



Creation Date 12-Oct-2009

Revision Date 27-Dec-2020

Revision Number 2

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

1.1. Product identifier

Product Description: Cat No. : CAS No EC No Molecular Formula	Drierite®, regular (CaSO4), Lab Grade 43056 7778-18-9 231-900-3 Ca O4 S
1.2. Relevant identified uses of the	substance or mixture and uses advised against
Recommended Use Uses advised against	Laboratory chemicals. No Information available
1.3. Details of the supplier of the sa	ifety 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 e-mail - infoch@thermofisher.com
E-mail address	tech@alfa.com www.alfa.com Product safety Tel + +049 (0) 7275 988687-0
<u>1.4. Emergency telephone number</u>	Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number) Poison Information Center Mainz www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240
	Exclusively for customers in Austria: Poison Information Center (VIZ) Emergency call 0-24 clock: +43 1 406 43 43 Office hours: Monday to Friday, 8am to 4pm, tel: +43 1 406 68 98
	For 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)

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 Based on available data, the classification criteria are not met

Environmental hazards Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

2.2. Label elements

Hazard Statements

Precautionary Statements

2.3. Other hazards

In accordance with Annex XIII of the REACH Regulation, inorganic substances do not require assessment

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Component	CAS No	EC No	Weight %	CLP Classification - Regulation (EC) No 1272/2008
Sulfuric acid, calcium salt (1:1)	7778-18-9	EEC No. 231-900-3	>95	-

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.			
Ingestion	Do NOT induce vomiting. Get medical attention.			
Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur. If not breathing, give artificial respiration.			
Self-Protection of the First Aider	No special precautions required.			
4.2. Most important symptoms and effects, both acute and delayed				

No information available.

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

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Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons No information available.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

Calcium oxides, Sulfur 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.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

6.2. Environmental precautions

Should not be released into the environment. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

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SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Avoid dust formation.

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.

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

Switzerland - Storage of hazardous substances

Storage Class/LGK 13

Storage class - SC 11/13 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. **CH** - The Government of Switzerland has set a directive on limit values for working materials (Grenzwerte am arbeitplatz) which is based on the Swiss Federal Regulation "Verordnung über die Verhütung von Unfällen und Berufskrankheiten". This directive is administered, periodically revised and enforced by SUVA (Swiss National Accident Insurance Fund).

Component	European Union	The United Kingdom	France	Belgium	Spain
Sulfuric acid, calcium			TWA / VME: 10 mg/m ³	TWA: 10 mg/m ³ 8 uren	TWA / VLA-ED: 10
salt (1:1)			(8 heures).	_	mg/m ³ (8 horas)
Component	Italy	Germany	Portugal	The Netherlands	Finland
Sulfuric acid, calcium		TWA: 6 mg/m ³ (8	TWA: 10 mg/m ³ 8 horas		
salt (1:1)		Stunden). AGW -	_		
		TWA: 1.5 mg/m ³ (8			
		Stunden). MAK			
		TWA: 4 mg/m ³ (8			

Component	Austria	Denmark	Switzerland	Poland	Norway
Sulfuric acid, calcium	MAK-KZGW: 10 mg/m ³		TWA: 3 mg/m ³ 8	TWA: 10 mg/m ³ 8	
salt (1:1)	15 Minuten		Stunden	godzinach	
	MAK-TMW: 5 mg/m ³ 8				
	Stunden				

Stunden). MAK

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Sulfuric acid, calcium	TWA: 10.0 mg/m ³		TWA: 10 mg/m ³ 8 hr.		

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salt (1:1)			STEL: 30 mg/m ³ 15 m	nin	
Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Sulfuric acid, calcium salt (1:1)				TWA: 4 mg/m ³ 8 órában. AK TWA: 1.5 mg/m ³ 8 órában. AK	

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Sulfuric acid, calcium	TWA: 4 mg/m ³				
salt (1:1)	_				

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Sulfuric acid, calcium salt (1:1)		TWA: 4 mg/m ³ inhalable fraction TWA: 1.5 mg/m ³	TWA: 6 mg/m ³ 8 urah respirable fraction		

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)

See table for values

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Sulfuric acid, calcium salt (1:1) 7778-18-9 (>95)		DNEL = 5082mg/m ³		DNEL = 21.17mg/m ³

Predicted No Effect Concentration (PNEC)

See values below.

Component	Fresh water	Fresh water	Water Intermittent	Microorganisms in	Soil (Agriculture)
		sediment		sewage treatment	
Sulfuric acid, calcium salt				PNEC = 100mg/L	
(1:1)					
7778-18-9 (>95)					

8.2. Exposure controls

Engineering Measures

None under normal use conditions.

Personal protective equipment

Eye Protection

Wear safety glasses with side shields (or goggles) (European standard - EN 166)

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Hand Protection	Protectiv	ve gloves		
Glove material Natural rubber Nitrile rubber Neoprene PVC	Breakthrough time See manufacturers recommendations	Glove thickness	EU standard EN 374	Glove comments (minimum requirement)
Skin and body prot	ection Wear ap	propriate protective g	ploves and clothing to p	prevent skin exposure.

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	No protective equipment is needed under normal use conditions.
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: Particle filter
Small scale/Laboratory use	Maintain adequate ventilation

Environmental exposure controls N

No information available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State	Solid	
Appearance Odor Odor Threshold Melting Point/Range Softening Point Boiling Point/Range Flammability (liquid) Flammability (solid,gas) Explosion Limits	No information available Odorless No data available 1450 °C / 2642 °F No data available No information available Not applicable No information available No data available	Solid
Flash Point Autoignition Temperature Decomposition Temperature pH	No information available No data available No data available No information available	Method - No information available
Viscosity Water Solubility Solubility in other solvents	Not applicable Slightly soluble No information available	Solid
Partition Coefficient (n-octanol/wa	•	
Component Sulfuric acid, calcium salt (1:1) Vapor Pressure Density / Specific Gravity Bulk Density Vapor Density Particle characteristics	log Pow -0.2 No data available No information available No data available Not applicable No data available	Solid

9.2. Other information

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Molecular Formula Molecular Weight Evaporation Rate Ca O4 S 136.14 Not applicable - Solid

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity	None known, based on information available
10.2. Chemical stability	Hygroscopic.
10.3. Possibility of hazardous reaction	ons
Hazardous Polymerization Hazardous Reactions	Hazardous polymerization does not occur. None under normal processing.
10.4. Conditions to avoid	Incompatible products. Excess heat. Avoid dust formation. Exposure to moisture.
10.5. Incompatible materials	Strong oxidizing agents. Strong acids.

10.6. Hazardous decomposition products

Calcium oxides. Sulfur oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

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

Product Information

(a) acute toxicity;

OralBased on available data, the classification criteria are not metDermalNo data availableInhalationNo data available

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation		
Sulfuric acid, calcium salt (1:1)	> 3000 mg/kg (Rat)	-	LC50 > 3.26 mg/L (Rat) 4 h		

(b) skin corrosion/irritation; No data available

- (c) serious eye damage/irritation; No data available
- (d) respiratory or skin sensitization; Respiratory No data available
 - Skin No data 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; Target Organs	No data available No information available.
(j) aspiration hazard;	Not applicable Solid
Other Adverse Effects	The toxicological properties have not been fully investigated.
Symptoms / effects,both acute and delayed	No information available.

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

Do not empty into drains. .

Component	Freshwater Fish	Water Flea	Freshwater Algae
Sulfuric acid, calcium salt (1:1)	Lepomis macrochirus: LC50:	EC50: 3200 mg/L/120H	
	2.98 mg/L/96H		

<u>12.2. Persistence and degradability</u> Persistence Degradability	Persistence is unlikely. Not relevant for inorganic substances.					
12.3. Bioaccumulative potential	Bioaccumulation is unlikely					
Component	log Pow	Bioconcentration factor (BCF)				
Sulfuric acid, calcium salt (1:1)	-0.2	No data available				
<u>12.4. Mobility in soil</u>	The product is water soluble, and may spread in water systems . Will likely be mobile in th environment due to its water solubility. Is not likely mobile in the environment due its low water solubility. Highly mobile in soils					
<u>12.5. Results of PBT and vPvB</u> assessment	In accordance with Annex XIII of the REACH Regulation, inorganic substances do not require assessment.					
<u>12.6. Endocrine disrupting</u> properties Endocrine Disruptor Information	This product does not contain any known or su	spected endocrine disruptors				

12.7. Other adverse effects Persistent Organic Pollutant Ozone Depletion Potential

This product does not contain any known or suspected substance This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues/Unused Products	Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.
Contaminated Packaging	Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use empty containers.
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.
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	Not regulated
<u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> <u>14.3. Transport hazard class(es)</u> <u>14.4. Packing group</u>	
ADR	Not regulated
<u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> <u>14.3. Transport hazard class(es)</u> <u>14.4. Packing group</u>	
IATA	Not regulated
<u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> <u>14.3. Transport hazard class(es)</u> <u>14.4. Packing group</u>	
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
Sulfuric acid, calcium salt (1:1)	7778-18-9	231-900-3	-	-	Х	Х	KE-04614	Х	Х
Component	CAS No	TSCA	TSCA In	ventory	DSL	NDSL	AICS	NZIoC	PICCS

			notification - Active-Inactive	-	_			
Sulfuric acid, calcium salt (1:1)	7778-18-9	Х	ACTIVE	Х	-	Х	Х	Х

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

1	Component	CAS No	Seveso III Directive (2012/18/EC) -	· · · · · · · · · · · · · · · · · · ·
			Qualifying Quantities for Major Accident Notification	Qualifying Quantities for Safety Report Requirements
	Sulfuric acid, calcium salt (1:1)	7778-18-9	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

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

See table for values

Component	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Sulfuric acid, calcium salt (1:1)	WGK1	

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

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

Legend		
CAS - Chemical Abstracts Service	TSCA - United States Toxic Substances Control Act Section 8(b) Inventory	
EINECS/ELINCS - European Inventory of Existing Commercial Chemica Substances/EU List of Notified Chemical Substances		
PICCS - Philippines Inventory of Chemicals and Chemical Substances	ENCS - Japanese Existing and New Chemical Substances	
IECSC - Chinese Inventory of Existing Chemical Substances	AICS - Australian Inventory of Chemical Substances	
KECL - Korean Existing and Evaluated Chemical Substances	NZIOC - New Zealand Inventory of Chemicals	
WEL - Workplace Exposure Limit	TWA - Time Weighted Average	
ACGIH - American Conference of Governmental Industrial Hygienists	IARC - International Agency for Research on Cancer	
DNEL - Derived No Effect Level	Predicted No Effect Concentration (PNEC)	
RPE - Respiratory Protective Equipment	LD50 - Lethal Dose 50%	
LC50 - Lethal Concentration 50% NOEC - No Observed Effect Concentration	EC50 - Effective Concentration 50% POW - Partition coefficient Octanol:Water	
PBT - Persistent, Bioaccumulative, Toxic	vPvB - very Persistent, very Bioaccumulative	
ADR - European Agreement Concerning the International Carriage of	ICAO/IATA - International Civil Aviation Organization/International Air	
Dangerous Goods by Road IMO/IMDG - International Maritime Organization/International Maritime	Transport Association MARPOL - International Convention for the Prevention of Pollution from	
Dangerous Goods Code	Ships	
OECD - Organisation for Economic Co-operation and Development	ATE - Acute Toxicity Estimate	
BCF - Bioconcentration factor	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, F	RTECS	

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Prepared By Creation Date Revision Date Revision Summary Health, Safety and Environmental Department 12-Oct-2009 27-Dec-2020 Not applicable.

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

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet