MASH REDOX

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 12/20/2017 Revision date: 8/20/2024 Supersedes version of: 8/3/2022 Version: 4.0

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

1.1. Product identifier

Product form	:	Mixture
Trade name	:	MASH REDOX
UFI	:	79YX-508J-P000-407S
EC-No.	:	240-795-3
CAS-No.	:	16731-55-8
Formula	:	K2S2O5
Product group	:	Blend

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

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer
BREWLINE
23-25 Avenue Ferdinand de Lesseps
ZA Actipolis
33610 CANEJAN - FRANCE
T +33557779292 - F +33556864002
contact@brewline.eu

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Belgium	Centre Anti-Poisons/Antigifcentrum c/o Hôpital Militaire Reine Astrid	Rue Bruyn 1 1120 Brussels	+32 70 245 245	Please dial: 070 245 245 for any urgent questions about intoxication (free of charge 24/7), if not accessible, dial: 02 264 96 30 (standard fee)
Bulgaria	Национален токсикологичен информационен център Многопрофилна болница за активно лечение и спешна медицина "Н.И.Пирогов"	бул. Ген. Едуард И. Тотлебен 21 1606 София	+359 2 9154 233	

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	Giftlinjen	Bispebjerg Bakke 23 Opgang 20 C 2400 København NV	+45 82 12 12 12	
France	ORFILA		+33 1 45 42 59 59	This number provides contact details for all French Poison Control centers. These poison and toxicovigilance centers provide free medical assistance (excluding call costs), 24 hours a day, 7 days a week.
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	
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital Msida MSD 2090 Msida	+356 2545 6508	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital MSD Msida	+356 2545 6504	

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	
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	
Sweden	Giftinformationscentralen	Solna Strandväg 21 171 54 Solna	112 – begär Giftinformation	
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

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 1 H318

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

Adverse physicochemical, human health and environmental effects

Causes serious eye irritation. Causes serious eye damage.

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS05

Signal word (CLP) : Danger

Hazard statements (CLP) : H318 - Causes serious eye damage.

Precautionary statements (CLP) : P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

EUH-statements : EUH031 - Contact with acids liberates toxic gas.

2.3. Other hazards

Other hazards which do not result in classification : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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 metabisulphite - E224 substance with a Community workplace exposure limit	(CAS-No.) 16731-55-8 (EC-No.) 240-795-3 (REACH-no) 01-2119537422-45	40 – 60	Eye Dam. 1, H318

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.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove person to fresh air and keep comfortable for breathing. If unconscious place in recovery position and seek medical advice. Loosen tight clothing such as a collar, tie, belt or waistband. Apply artificial respiration if breathing stopped. Immediately consult a doctor/medical service. If experiencing respiratory symptoms: Call a poison center or a doctor.

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. Rinse immediately with plenty of water for 15 minutes. Immediately consult a doctor/medical service. Wash contaminated clothing before reuse. 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. Rinse cautiously with water for several minutes. Call a physician immediately.

First-aid measures after ingestion : If swallowed, rinse mouth with water (only if the person is conscious). Remove person to fresh air and keep comfortable for breathing. Never attempt to induce vomiting : risk of inhalation. Give water to drink if victim completely conscious/alert. Never give anything by mouth to an unconscious person. If unconscious place in recovery position and seek medical advice. Loosen tight clothing such as a collar, tie, belt or waistband. 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 : None under normal conditions.

Symptoms/effects after eye contact : Eye irritation. Serious damage to eyes.

Symptoms/effects after ingestion : If swallowed, risk of formation of sulphur dioxide by reaction with gastric acid. Gastrointestinal complaints.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : If there is a fire close by, use suitable extinguishing agents. carbon dioxide (CO_2), powder, alcohol-resistant foam, water spray. Water spray. Dry powder. Foam.

Unsuitable extinguishing media : Do not use water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard : In case of fire and/or explosion do not breathe fumes.

Reactivity in case of fire : The product is non-combustible.

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. Thermal decomposition generates : Toxic fumes may be released. Sulphur dioxide. Sulphur oxides.

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.

6.1.1. For non-emergency personnel

Protective equipment	:	Wear personal protective equipment.
Emergency procedures	:	Ventilate spillage area. Do not touch or walk on the spilled product. Avoid contact with skin and eyes.
Measures in case of dust release	:	Avoid dust formation.

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

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

Methods for cleaning up	:	Mechanically recover the product. Contain leaking substance, pump over in suitable containers. Shovel into suitable and closed container for disposal. Clean contaminated surfaces with an excess of water. Notify authorities if product enters sewers or public waters.
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 : Avoid dust formation. Ensure good ventilation of the work station. Local exhaust is recommended where dust may occur. Avoid contact with skin and eyes. Wear recommended personal protective equipment. Store tightly closed in a dry and cool place. Wear personal protective equipment.

Hygiene measures : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Always wash hands after handling the product. Take off immediately all contaminated clothing and wash it before reuse.

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. Keep container tightly closed to prevent moisture pick-up. Store in a dry, cool place. Keep out of direct sunlight. Store in a well-ventilated place. Keep cool.

Incompatible products : Strong acids, strong oxidants. SODIUM NITRATE. Sodium nitrite. Sodium sulfide.

Heat and ignition sources : Keep away from ignition sources (including static discharges).

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

MASH REDOX (16731-55-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	≈ 0.5 ppm (SO2)
IOEL STEL	≈ 1 ppm (SO2)
Remark	SO2
France - Occupational Exposure Limits	
Local name	Dioxyde de soufre (CAS: 7446-09-5)
VME (OEL TWA)	≈ 5 mg/m³
	≈ 2 ppm
VLE (OEL C/STEL)	≈ 10 mg/m³
	≈ 5 ppm
Remark	Limite donnée à titre indicative

MASH REDOX (16731-55-8)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL STEL	0.25 ppm (SO2)
Remark (ACGIH)	SO2

Potassium metabisulphite - E224 (16731-55-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	≈ 0.5 ppm (SO2)
IOEL STEL	≈ 1 ppm (SO2)
Remark	SO2
France - Occupational Exposure Limits	
Local name	Dioxyde de soufre (CAS: 7446-09-5)
VME (OEL TWA)	≈ 5 mg/m³
	≈ 2 ppm
VLE (OEL C/STEL)	≈ 10 mg/m³
	≈ 5 ppm
Remark	Limite donnée à titre indicative
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL STEL	0.25 ppm (SO2)
Remark (ACGIH)	SO2

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

MASH REDOX (16731-55-8)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, inhalation	263 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	10 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	78 mg/m³
Long-term - local effects, inhalation	78 mg/m³

DNEL/DMEL (additional information)	
Additional information	Use engineering controls to keep exposures below the OEL or DNEL
PNEC (Water)	
PNEC aqua (freshwater)	1.17 mg/l
PNEC aqua (marine water)	0.12 mg/l
PNEC (STP)	
PNEC sewage treatment plant	88.1 mg/l

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. Avoid dust formation. 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:			
Use eye protection according to EN 166, designed to protect against powders and dusts. Safety glasses with side shields. Safety glasses			
Type	**Field of application**	**Characteristics**	**Standard**
Safety glasses	Dust	With side shields	EN 166

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Type	Standard
Chemically resistant protective gloves	EN 374

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					
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**	**Standard**
Chemically resistant protective gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0.4		EN 420, EN ISO 374
Chemically resistant protective gloves	Chloroprene rubber (CR)	6 (> 480 minutes)	0.5		EN 420, EN ISO 374
Chemically resistant protective gloves	Butyl rubber	6 (> 480 minutes)	0.7		EN 420, EN ISO 374

Other skin protection Materials for protective clothing:
Wear suitable protective clothing. Long sleeved protective clothing. acid resistant clothing. Splash guard. EN 14605. Dust protection. EN ISO 13982

8.2.2.3. Respiratory protection

Respiratory protection:			
No special protection required where adequate ventilation is maintained. Wear suitable respiratory equipment in case of insufficient ventilation. EN 143. EN 149			
Device	**Filter type**	**Condition**	**Standard**
Dust mask	Type P1	Dust protection, Short term exposure	EN 149, EN 143
Aerosol mask	ABEK-P3	High dust protection, Mist formation, Long term exposure, Dust protection	EN 14387

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	:	Solid
Colour	:	white.
Appearance	:	Crystals. Powder.
Odour	:	characteristic.
Odour threshold	:	Not available
Melting point	:	> 150 °C
Freezing point	:	Not applicable
Boiling point	:	Not available
Flammability	:	Non flammable.
Oxidising properties	:	Non oxidizing.
Explosive limits	:	Not applicable
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	> 150 °C 1.013 hPa
pH	:	Not available
pH solution	:	3.5 – 4.5 5% - 20°C
Viscosity, kinematic	:	Not applicable
Solubility	:	Water: ≈ 450 g/l 20°C
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Partition coefficient n-octanol/water (Log Pow)	:	≈ -4
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	1.1 – 1.3 kg/m³ 20°C
Relative density	:	2.3 Type: 'relative density' Temp.: 20 °C
Relative vapour density at 20°C	:	Not applicable
Particle size	:	Not available
Particle size distribution	:	Not available
Particle shape	:	Not available
Particle aspect ratio	:	Not available
Particle aggregation state	:	Not available
Particle agglomeration state	:	Not available
Particle specific surface area	:	Not available
Particle dustiness	:	Not available

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.

10.3. Possibility of hazardous reactions

Can react with. Nitrites. Nitrates. Oxidation agents.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Avoid contact with hot surfaces. Heat. flames or sparks. Moisture.

10.5. Incompatible materials

Oxidizing agents and strong acids. Nitrites. Nitrates.

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)
(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)
(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)
(Based on available data, the classification criteria are not met)

MASH REDOX (16731-55-8)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal	> 2000 mg/kg

LC50 Inhalation - Rat	> 5.5 mg/l air Animal: rat, Animal sex: male, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Potassium metabisulphite - E224 (16731-55-8)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal	> 2000 mg/kg
LC50 Inhalation - Rat	> 5.5 mg/l/4h Animal: rat, Animal sex: male, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation : Not irritating to skin (Based on available data, the classification criteria are not met)

Serious eye damage/irritation : Severe eye irritation

Additional information : Causes serious eye damage.

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met) (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) (Based on available data, the classification criteria are not met)

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

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

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met)

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met)

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

MASH REDOX (16731-55-8)	
Viscosity, kinematic	Not applicable

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life. Prevent liquid from entering sewers, watercourses, underground or low areas.

Hazardous to the aquatic environment, short–term (acute) : Not classified (Based on available data, the classification criteria are not met) (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) (Based on available data, the classification criteria are not met)

MASH REDOX (16731-55-8)	
LC50 - Fish [1]	464 – 1000 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	89 mg/l Test organisms (species): Daphnia magna
EC50 - Other aquatic organisms [1]	65 mg/l 17h - Bacteria
EC50 72h - Algae [1]	43.8 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
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'
NOEC chronic algae	> 10 mg/l Daphnia magna

Potassium metabisulphite - E224 (16731-55-8)	
LC50 - Fish [1]	464 – 1000 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	89 mg/l Test organisms (species): Daphnia magna
EC50 - Other aquatic organisms [1]	65 mg/l 17h - Bacteria
EC50 72h - Algae [1]	43.8 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
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'
NOEC chronic algae	> 8.41 mg/l Daphnia magna

12.2. Persistence and degradability

MASH REDOX (16731-55-8)	
Persistence and degradability	Mineral. Not biodegradable.
Chemical oxygen demand (COD)	0.14 g O_2/g substance

Potassium metabisulphite - E224 (16731-55-8)	
Persistence and degradability	Mineral. Not biodegradable.
Chemical oxygen demand (COD)	0.14 g O_2/g substance

12.3. Bioaccumulative potential

MASH REDOX (16731-55-8)	
Partition coefficient n-octanol/water (Log Pow)	≈ -4
Bioaccumulative potential	There is no bioaccumulation.

Potassium metabisulphite - E224 (16731-55-8)	
Partition coefficient n-octanol/water (Log Pow)	≈ -4
Bioaccumulative potential	There is no bioaccumulation.

12.4. Mobility in soil

MASH REDOX (16731-55-8)	
Additional information	Not volatile

Potassium metabisulphite - E224 (16731-55-8)	
Additional information	Not volatile

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 : No other effects known,Do not allow to enter drains or water courses

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 : Do not flush into surface water or sewer system.

Product/Packaging disposal recommendations : Empty remaining contents. 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 applicable
UN-No. (IMDG)	:	Not applicable
UN-No. (IATA)	:	Not applicable
UN-No. (ADN)	:	Not applicable
UN-No. (RID)	:	Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	:	Not applicable
Proper Shipping Name (IMDG)	:	Not applicable
Proper Shipping Name (IATA)	:	Not applicable
Proper Shipping Name (ADN)	:	Not applicable
Proper Shipping Name (RID)	:	Not applicable

14.3. Transport hazard class(es)

ADR

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

IMDG

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

IATA

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

ADN

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

RID

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

14.4. Packing group

Packing group (ADR)	:	Not applicable
Packing group (IMDG)	:	Not applicable
Packing group (IATA)	:	Not applicable
Packing group (ADN)	:	Not applicable
Packing group (RID)	:	Not applicable

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 applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

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

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)

15.1.2. National regulations

France	
Occupational diseases	
Code	**Description**
RG 66	Occupational rhinitis and asthma

Germany

Water hazard class (WGK)	:	WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1)
Hazardous Incident Ordinance (12. BImSchV)	:	Is not subject to 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

Switzerland

Storage class (LK)	:	NG - Non-hazardous
Chemicals Ordinance (ChemV, SR 813.11)	:	Group 2

15.2. Chemical safety assessment

A chemical safety assessment has been carried out

For the following substances of this mixture a chemical safety assessment has been carried out
Potassium metabisulphite - E224

SECTION 16: Other information

Indication of changes:

Revision - See : *.

Section	Changed item	Change	Comments
4.1	First-aid measures general	Modified	
4.1	First-aid measures after inhalation	Modified	
4.1	First-aid measures after skin contact	Added	
4.1	First-aid measures after ingestion	Modified	
5.3	Other information	Modified	
6.3	Methods for cleaning up	Modified	
7.1	Hygiene measures	Added	
8.1	DNEL/DMEL (additional information)	Added	
10.4	Conditions to avoid	Modified	

Abbreviations and acronyms:	
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 disruptor

Full text of H- and EUH-statements:	
EUH031	Contact with acids liberates toxic gas.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H318	Causes serious eye damage.

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.