compliance with the inventory
ISHL	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
NZIoC	:	Not in compliance with the inventory
TECI	:	On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment
Exempt

SECTION 16: Other information

Full text of H-Statements

H290	:	May be corrosive to metals.
H302	:	Harmful if swallowed.
H314	:	Causes severe skin burns and eye damage.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H411	:	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Met. Corr.	:	Corrosive to metals
Skin Corr.	:	Skin corrosion
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; 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 car-

rying 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 Co-operation 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; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:		**Classification procedure:**
Met. Corr. 1	H290	Based on product data or assessment
Skin Corr. 1A	H314	Calculation method
Eye Dam. 1	H318	Calculation method
Aquatic Chronic 3	H412	Calculation method

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