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

1.1 Product identifier

Trade name : gigasept® PAA

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

Use of the Substance/Mixture : Disinfectants

Recommended restrictions on use : Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Producer/Supplier : Bioxal
Route de Varenne
71100 Chalon sur Saone
France
Telephone: +49385923000
Telefax: +33385923012
Bioxal.info@airliquide.com
www.schuelke.com

Producer : BIOXAL SA - AIR LIQUIDE Group
Route des Varennes - BP 72

71103 Chalon-sur-Saône Cedex
France
Telephone: + 33 (0) 3 85 92 30 00
Telefax: + 33 (0) 3 85 92 30 12

1.4 Emergency telephone number

Emergency telephone number : UK Poisons Emergency number: 0870 600 6266

Emergency telephone number : +49385923000
+49 (0)40 / 52 100 –0

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (67/548/EEC, 1999/45/EC)

Irritant R41: Risk of serious damage to eyes.

2.2 Label elements

Labelling according to EC Directives (1999/45/EC):

Hazard symbols :

		Irritant	
R-phrase(s)	:	R41	Risk of serious damage to eyes.
S-phrase(s)	:	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
		S39	Wear eye/face protection.
Further information	:	In the EU, this product falls under the Directive medical devices 93/42/EEC.	

2.3 Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT). No special risks known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Solution of the following substances with harmless additives.

Hazardous components

Chemical Name	Index-Number CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
Peracetic acid	607-094-00-8 79-21-0 201-186-8 01-2119531330-56-XXXX	R10 O; R 7 Xn; R20/21/22 C; R35 N; R50	Flam. Liq. 3; H226 Org. Perox. D; H242 Acute Tox. 4; H302 Acute Tox. 4; H312 Acute Tox. 4; H332 Skin Corr. 1A; H314 STOT SE 3; H335 Aquatic Acute 1; H400	< 1 %
Hydrogen peroxide	008-003-00-9 7722-84-1 231-765-0 01-2119485845-22-XXXX	O; R 5 O; R 8 Xn; R20/22 C; R35	Ox. Liq. 1; H271	< 5 %
Acetic acid	607-002-00-6 64-19-7 200-580-7 01-2119475328-22-XXXX	R10 C; R35	Flam. Liq. 3; H226 Skin Corr. 1A; H314	< 5 %

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.
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	:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.
If swallowed	:	Rinse mouth. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	:	Treat symptomatically.

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	:	Dry powder, Foam, Water spray jet, Carbon dioxide (CO2)
Unsuitable extinguishing media	:	High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting	:	No information available.
Specific risk from the substance or the product itself, its combustion products or evolved gases	:	Fire may cause evolution of:, Oxygen

5.3 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

Personal precautions	:	Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid contact with skin

and eyes. Do not breathe vapour.

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 : Wipe up with absorbent material (e.g. cloth, fleece).
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 : Normal measures for preventive fire protection.

Hygiene measures : When using do not eat or drink.

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.

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 alkalis.
Do not store together with reducing agents.
Do not store together with combustible substances.

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
Hydrogen peroxide	7722-84-1	Permissible exposure limit	0,5 ppm 0,71 mg/m3	DFG
Hydrogen peroxide	7722-84-1	Permissible exposure limit	1 ppm 1,4 mg/m3	OSHA
Acetic acid	64-19-7	Permissible exposure limit	10 ppm 25 mg/m3	EC/2000/39
Acetic acid	64-19-7	Permissible exposure limit	10 ppm 25 mg/m3	OSHA

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

Hydrogen peroxide : End Use: Workers, Exposure routes: Inhalation, Potential health effects: Local effects, Short-term exposure, Value: 3 mg/m3
End Use: Workers, Exposure routes: Inhalation, Potential health effects: Local effects, Long-term exposure, Value: 1,4 mg/m3
End Use: Consumers, Exposure routes: Inhalation, Potential health effects: Local effects, Short-term exposure, Value: 1,93 mg/m3
End Use: Consumers, Exposure routes: Inhalation, Potential health effects: Local effects, Long-term exposure, Value: 0,21 mg/m3

Acetic acid : End Use: Workers, Exposure routes: Inhalation, Potential health effects: Local effects, Acute effects, Short-term exposure, Value: 25 mg/m3
End Use: Workers, Exposure routes: Inhalation, Potential health effects: Local effects, Chronic effects, Long-term exposure, Value: 25 mg/m3
End Use: Consumers, Exposure routes: Inhalation, Potential health effects: Local effects, Acute effects, Short-term exposure, Value: 25 mg/m3
End Use: Consumers, Exposure routes: Inhalation, Potential health effects: Local effects, Chronic effects, Long-term exposure, Value: 25 mg/m3

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

Hydrogen peroxide : Fresh water, Value: 0,0126 mg/l
Marine water, Value: 0,0126 mg/l
Water, Value: 0,0138 mg/l
Effects on waste water treatment plants, Value: 4,66 mg/l

Acetic acid : Fresh water, Value: 3,058 mg/l
Marine water, Value: 0,3058 mg/l
Fresh water sediment, Value: 11,36 mg/kg
Marine sediment, Value: 1,136 mg/kg
Water, Value: 30,58 mg/l, Intermittent use/release
Soil, Value: 0,478 mg/kg
Effects on waste water treatment plants, Value: 85 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 protection	:	Safety glasses with side-shields conforming to EN166
Hand protection	:	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.

Environmental exposure controls

General advice	:	Avoid subsoil penetration. Do not flush into surface water or sanitary sewer system.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	colourless
Odour	:	very faint, characteristic
Flash point	:	Not applicable
Ignition temperature	:	Not applicable
Auto-ignition temperature	:	Not applicable
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Flammability	:	does not ignite
Explosive properties	:	Not applicable
Oxidizing properties	:	Not applicable
pH	:	ca. 3,5, 20 °C, concentrate
Melting point/range	:	not determined
Crystallization range		< -15 °C
Decomposition temperature		No data available

Boiling point/boiling range	:	ca. 100 °C, 1.013 hPa
Vapour pressure	:	20 hPa, ca. 20 °C
Relative vapour density	:	No data available
Density	:	ca. 1,02 g/cm3, 20 °C
Water solubility	:	completely soluble
Partition coefficient: n-octanol/water	:	Not applicable
Viscosity, dynamic	:	not determined
Evaporation rate	:	No data available

9.2 Other information

No data available

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

To avoid thermal decomposition, do not overheat.

10.4 Conditions to avoid

Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Reducing agents, Acid chlorides, Strong acids and strong bases, Aldehydes, Metals

10.6 Hazardous decomposition products

Oxygen

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product

Acute oral toxicity	:	LD50: > 2000 mg/kg, Rat, OECD Test Guideline 401, GLP: yes

Components:

Peracetic acid:		
Acute inhalation toxicity	:	LC50: 0,59 mg/l, 1 h, Rat, OECD Test Guideline 403
Acute dermal toxicity	:	No data available
Hydrogen peroxide:		
Acute inhalation toxicity	:	LC0: 16,1 mg/l, 4 h, vapour, Harmful by inhalation.
Acute dermal toxicity	:	LD50: 6500 mg/kg, Rat
Acetic acid:		
Acute inhalation toxicity	:	LC50: > 39,8 mg/l, 4 h, Rat
Acute dermal toxicity	:	LD50: > 2000 mg/kg, Rabbit

Skin corrosion/irritation

Product

Rabbit, OECD Test Guideline 404, GLP: yes, According to the classification criteria of the European Union, the product is not considered as being a skin irritant.

Serious eye damage/eye irritation

Product

Risk of serious damage to eyes., Rabbit, OECD Test Guideline 405, GLP: yes

Respiratory or skin sensitisation

Product

Did not cause sensitisation on laboratory animals. Guinea pig, OECD Test Guideline 406, GLP: yes

Germ cell mutagenicity

Components:

Peracetic acid:		
Genotoxicity in vitro	:	negative Ames test
Germ cell mutagenicity- Assessment	:	Animal testing did not show any mutagenic effects.
Hydrogen peroxide:		
Genotoxicity in vitro	:	negative Ames test
Genotoxicity in vivo	:	not mutagenic, in vivo assay
Germ cell mutagenicity- Assessment	:	Not mutagenic in Ames Test.
Acetic acid:		
Genotoxicity in vitro	:	negative Ames test
Germ cell mutagenicity- Assessment	:	Not mutagenic in Ames Test.

Carcinogenicity

Components:

Peracetic acid:		
Carcinogenicity - Assessment	:	Animal testing did not show any carcinogenic effects.
Hydrogen peroxide:		
Carcinogenicity - Assessment	:	Animal testing did not show any carcinogenic effects.
Acetic acid:		
Carcinogenicity - Assessment	:	Animal testing did not show any carcinogenic effects.

Reproductive toxicity

Components:

Peracetic acid:		
Effects on fertility	:	Rat, Oral, NOAEL: 200 mg/l, F1: 200 mg/l
Reproductive toxicity - Assessment	:	Animal testing did not show any effects on fertility.
Teratogenicity - Assessment	:	No data available
Hydrogen peroxide:		
Reproductive toxicity - Assessment	:	Animal testing did not show any effects on fertility.
Teratogenicity - Assessment	:	Embryotoxicity classification not possible from current data.

Acetic acid:

Reproductive toxicity - Assessment	:	Animal testing did not show any effects on fertility.
Teratogenicity - Assessment	:	No data available

STOT - single exposure
No data available

STOT - repeated exposure
No data available

Repeated dose toxicity

Components:

Hydrogen peroxide:
No observed adverse effect level: Rat: NOAEL: 26 mg/kg, Oral, Exposure time: 3 months, No adverse effect has been observed in chronic toxicity tests.
Lowest observed adverse effect level: Rat: NOAEL: 0,0029 mg/l, inhalation (vapour), OECD Test Guideline 407

Acetic acid:
Rat: NOAEL: 1.800 mg/kg, Oral, Exposure time: 14 d

Aspiration toxicity
No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

Peracetic acid:

Toxicity to fish	:	LC50: 13 mg/l, 96 h, semi-static test, OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna): 3,3 mg/l, 48 h, OECD Test Guideline 202
Toxicity to algae	:	No data available

Hydrogen peroxide:

Toxicity to fish	:	LC50 (Fish): 16,4 - 37,4 mg/l, 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna): 2,4 mg/l, 48 h
Toxicity to algae	:	ErC50 (Skeletonema costatum): 1,38 mg/l, 72 h
	:	NOEC (Skeletonema costatum): 0,63 mg/l, 72 h

Acetic acid:

Toxicity to fish	:	LC50 (Gambusia affinis (Mosquito fish)): 251 mg/l, 96 h, static test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna): 95 mg/l, 24 h
Toxicity to algae	:	EC100 (Euglena gracilis): 720 mg/l, 0,25 h

12.2 Persistence and degradability

Components:

Peracetic acid:

Biodegradability	:	Totally biodegradable OECD Test Guideline 301

Hydrogen peroxide:

Biodegradability	:	Totally biodegradable OECD Test Guideline 301

Acetic acid:
Biodegradability : Totally biodegradable OECD 301D / EEC 84/449 C6

12.3 Bioaccumulative potential

Product
Partition coefficient: n-octanol/water : Not applicable
Components:
Peracetic acid:
Bioaccumulation : Does not bioaccumulate.
Hydrogen peroxide:
Bioaccumulation : Does not bioaccumulate.
Acetic acid:
Bioaccumulation : Bioaccumulation is unlikely.

12.4 Mobility in soil

Components:
Peracetic acid:
Mobility : Water, Hydrolyses readily.
Hydrogen peroxide:
Mobility : Water, Hydrolyses readily.
Acetic acid:
Mobility : No data available

12.5 Results of PBT and vPvB assessment

Product
This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).

12.6 Other adverse effects

Product
Additional ecological information : The product has not been tested.

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 : EWC 160903
Waste key for the unused product(Group) : peroxides, e.g. hydrogen peroxide

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

For personal protection see section 8.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 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

Legislation on the control of major-accident hazards involving dangerous substances	:	Directive 96/82/EC does not apply

15.2 Chemical Safety Assessment

Exempt

SECTION 16: Other information

Full text of R-Phrases

R 5	:	Heating may cause an explosion.
R 7	:	May cause fire.
R 8	:	Contact with combustible material may cause fire.
R10	:	Flammable.
R20/21/22	:	Harmful by inhalation, in contact with skin and if swallowed.
R20/22	:	Harmful by inhalation and if swallowed.
R35	:	Causes severe burns.
R50	:	Very toxic to aquatic organisms.

Full text of H-Statements

H226	:	Flammable liquid and vapour.
H242	:	Heating may cause a fire.
H271	:	May cause fire or explosion; strong oxidiser.
H302	:	Harmful if swallowed.
H312	:	Harmful in contact with skin.
H314	:	Causes severe skin burns and eye damage.
H332	:	Harmful if inhaled.
H335	:	May cause respiratory irritation.
H400	:	Very toxic to aquatic life.

Full text of other abbreviations

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Flam. Liq.	Flammable liquids
Org. Perox.	Organic peroxides
Ox. Liq.	Oxidizing liquids
Skin Corr.	Skin corrosion
STOT SE	Specific target organ toxicity - single exposure

Further information

Changes compared with the previous edition!!!

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.