

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

#### 1.1. Product identifier

Product form	: Mixture
Trade name	: SULPHUR SOLUTION 10
UFI	: ERE7-K9HG-H10F-1962
Type of product	: Preserving agent
Product group	: Trade product
Other means of identification	: E228 - E220

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

##### 1.2.1. Relevant identified uses

Main use category	: Professional use
Industrial/Professional use spec	: For professional users only
Use of the substance/mixture	: Potassium bisulphite (E228) and sulphur dioxide (E220) in aqueous solution, containing 100 g/L of pure sulphur dioxide. Sulphating of juice and wines. Preservative.
Use of the substance/mixture	: For œnological use

##### 1.2.2. Uses advised against

Restrictions on use	: Food/feedstuff additives
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#### 1.3. Details of the supplier of the safety data sheet

##### Manufacturer

LAFFORT FRANCE SAS  
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33072 BORDEAUX CEDEX  
FRANCE  
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##### Distributor

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SOUTH AUSTRALIA  
AUSTRALIA  
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##### Manufacturer

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20100 RENTERIA (Guipúzcoa)  
ESPAÑA  
T 0034943344068 - F 0034943344281  
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##### Distributor

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##### Distributor

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##### Distributor

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## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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USA

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### 1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Australia	NSW Poisons Information Centre The Children's Hospital at Westmead	Locked Bag 4001 NSW 2145	13 11 26	
Canada	Ontario Poison Centre (OPC)	The Hospital for Sick Children 555 University Avenue ON M5G 1X8 Toronto	1-800-268-9017 (416) 813-5900	
Canada	BC Drug and Poison Information Centre (DPIC)	655 West 12th Avenue BC V5Z 4R4 Vancouver	1-800-567-8911 (604) 682-5050	
China	National Poison Control Center	Chinese Center for Disease Control and Prevention Nanwei road, No.29 100050 Beijing	+86 10 831 32 046	
Croatia	Centar za kontrolu otrovanja Institut za medicinska istraživanja i medicinu rada	Ksaverska Cesta 2 p.p. 291 10000 Zagreb	+385 1 234 8342	Information available 24/7 in Croatian and English
Czech Republic	Toxikologické informační středisko Klinika pracovního lékařství VFN a 1. LF UK	Na Bojišti 1 120 00 Praha 2	+420 224 919 293 +420 224 915 402	
Denmark	Gifftlinjen	Bispebjerg Bakke 23 Opgang 20 C 2400 København NV	+45 82 12 12 12	
Georgia	National Toxicology Information Advisory Center	Tbilisi State Medical University Department of Toxicology - 7 Asatiani St. 380 077 Tbilisi	+995 99 533320	
Greece	Poisons Information Centre Children's Hospital P&A Kyriakou	11762 Athens	+30 2 10 779 3777	
Hungary	Országos Kémiai Biztonsági Intézet Egészségügyi Toxikológiai Tájékoztató Szolgálat	Nagyvárad tér 2. 1437 Budapest, Pf. 839 1097 Budapest	+36 80 20 11 99	
Israel	Israel Poison Information Center Rambam Health Care Campus	6 Ha'Aliya Street 31096	+972 4 854 1900	
Japan	Japan Poison Information Center	Tsukuba Medical Center 1-1-1 Amakubo 305-0005 Tsukuba City, Ibaraki	+81-29-856-3566 +81-72-727-2499	
Jordan	National Drug & Poison Information Center of Jordan		0798506755 00962-6-5353444	
Kazakhstan	Republican Toxicology Center	Tole-bi 93 480083 Almaty	+7 3272 925 868	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital MSD Msida	+356 2545 6504	

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Country	Organisation/Company	Address	Emergency number	Comment
New Zealand	National Poisons Centre	Dunedin School of Medicine, University of Otago PO Box 913 9054 Dunedin	0800 764 766 +56 2 2 247 3600	
Poland	National Poisons Information Centre The Nofer Institute of Occupational Medicine (Łódź)	ul. Teresy 8 P.O. BOX 199 90950 Łódź	+48 42 63 14 724	
Romania	Department of Clinical Toxicology Spitalul de Urgenta Floreasca	Calea Floreasca Bucuresti	+40 21 230 8000	
Russia	Информационно-консультативный центр по токсикологии (RTIAC) Министерство здравоохранения Российской Федерации	3 Сухаревская Площадь Блок 7 129090 г. Москва	+7 495 628 1687 (только на русском)	
Serbia	Nacionalni centar za kontrolu trovanja - VMA	Crnotravska 17 11000 Beograd	+381 11 360 84 40	
Slovenia	Center za klinično toksikologijo in farmakologijo Interna klinika, UKCL	Zaloška 7 1000 Ljubljana	+386 522 52 83	
South Africa	Tygerberg Poison Information Centre	Division of Clinical Pharmacology Faculty of Medicine and Health Sciences Stellenbosch University - PO Box 241 8 000 Cape Town	0861 555 777 +56 2 2 247 3600	
Sweden	Giftinformationscentralen	Solna Strandväg 21 171 54 Solna	112 – begär Giftinformation	
Turkey	Ulusal Zehir Merkezi (UZEM) Refik Saydam Hıfzısıhha Merkezi Başkanlığı	Cemal Gürsel Cd. No: 18 Sıhhiye Çankaya 06590 Ankara	114	Information is provided to public and medical personnel on poisoning incidents via 114.
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Cardiff Centre) University Hospital Llandough	Penlan Road CF64 2XX	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Edinburgh Centre) Royal Infirmary of Edinburgh	Little France Crescent EH16 4SA	0344 892 0111	Only for healthcare professionals
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER	+44 20 7188 7188	
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre	16/17 Framlington Place Newcastle-upon-Tyne NE2 4AB	0344 892 0111	Only for healthcare professionals

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Country	Organisation/Company	Address	Emergency number	Comment
United States of America	American Association of Poison Control Centers	515 King St., Suite 510 VA 22314 Alexandria	1-800-222-1222 +56 2 2 247 3600	

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

Serious eye damage/eye irritation, Category 2 H319

Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation H335

Full text of H- and EUH-statements: see section 16

#### Adverse physicochemical, human health and environmental effects

Causes serious eye irritation. May cause irritation to the respiratory tract. May cause respiratory irritation.

### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS07

Signal word (CLP)

: Warning

Contains

: Potassium bisulfite - E228

Hazard statements (CLP)

: H319 - Causes serious eye irritation.  
H335 - May cause respiratory irritation.

Precautionary statements (CLP)

: P261 - Avoid breathing fume, gas, mist, spray, vapours.  
P280 - Wear protective gloves, protective clothing, eye protection, face protection.  
P312 - Call a POISON CENTER, doctor if you feel unwell.  
P337+P313 - If eye irritation persists: Get medical advice/attention.

EUH-statements

: EUH031 - Contact with acids liberates toxic gas.

### 2.3. Other hazards

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Potassium bisulfite - E228 substance with a Community workplace exposure limit	CAS-No.: 7773-03-7 EC-No.: 231-870-1	9,5 – 10	Eye Irrit. 2, H319 STOT SE 3, H335

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Sulphur dioxide (E220) substance with a Community workplace exposure limit	CAS-No.: 7446-09-5 EC-No.: 231-195-2 EC Index-No.: 016-011-00-9 REACH-no: 01-2119485028-34	< 0,5	Press. Gas Acute Tox. 3 (Inhalation), H331 (ATE=700 ppmv/4h) Acute Tox. 3 (Inhalation:gas), H331 (ATE=700 ppmv/4h) Skin Corr. 1B, H314

Full text of H- and EUH-statements: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general	: In case of doubt or persistent symptoms, consult always a physician. Remove victim from polluted area. Take off immediately all contaminated clothing. Never give anything by mouth to an unconscious person. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If symptoms persist, call a physician. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap. Get medical advice if skin irritation persists. Wash skin with plenty of water.
First-aid measures after eye contact	: In case of eye contact, immediately rinse with clean water for 10-15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: If swallowed, rinse mouth with water (only if the person is conscious). Never attempt to induce vomiting : risk of inhalation. Remove person to fresh air and keep comfortable for breathing. Loosen tight clothing such as a collar, tie, belt or waistband. If unconscious place in recovery position and seek medical advice. P310 - Immediately call a POISON CENTER/doctor. Call a poison center or a doctor if you feel unwell.

#### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects	: More detailed information: See section 11.
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: May cause skin irritation / dermatitis.
Symptoms/effects after eye contact	: Eye irritation. Serious damage to eyes.
Symptoms/effects after ingestion	: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Seek a medical assistance, even if there are no immediate symptoms.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	: If there is a fire close by, use suitable extinguishing agents. carbon dioxide (CO2), powder, alcohol-resistant foam, water spray. Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use water jet.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: This product is flammable. In case of fire and/or explosion do not breathe fumes.
Hazardous decomposition products in case of fire	: Under normal conditions of storage and use, hazardous decomposition products should not be produced. Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide. Sulphur oxides. Sulphur dioxide.

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### 5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information	: Provision to contain effluent from fire extinguishing. Do not contaminate ground and surface water. Dispose in a safe manner in accordance with local/national regulations.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Do not handle until all safety precautions have been read and understood. Evacuate personnel to a safe area. Ensure adequate air ventilation. Spilled material may present a slipping hazard.
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#### 6.1.1. For non-emergency personnel

Protective equipment	: Wear personal protective equipment.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes. Do not touch or walk on the spilled product. Avoid breathing dust/fume/gas/mist/vapours/spray.

#### 6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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### 6.2. Environmental precautions

Avoid release to the environment. Do not flush into surface water or sewer system. Notify authorities if product enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

For containment	: Cover spill with non combustible material, e.g.: sand, earth, vermiculite.
Methods for cleaning up	: Mechanically recover the product. Take up liquid spill into absorbent material. Shovel into suitable and closed container for disposal. Clean contaminated surfaces with an excess of water.
Other information	: Dispose of materials or solid residues at an authorized site. Do not allow to enter drains or water courses.

### 6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling	: Store tightly closed in a dry and cool place. Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid inhalation of vapours. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product. If on skin, take off contaminated clothing. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Keep only in the original container. Store in a well-ventilated place. Keep container tightly closed. Containers which are opened should be properly resealed and kept upright to prevent leakage.
Storage conditions	: Keep in a well-ventilated room. Store in a dry, cool place. Keep out of direct sunlight. Keep container closed when not in use. Keep container tightly closed. Store locked up. Store in a well-ventilated place. Keep cool.
Incompatible products	: Strong acids and oxidants.
Heat and ignition sources	: Keep away from ignition sources (including static discharges). Store away from heat.

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### 7.3. Specific end use(s)

For œnological use.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

<b>Potassium bisulfite - E228 (7773-03-7)</b>	
<b>EU - Indicative Occupational Exposure Limit (IOEL)</b>	
IOEL TWA [ppm]	2 ppm
IOEL STEL [ppm]	5 ppm SO <sub>2</sub>
<b>France - Occupational Exposure Limits</b>	
VME (OEL TWA)	≈ 5 mg/m <sup>3</sup>
VME (OEL TWA) [ppm]	≈ 2 ppm
VLE (OEL C/STEL)	≈ 10 mg/m <sup>3</sup> SO <sub>2</sub>
VLE (OEL C/STEL) [ppm]	≈ 5 ppm
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH OEL STEL [ppm]	0,25 ppm SO <sub>2</sub>
<b>Sulphur dioxid (E220) (7446-09-5)</b>	
<b>EU - Indicative Occupational Exposure Limit (IOEL)</b>	
Local name	Sulphur dioxide
IOEL TWA	1,3 mg/m <sup>3</sup>
IOEL TWA [ppm]	0,5 ppm
IOEL STEL	2,7 mg/m <sup>3</sup>
IOEL STEL [ppm]	1 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164
<b>France - Occupational Exposure Limits</b>	
Local name	Soufre (dioxyde de) (Anhydride sulfureux)
VME (OEL TWA)	1,3 mg/m <sup>3</sup>
VME (OEL TWA) [ppm]	0,5 ppm
VLE (OEL C/STEL)	2,7 mg/m <sup>3</sup>
VLE (OEL C/STEL) [ppm]	1 ppm
Remark	Valeurs r�glementaires indicatives
Regulatory reference	Circulaire du Minist�re du travail (r�f.: Arr�te du 27 septembre 2019)
<b>Spain - Occupational Exposure Limits</b>	
Local name	D�oxido de azufre
VLA-ED (OEL TWA) [1]	1,32 mg/m <sup>3</sup>
VLA-ED (OEL TWA) [2]	0,5 ppm
VLA-EC (OEL STEL)	2,64 mg/m <sup>3</sup>

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<b>Sulphur dioxide (E220) (7446-09-5)</b>	
VLA-EC (OEL STEL) [ppm]	1 ppm
Remark	s (Esta sustancia tiene prohibida total o parcialmente su comercialización y uso como fitosanitario y/o como biocida. Para una información detallada acerca de las prohibiciones consúltese: Base de datos de productos biocidas: <a href="http://www.mssi.gob.es/ciudadanos/productos.do?tipo=plaguicidas">http://www.mssi.gob.es/ciudadanos/productos.do?tipo=plaguicidas</a> Base de datos de productos fitosanitarios <a href="http://www.magrama.gob.es/agricultura/pags/fitos/registro/fichas/pdf/Lista_sa.pdf">http://www.magrama.gob.es/agricultura/pags/fitos/registro/fichas/pdf/Lista_sa.pdf</a> ).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2022. INSHT

### 8.1.2. Recommended monitoring procedures

No additional information available

### 8.1.3. Air contaminants formed

No additional information available

### 8.1.4. DNEL and PNEC

No additional information available

### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure the ventilation system is regularly maintained and tested.

### 8.2.2. Personal protection equipment

#### Personal protective equipment:

Refer to protective measures listed in Sections 7 and 8.

#### Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

##### Eye protection:

Wear eye or face protection. Safety glasses with side shields. Safety glasses

Eye protection			
Type	Field of application	Characteristics	Standard
Safety glasses		With side shields	EN 166

#### 8.2.2.2. Skin protection

##### Skin and body protection:

Wear suitable protective clothing

Skin and body protection	
Type	Standard
Chemically resistant protective gloves	EN 374



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### Hand protection:

Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. Gloves must be replaced after each use and whenever signs of wear or perforation appear. Protective gloves. ISO 374-1. Wash hands immediately after handling the product

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Chemically resistant protective gloves	Chloroprene rubber (CR)	6 (> 480 minutes)	0.5		EN ISO 374
Chemically resistant protective gloves	Polyvinylchloride (PVC)	6 (> 480 minutes)	0.7		EN ISO 374

### Other skin protection

#### Materials for protective clothing:

Long sleeved protective clothing. Use chemically protective clothing

#### 8.2.2.3. Respiratory protection

##### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. EN 143. EN 145. EN 149

#### 8.2.2.4. Thermal hazards

No additional information available

#### 8.2.3. Environmental exposure controls

##### Environmental exposure controls:

Do not allow into drains or water courses. Avoid release to the environment.

##### Other information:

Do not eat, drink or smoke during work. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: pale. amber.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 4,8 – 5,8 20°C
Viscosity, kinematic	: Not available
Solubility	: Soluble in water. Slightly soluble in: Ethanol.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 1,3 kg/l 20°C
Relative density	: Not available
Relative vapour density at 20°C	: Not available

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Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions. On contact with acid releases: Sulphur dioxide.

### 10.3. Possibility of hazardous reactions

May react violently with oxidants. May react violently with acids. Contact with acids liberates toxic gas.

### 10.4. Conditions to avoid

Heat. flames or sparks.

### 10.5. Incompatible materials

Oxidizing agent. Acids. Acids.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates : See Section 5.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)

Potassium bisulfite - E228 (7773-03-7)	
LD50 oral rat	> 2300 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	≤
LC50 Inhalation - Rat	> 5,5 mg/l/4h Animal: rat, Animal sex: male, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation	: Slightly irritant but not relevant for classification (Based on available data, the classification criteria are not met) pH: 4,8 – 5,8 20°C
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Serious eye damage/irritation	: Severe eye irritation pH: 4,8 – 5,8 20°C
Additional information	: Causes serious eye damage.
Respiratory or skin sensitisation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: May cause respiratory irritation.

### Potassium bisulfite - E228 (7773-03-7)

STOT-single exposure	May cause respiratory irritation.
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STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

## 11.2. Information on other hazards

No additional information available

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: Harmful to aquatic life.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

### Potassium bisulfite - E228 (7773-03-7)

LC50 - Fish [1]	450 – 1000 mg/l Brachydanio rerio
EC50 - Crustacea [1]	230 mg/l Test organisms (species): Daphnia magna
EC50 - Other aquatic organisms [1]	65 mg/l Pseudomonas putida - 17h
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
NOEC (chronic)	> 10 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	≥ 316 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) Duration: '34 d'

### Sulphur dioxide (E220) (7446-09-5)

LC50 - Fish [1]	5000 ppm Salvenus spec.
LC50 - Fish [2]	3200 µg/l Atlantic menhaden, Brevoortia tyrannus

## 12.2. Persistence and degradability

### Potassium bisulfite - E228 (7773-03-7)

Persistence and degradability	May be harmful to aquatic organisms, to flora, to soil organisms. Biodegradable.
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### Sulphur dioxide (E220) (7446-09-5)

Persistence and degradability	Not applicable. Inorganic Gaseous Substances.
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### 12.3. Bioaccumulative potential

#### Potassium bisulfite - E228 (7773-03-7)

Bioaccumulative potential : There is no bioaccumulation.

#### Sulphur dioxide (E220) (7446-09-5)

Bioaccumulative potential : Not applicable.

### 12.4. Mobility in soil

#### Sulphur dioxide (E220) (7446-09-5)

Ecology - soil : Not applicable.

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

Other adverse effects : Do not allow to enter drains or water courses, if the product is not neutralised, it may have harmful effects on the aquatic environment

At high concentrations : The product is suspected to inhibit waste water biological treatment systems

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations : Neutralise with a carbonate solution and wash with plenty of water. Do not flush into surface water or sewer system.

Product/Packaging disposal recommendations : Empty remaining contents. Neutralise with a carbonate solution and wash with plenty of water. Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

### 14.1. UN number or ID number

UN-No. (ADR) : Not regulated

UN-No. (IMDG) : Not regulated

UN-No. (IATA) : Not regulated

UN-No. (ADN) : Not regulated

UN-No. (RID) : Not regulated

### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not regulated

Proper Shipping Name (IMDG) : Not regulated

Proper Shipping Name (IATA) : Not regulated

Proper Shipping Name (ADN) : Not regulated

Proper Shipping Name (RID) : Not regulated

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### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR) : Not regulated

#### IMDG

Transport hazard class(es) (IMDG) : Not regulated

#### IATA

Transport hazard class(es) (IATA) : Not regulated

#### ADN

Transport hazard class(es) (ADN) : Not regulated

#### RID

Transport hazard class(es) (RID) : Not regulated

### 14.4. Packing group

Packing group (ADR) : Not regulated

Packing group (IMDG) : Not regulated

Packing group (IATA) : Not regulated

Packing group (ADN) : Not regulated

Packing group (RID) : Not regulated

### 14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

### 14.6. Special precautions for user

#### Overland transport

Not regulated

#### Transport by sea

Not regulated

#### Air transport

Not regulated

#### Inland waterway transport

Not regulated

#### Rail transport

Not regulated

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

Contains no substance(s) listed on the REACH Candidate List

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Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

### 15.1.2. National regulations

#### Germany

Water hazard class (WGK) : WGK nwg, Non-hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

#### Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

#### Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

### Indication of changes:

Revision - See : \*.

Indication of changes			
Section	Changed item	Change	Comments
1.1	UFI	Added	
5.1	Suitable extinguishing media	Modified	
5.2	Fire hazard	Added	
5.2	Hazardous decomposition products in case of fire	Modified	
5.3	Other information	Modified	
6.1	General measures	Modified	
6.1	Emergency procedures	Modified	
6.2	Environmental precautions	Modified	
6.3	Methods for cleaning up	Modified	
7.2	Technical measures	Modified	
7.2	Storage conditions	Modified	
8.2	Appropriate engineering controls	Modified	
8.2	Eye protection	Modified	
8.2	Hand protection	Modified	
10	Hazardous decomposition products	Modified	
11.1	Reason for no classification	Added	
12.	Reason for no classification	Added	

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<b>Abbreviations and acronyms:</b>	
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
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

<b>Full text of H- and EUH-statements:</b>	
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3

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Full text of H- and EUH-statements:	
Acute Tox. 3 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 3
EUH031	Contact with acids liberates toxic gas.
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
Press. Gas	Gases under pressure
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.