SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Creation Date 04-Feb-2010 **Revision Date** 30-Nov-2024 **Revision Number** 6

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Description:	**Oxone®, monopersulfate**
Cat No. :	**89892**
Synonyms	Oxone; Potassium monopersulfate; Potassium monopersulfate triple salt
CAS No	70693-62-8
EC No	274-778-7
Molecular Formula	H3 K5 O18 S4
REACH registration number	-

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

Recommended Use	Laboratory chemicals.
Uses advised against	No Information available

1.3. Details of the supplier of the safety data sheet

Company

Thermo Fisher (Kandel) GmbH
Erlenbachweg 2, 76870 Kandel, Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300

Swiss distributor - Fisher Scientific AG
Neuhofstrasse 11, CH 4153 Reinach
Tel: +41 (0) 56 618 41 11
https://www.fishersci.ch/ch/en/customer-help-support/forms/email-us.html

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
CHEMTREC Tel. No.**US:**001-800-424-9300 / **Europe:**001-703-527-3887

customers in Switzerland:
Tox Info Suisse Emergency Number: **145 (24hr)**
Tox Info Suisse: +41-44 251 51 51 (Emergency number from abroad)
Chemtrec (24h) Toll-Free: 0800 564 402
Chemtrec Local: +41-43 508 20 11 (Zurich)

Poison Centre - Emergency information services

Ireland : National Poisons Information Centre (NPIC) - **01 809 2166** (8am-10pm, 7 days a week)
Malta : +356 2395 2000
Cyprus : +357 2240 5611

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

Based on available data, the classification criteria are not met

Health hazards

Acute oral toxicity	Category 4 (H302)
Acute Inhalation Toxicity - Dusts and Mists	Category 4 (H332)
Skin Corrosion/Irritation	Category 1 A (H314)
Serious Eye Damage/Eye Irritation	Category 1 (H318)
Respiratory Sensitization	Category 1 (H334)
Skin Sensitization	Category 1 (H317)

Environmental hazards

Chronic aquatic toxicity	Category 3 (H412)

Full text of Hazard Statements: see section 16

2.2. Label elements

Signal Word **Danger**

Hazard Statements

H302 + H332 - Harmful if swallowed or if inhaled
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements

P280 - Wear protective gloves/protective clothing/eye protection/face protection
P284 - Wear respiratory protection
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician

2.3. Other hazards

This product does not contain any known or suspected endocrine disruptors

Section 3: Composition/information on ingredients

3.2. Mixtures

Component	CAS No	EC No	Weight %	CLP Classification - Regulation (EC) No 1272/2008
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2)	70693-62-8	EEC No. 274-778-7	>85	Acute Tox. 4 (H302) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Aquatic Chronic 3 (H412)
Potassium pyrosulfate	7790-62-7	EEC No. 232-216-8	<5	Acute Tox. 3 (H331) Skin Corr. 1A (H314) Eye Dam. 1 (H318) EUH071
Dipotassium peroxodisulphate	7727-21-1	EEC No. 231-781-8	<5	Ox. Sol. 3 (H272) Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Skin Sens. 1 (H317) Eye Irrit. 2 (H319) Resp. Sens. 1 (H334) STOT SE 3 (H335)
Potassium hydrogen sulfate	7646-93-7	EEC No. 231-594-1	<5	Skin Corr. 1B (H314) Eye Dam. 1 (H318) STOT SE 3 (H335)

REACH registration number	-

Full text of Hazard Statements: see section 16

Section 4: First aid measures

4.1. Description of first aid measures

General Advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing.

Skin Contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.

Ingestion Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. Call a physician or poison control center immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Self-Protection of the First Aider Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

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

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

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

Notes to Physician Treat symptomatically.

Section 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media
CO_2, dry chemical, dry sand, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons
Do not use water jetstream.

5.2. Special hazards arising from the substance or mixture

The product causes burns of eyes, skin and mucous membranes. Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.).

Hazardous Combustion Products
Carbon monoxide (CO), Carbon dioxide (CO_2), Sulfur oxides, Potassium oxides.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing.

6.2. Environmental precautions

Should not be released into the environment. Do not allow material to contaminate ground water system. See Section 12 for additional Ecological Information. Avoid release to the environment. Collect spillage. Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

Section 7: Handling and storage

7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from clothing and other combustible materials.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Corrosives area. Store under an inert atmosphere. Protect from moisture.

Technical Rules for Hazardous Substances (TRGS) 510 Storage Class (LGK) (Germany) Storage Class/LGK 8B

Switzerland - Storage of hazardous substances Storage class - SC 8
https://www.kvu.ch/de/themen/stoffe-und-produkte
https://www.kvu.ch/fr/themes/substances-et-produits
https://www.kvu.ch/it/temi/sostanze-e-prodotti

7.3. Specific end use(s)

Use in laboratories

Section 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits
List source(s): **IRE -** 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority.

Component	European Union	The United Kingdom	France	Belgium	Spain
Dipotassium peroxodisulphate				TWA: 0.1 mg/m³ 8 uren	TWA / VLA-ED: 0.1 mg/m³ (8 horas)

Component	Italy	Germany	Portugal	The Netherlands	Finland
Dipotassium peroxodisulphate			TWA: 0.1 mg/m³ 8 horas		

Component	Austria	Denmark	Switzerland	Poland	Norway
Dipotassium peroxodisulphate		TWA: 2 mg/m³ 8 timer STEL: 4 mg/m³ 15 minutter		TWA: 0.1 mg/m³ 8 godzinach	TWA: 2 mg/m³ 8 timer

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Dipotassium peroxodisulphate			TWA: 0.1 mg/m³ 8 hr. STEL: 0.3 mg/m³ 15 min		

Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Dipotassium peroxodisulphate					TWA: 2 mg/m³ 8 klukkustundum. S2O8 Ceiling: 4 mg/m³ S2O8

Biological limit values
This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring methods
BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)
Workers; See table for values

Component	Acute effects local (Oral)	Acute effects systemic (Oral)	Chronic effects local (Oral)	Chronic effects systemic (Oral)
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2) 70693-62-8 (>85)		10 mg/kg		

Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2) 70693-62-8 (>85)	DNEL = 0.449mg/cm2	DNEL = 80mg/kg bw/day		DNEL = 20mg/kg bw/day
Dipotassium peroxodisulphate 7727-21-1 (<5)	DNEL = 2.248mg/cm2	DNEL = 400mg/kg bw/day	DNEL = 0.102mg/cm2	DNEL = 18.2mg/kg bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2) 70693-62-8 (>85)	DNEL = 50mg/m^3	DNEL = 50mg/m^3	DNEL = 0.28mg/m^3	DNEL = 0.28mg/m^3
Potassium pyrosulfate 7790-62-7 (<5)	DNEL = 0.26mg/m^3	DNEL = 0.26mg/m^3	DNEL = 0.13mg/m^3	DNEL = 0.13mg/m^3
Dipotassium peroxodisulphate 7727-21-1 (<5)		DNEL = 590mg/m^3	DNEL = 2.06mg/m^3	DNEL = 2.06mg/m^3

Predicted No Effect Concentration (PNEC)
See values below.

Component	Fresh water	Fresh water sediment	Water Intermittent	Microorganisms in sewage treatment	Soil (Agriculture)
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2) 70693-62-8 (>85)	PNEC = 0.022mg/L	PNEC = 0.0782mg/kg sediment dw	PNEC = 0.0109mg/L	PNEC = 108mg/L	PNEC = 1mg/kg soil dw
Potassium pyrosulfate 7790-62-7 (<5)	PNEC = 0.68mg/L	PNEC = 2.5mg/kg sediment dw	PNEC = 6.8mg/L	PNEC = 800mg/L	PNEC = 0.092mg/kg soil dw
Dipotassium peroxodisulphate 7727-21-1 (<5)	PNEC = 0.0763mg/L	PNEC = 0.275mg/kg sediment dw	PNEC = 0.763mg/L	PNEC = 3.6mg/L	PNEC = 0.015mg/kg soil dw

Component	Marine water	Marine water sediment	Marine water Intermittent	Food chain	Air
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2) 70693-62-8 (>85)	PNEC = 0.00222mg/L	PNEC = 0.00796mg/kg sediment dw		PNEC = 44.44mg/kg food	
Potassium pyrosulfate 7790-62-7 (<5)	PNEC = 0.068mg/L	PNEC = 0.25mg/kg sediment dw			
Dipotassium peroxodisulphate 7727-21-1 (<5)	PNEC = 0.011mg/L	PNEC = 0.0396mg/kg sediment dw			

8.2. Exposure controls

Engineering Measures
Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.
Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection Goggles (European standard - EN 166)

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Butyl rubber	See manufacturers recommendations	-	EN 374	(minimum requirement)

Skin and body protection Long sleeved clothing.

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

Respiratory Protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Large scale/emergency use Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced
Recommended Filter type: Particulates filter conforming to EN 143

Small scale/Laboratory use Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141
When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls Prevent product from entering drains.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State	Solid	
Appearance	White	
Odor	Odorless	
Odor Threshold	No data available	
Melting Point/Range	No information available	
Softening Point	No data available	
Boiling Point/Range	No information available	
Flammability (liquid)	Not applicable	Solid
Flammability (solid,gas)	No information available	
Explosion Limits	No data available	
Flash Point	No information available	**Method -** No information available
Autoignition Temperature	No data available	
Decomposition Temperature	>70 °C	
pH	2-3	10 g/L aq.sol
Viscosity	Not applicable	Solid
Water Solubility	298 g/L (20°C)	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Component	**log Pow**	
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2)	<0.3	
Vapor Pressure	negligible	
Density / Specific Gravity	No data available	
Bulk Density	No data available	
Vapor Density	Not applicable	Solid
Particle characteristics	No data available	

9.2. Other information

Molecular Formula	H3 K5 O18 S4
Molecular Weight	614.78
Oxidizing Properties	Oxidizer
Evaporation Rate	Not applicable - Solid

Section 10: Stability and reactivity

10.1. Reactivity

None known, based on information available

10.2. Chemical stability

Hygroscopic. Oxidizer: Contact with combustible/organic material may cause fire.

10.3. Possibility of hazardous reactions

Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

10.4. Conditions to avoid

Incompatible products. Excess heat. Combustible material. Avoid dust formation. Exposure to moist air or water.

10.5. Incompatible materials

Strong oxidizing agents. Strong reducing agents. Combustible material.

10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO_2). Sulfur oxides. Potassium oxides.

Section 11: Toxicological information

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

Product Information

(a) acute toxicity;

Oral	Category 4
Dermal	Based on available data, the classification criteria are not met
Inhalation	Category 4

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2)	1204 mg/kg (Rat)	> 11000 mg/kg (Rabbit)	> 14 mg/L (Rat) 1 h
Dipotassium peroxodisulphate	802 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	LC50 > 42.9 mg/L (Rat) 1 h
Potassium hydrogen sulfate	LD50 = 2340 mg/kg (Rat)	-	-

(b) skin corrosion/irritation; Category 1 A

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;

Respiratory	Category 1
Skin	Category 1

No information available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; Not applicable
Solid

Symptoms / effects,both acute and delayed Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

11.2. Information on other hazards

Endocrine Disrupting Properties Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity effects The product contains following substances which are hazardous for the environment. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Contains a substance which is:. Harmful to aquatic organisms.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2)	LC50: > 32 mg/L, 96h semi-static (Brachydanio rerio)		
Dipotassium peroxodisulphate	LC50: 100 mg/L/96h (P.reticulata)	EC50: 357 mg/L/24H (Daphnia magna)	

Component	Microtox	M-Factor
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2)	EC50 = 179 mg/L 18 h	

12.2. Persistence and degradability

Persistence Soluble in water, Persistence is unlikely, based on information available.

Degradation in sewage treatment plant Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

12.3. Bioaccumulative potential

Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2)	<0.3	No data available

12.4. Mobility in soil

The product is water soluble, and may spread in water systems Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

12.5. Results of PBT and vPvB assessment

No data available for assessment.

12.6. Endocrine disrupting properties

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

Persistent Organic Pollutant This product does not contain any known or suspected substance

Ozone Depletion Potential This product does not contain any known or suspected substance

Section 13: Disposal considerations

13.1. Waste treatment methods

Waste from Residues/Unused Waste is classified as hazardous. Dispose of in accordance with the European Directives

Products	on waste and hazardous waste. Dispose of in accordance with local regulations.
Contaminated Packaging	Dispose of this container to hazardous or special waste collection point.
European Waste Catalogue (EWC)	According to the European Waste Catalog, Waste Codes are not product specific, but application specific.
Other Information	Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not flush to sewer. Large amounts will affect pH and harm aquatic organisms. Do not let this chemical enter the environment.
Switzerland - Waste Ordinance	Disposal should be in accordance with applicable regional, national and local laws and regulations. Ordinance on the Avoidance and the Disposal of Waste (Waste Ordinance, ADWO) SR 814.600 https://www.fedlex.admin.ch/eli/cc/2015/891/en

Section 14: Transport information

IMDG/IMO

14.1. UN number	UN3260
14.2. UN proper shipping name	Corrosive solid, acidic, inorganic, n.o.s.
Technical Shipping Name	Potassium peroxymonosulfate sulfate (K5(HSO3(O2))(SO3(O2))(HSO4)2)
14.3. Transport hazard class(es)	8
14.4. Packing group	II

ADR

14.1. UN number	UN3260
14.2. UN proper shipping name	Corrosive solid, acidic, inorganic, n.o.s.
Technical Shipping Name	Potassium peroxymonosulfate sulfate (K5(HSO3(O2))(SO3(O2))(HSO4)2)
14.3. Transport hazard class(es)	8
14.4. Packing group	II

IATA

14.1. UN number	UN3260
14.2. UN proper shipping name	Corrosive solid, acidic, inorganic, n.o.s.
Technical Shipping Name	Potassium peroxymonosulfate sulfate (K5(HSO3(O2))(SO3(O2))(HSO4)2)
14.3. Transport hazard class(es)	8
14.4. Packing group	II

14.5. Environmental hazards	No hazards identified
14.6. Special precautions for user	No special precautions required.
14.7. Maritime transport in bulk according to IMO instruments	Not applicable, packaged goods

Section 15: Regulatory information

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

International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2)	70693-62-8	274-778-7	-	-	X	X	KE-29181	-	-
Potassium pyrosulfate	7790-62-7	232-216-8	-	-	X	X	KE-12142	-	-
Dipotassium peroxodisulphate	7727-21-1	231-781-8	-	-	X	X	KE-12177	X	X
Potassium hydrogen sulfate	7646-93-7	231-594-1	-	-	X	X	KE-32642	X	X

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2)	70693-62-8	X	ACTIVE	X	-	X	X	X
Potassium pyrosulfate	7790-62-7	X	ACTIVE	X	-	X	X	X
Dipotassium peroxodisulphate	7727-21-1	X	ACTIVE	X	-	X	X	X
Potassium hydrogen sulfate	7646-93-7	X	ACTIVE	X	-	X	X	X

Legend: X - Listed '-' - Not Listed **KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2)	70693-62-8	-	-	-
Potassium pyrosulfate	7790-62-7	-	-	-
Dipotassium peroxodisulphate	7727-21-1	-	Use restricted. See entry 75. (see link for restriction details)	-
Potassium hydrogen sulfate	7646-93-7	-	Use restricted. See entry 75. (see link for restriction details)	-

REACH links
https://echa.europa.eu/substances-restricted-under-reach

Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2)	70693-62-8	Not applicable	Not applicable
Potassium pyrosulfate	7790-62-7	Not applicable	Not applicable
Dipotassium peroxodisulphate	7727-21-1	Not applicable	Not applicable
Potassium hydrogen sulfate	7646-93-7	Not applicable	Not applicable

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals
Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?
Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at

work .

National Regulations

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

WGK Classification Water endangering class = 1 (self classification)

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
Potassium peroxymonosulfate sulfate (K5H3(SO3(O2))2(SO4)2)	WGK1	
Dipotassium peroxodisulphate	WGK1	
Potassium hydrogen sulfate	WGK1	

Component	France - INRS (Tables of occupational diseases)
Dipotassium peroxodisulphate	Tableaux des maladies professionnelles (TMP) - RG 65,RG 66

Swiss Regulations
Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2).
Take note on Article 13 Maternity Ordinance (SR 822.111.52) with regards expectant and nursing mothers.

15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

Section 16: Other information

Full text of H-Statements referred to under sections 2 and 3
H302 - Harmful if swallowed
H332 - Harmful if inhaled
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H412 - Harmful to aquatic life with long lasting effects
H272 - May intensify fire; oxidizer
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H331 - Toxic if inhaled
H335 - May cause respiratory irritation
EUH071 - Corrosive to the respiratory tract

Legend

CAS - Chemical Abstracts Service
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japanese Existing and New Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit
ACGIH - American Conference of Governmental Industrial Hygienists
DNEL - Derived No Effect Level
RPE - Respiratory Protective Equipment
LC50 - Lethal Concentration 50%
TWA - Time Weighted Average
IARC - International Agency for Research on Cancer
Predicted No Effect Concentration (PNEC)
LD50 - Lethal Dose 50%
EC50 - Effective Concentration 50%

NOEC - No Observed Effect Concentration
PBT - Persistent, Bioaccumulative, Toxic
POW - Partition coefficient Octanol:Water
vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code
OECD - Organisation for Economic Co-operation and Development
BCF - Bioconcentration factor
ICAO/IATA - International Civil Aviation Organization/International Air Transport Association
MARPOL - International Convention for the Prevention of Pollution from Ships
ATE - Acute Toxicity Estimate
VOC - (volatile organic compound)

Key literature references and sources for data
https://echa.europa.eu/information-on-chemicals
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Physical hazards	On basis of test data
Health Hazards	Calculation method
Environmental hazards	Calculation method

Training Advice
Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.
Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.
First aid for chemical exposure, including the use of eye wash and safety showers.
Chemical incident response training.

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This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006 .

For Switzerland - Compiled in accordance with the technical provisions referred to in Annex 2, Number 3, ChemO (SR 813.11 - Ordinance on Protection against Dangerous Substances and Preparations).

Disclaimer

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End of Safety Data Sheet