

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

1.1. Product identifier

Product form : Mixture
 Trade name : SULPHUR SOLUTION 10
 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 oenological use

1.2.2. Uses advised against

Restrictions on use : Food/feedstuff additives

1.3. Details of the supplier of the safety data sheet

Manufacturer

LAFFORT FRANCE

P.O. Box CS 61611

33072 BORDEAUX CEDEX - FRANCE

T +33 (0)5 56 86 53 04 - F +33 (0)5 56 86 30 50

info@laffort.com - www.laffort.com

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 Westmead	13 11 26 +56 2 2 247 3600	
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	

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Country	Organisation/Company	Address	Emergency number	Comment
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	
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 Haifa	+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	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital MSD Msida	+356 2545 6504	
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)	
Slovenia	Center za klinično toksikologijo in farmakologijo Interna klinika, UKCL	Zaloška cesta 7 1525 Ljubljana	+386 41 650 500	
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	
Turkey	Ulusal Zehir Merkezi (UZEM) Refik Saydam Hıfzısıhha Merkezi Başkanlığı	Cemal Gürsel Cd. No: 18 Sıhhiye Çankaya 6590 Ankara	114	Information is provided to public and medical personnel on poisoning incidents via 114.

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Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	0870 243 2241	
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, H319

Category 2

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

Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

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

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] Extra labelling to display Extra classification(s) to display

Hazard pictograms (CLP)

:



GHS07

Signal word (CLP)

: Warning

Hazardous ingredients

: 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
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves, protective clothing, eye protection, face protection
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
P312 - Call a doctor, a POISON CENTER if you feel unwell.

EUH-statements

: EUH031 - Contact with acids liberates toxic gas

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2.3. Other hazards

No additional information available

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	(CAS-No.) 7773-03-7 (EC-No.) 231-870-1	9,5 - 10	Eye Irrit. 2, H319 STOT SE 3, H335
Sulphur dioxide (E220)	(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 (Liq.), H280 Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Inhalation:gas), H331 Skin Corr. 1B, H314

Full text of H-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.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If symptoms persist, call a physician.
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.
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.
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. Immediately call a POISON CENTER or doctor/physician.

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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	: carbon dioxide (CO ₂), powder, alcohol-resistant foam, water spray.
Unsuitable extinguishing media	: Do not use water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: This product is flammable.
Hazardous decomposition products in case of fire	: Hazardous vapours may be released. Sulphur dioxide.

5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information	: 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	: Evacuate personnel to a safe area.
6.1.1. For non-emergency personnel	
Protective equipment	: Wear personal protective equipment.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes.
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".

6.2. Environmental precautions

Do not flush into surface water or sewer system.

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. 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.

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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.
- 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.
- Storage conditions : Keep in a well-ventilated room. Store tightly closed in a dry and cool place. Store away from direct sunlight or other heat sources.
- Incompatible products : Strong acids and oxidants.
- Heat and ignition sources : Keep away from ignition sources (including static discharges). Store away from heat.

7.3. Specific end use(s)

For oenological use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Potassium bisulfite - E228 (7773-03-7)		
EU	IOELV STEL (ppm)	1 ppm SO ₂
France	VLE (mg/m ³)	≈ 5 mg/m ³ SO ₂
USA - ACGIH	ACGIH STEL (ppm)	0,25 ppm SO ₂

Sulphur dioxide (E220) (7446-09-5)		
EU	Local name	Sulphur dioxide
EU	IOELV TWA (mg/m ³)	1,3 mg/m ³
EU	IOELV TWA (ppm)	0,5 ppm
EU	IOELV STEL (mg/m ³)	2,7 mg/m ³
EU	IOELV STEL (ppm)	1 ppm
EU	Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164
France	Local name	Soufre (dioxyde de) (Anhydride sulfureux)
France	VME (mg/m ³)	≈ 10 mg/m ³ Total dust
France	VME (ppm)	2 ppm
France	VLE (mg/m ³)	10 mg/m ³
France	VLE (ppm)	5 ppm
France	Note (FR)	Valeurs recommandées/admises
France	Regulatory reference	Circulaire du Ministère du travail (réf.: INRS ED 984, 2016)
Spain	Local name	Dióxido de azufre
Spain	VLA-ED (mg/m ³)	1,32 mg/m ³
Spain	VLA-ED (ppm)	0,5 ppm
Spain	VLA-EC (mg/m ³)	2,64 mg/m ³
Spain	VLA-EC (ppm)	1 ppm

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Sulphur dioxide (E220) (7446-09-5)		
Spain	Notes	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: http://www.msssi.gob.es/ciudadanos/productos.do?tipo=plaguicidas Base de datos de productos fitosanitarios http://www.magrama.gob.es/agricultura/pags/fitos/registro/fichas/pdf/Lista_sa.pdf).
Spain	Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2017. INSHT

8.2. Exposure 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.

Personal protective equipment:

Refer to protective measures listed in Sections 7 and 8.

Materials for protective clothing:

Long sleeved protective clothing. Use chemically protective clothing

Hand protection:

Protective gloves

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

Eye protection:

Safety glasses

Type	Use	Characteristics	Standard
Safety glasses		With side shields	EN 166

Skin and body protection:

Wear suitable protective clothing

Type	Standard
Chemically resistant protective gloves	EN 374

Respiratory protection:

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

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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	: No data available
pH	: 4,8 - 5,8 20 °C
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: > 100 °C Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: Not applicable
Density	: 1,3 kg/l 20 °C
Solubility	: Soluble in water. Slightly soluble in: Ethanol.
Log Pow	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: Not applicable

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9.2. Other information

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.

10.4. Conditions to avoid

Heat, flames or sparks.

10.5. Incompatible materials

Oxidizing agent. Acids.

10.6. Hazardous decomposition products

See Heading 5.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Potassium bisulfite - E228 (7773-03-7)	
LD50 oral rat	> 2000 mg/kg bodyweight

Skin corrosion/irritation : Slightly irritant but not relevant for classification
pH: 4,8 - 5,8 20°C

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

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : May cause respiratory irritation.

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STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life.

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

Potassium bisulfite - E228 (7773-03-7)	
LC50 fish 1	460 - 1000 mg/l Brachydanio rerio
EC50 other aquatic organisms 1	65 mg/l Pseudomonas putida - 17h

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	Readily biodegradable. May be harmful to aquatic organisms, to flora, to soil organisms.

Sulphur dioxide (E220) (7446-09-5)	
Persistence and degradability	Not applicable. Inorganic Gaseous Substances.

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

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12.6. 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 / RID / IMDG / IATA / ADN

14.1. UN 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

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

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

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 REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

VwVwS Annex reference : Water hazard class (WGK) 3, severe hazard to waters (Classification according to VwVwS, Annex 4)

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12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

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

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

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

Denmark

Recommendations Danish Regulation : 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 : *

Full text of H- and EUH-statements:

Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Press. Gas (Liq.)	Gases under pressure : Liquefied gas
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
H280	Contains gas under pressure; may explode if heated.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
EUH031	Contact with acids liberates toxic gas

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