Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 15.05.2024 Version number 24 (replaces version 23) Revision: 15.05.2024

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

· **1.1 Product identifier**

· **Product name: Sulfate No.1**

· **Catalog number:** 00515221, 505291, 515220BT, SDT612, 00515229BT, 00505291

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

· **Application of the substance / the preparation:** Reagent for water analysis

· **1.3 Details of the supplier of the safety data sheet**

· **Supplier:**
Tintometer GmbH
Schleefstraße 8-12
44287 Dortmund
Made in Germany
www.lovibond.com
phone: +49 (0)231 94510-0
e-mail: sales@lovibond.com

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom
phone : +44 1980 664800
e-mail: SDS@lovibond.uk

· **Informing department:**
e-mail: sds@lovibond.com
Product Safety Department

· **1.4 Emergency telephone number:**
+44 1235 239670
Languages: English

*
SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

GHS08 health hazard

Repr. 2 H361d Suspected of damaging the unborn child.

GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

GHS07

Acute Tox. 4 H302 Harmful if swallowed.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.

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· **Hazard pictograms**

GHS05 GHS07 GHS08

· **Signal word** Danger
· **Hazard-determining components of labelling:**
barium chloride dihydrate
salicylic acid
· **Hazard statements**
H302 Harmful if swallowed.
H318 Causes serious eye damage.
H361d Suspected of damaging the unborn child.
· **Precautionary statements**
P280 Wear protective gloves/protective clothing/eye protection.
P201 Obtain special instructions before use.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.

· **2.3 Other hazards** No further relevant information available.

· **Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

· **Determination of endocrine-disrupting properties**			
CAS: 69-72-7	salicylic acid	List II; III	20–30%

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of organic and inorganic compounds

· **Dangerous components:**		
CAS: 10326-27-9 EINECS: 233-788-1 Index No: 056-004-00-8	barium chloride dihydrate Acute Tox. 3, H301; Acute Tox. 4, H332 ATE: LD50 oral: 100 mg/kg	20–30%
CAS: 69-72-7 EINECS: 200-712-3 Index No: 607-732-00-5	salicylic acid Repr. 2, H361d; Eye Dam. 1, H318; Acute Tox. 4, H302	20–30%

· **Additional information** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information** Instantly remove any clothing soiled by the product.
· **After inhalation** Supply fresh air and call for doctor for safety reasons.
· **After skin contact**
Instantly wash with water and soap and rinse thoroughly.
Get medical advice/attention.
· **After eye contact**
Rinse opened eye for several minutes (at least 15 min) under running water.
Call a doctor immediately.
· **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
Seek medical treatment.
· **4.2 Most important symptoms and effects, both acute and delayed:**
Irritation and corrosion
after inhalation:
mucosal irritations, cough, shortness of breath

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after swallowing:
irritations
sickness
vomiting
diarrhoea
dizziness
pain
respiratory paralysis
CNS disorders
cardiovascular disorders
· **Danger**
Danger of system failure.
Danger of disturbed cardiac rhythm.
· **4.3 Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
· **5.2 Special hazards arising from the substance or mixture**
The product is in tablet form not flammable.
mixture with combustible ingredients
Formation of toxic gases is possible during heating or in case of fire.
Can be released in case of fire:
Hydrogen chloride (HCl)
Carbon monoxide (CO) and carbon dioxide (CO_2)
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
· **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
· **Advice for non-emergency personnel:**
Wear protective equipment. Keep unprotected persons away.
Avoid substance contact.
Ensure adequate ventilation
· **Advice for emergency responders:** Protective equipment: see section 8

· **6.2 Environmental precautions:** Do not allow product to reach sewage system or water bodies.
· **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Collect mechanically.
Dispose of contaminated material as waste according to item 13.
· **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
· **Advice on safe handling:** Provide suction extractors if dust is formed.
· **Hygiene measures:**
Do not get in eyes, on skin, or on clothing.
Take off immediately all contaminated clothing.
Store protective clothing separately.
Wash hands during breaks and at the end of the work.

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Do not eat, drink or smoke when using this product.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Requirements to be met by storerooms and containers:** Store in cool location.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Store in a locked cabinet or with access restricted to technical experts or their assistants.
Store in cool, dry conditions in well sealed containers.
Protect from heat and direct sunlight.
Protect from the effects of light.
Protect from humidity and keep away from water.
· **Recommended storage temperature:** 20°C +/- 5°C

· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
CAS: 9004-34-6 cellulose	
WEL (Great Britain)	Short-term value: 20* mg/m³ Long-term value: 10* 4** mg/m³ *inhalable dust **respirable
CAS: 10326-27-9 barium chloride dihydrate	
WEL (Great Britain)	Long-term value: 0.5 mg/m³ as Ba
IOELV (European Union)	Long-term value: 0.5 mg/m³ as Ba

· **Regulatory information**
WEL (Great Britain): EH40/2020
IOELV (European Union): (EU) 2019/1831
· **Recommended monitoring procedures:**
Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **8.2 Exposure controls**

· **Engineering measures:**
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See item 7.

· **Individual protection measures, such as personal protective equipment**
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
· **Eye/face protection** Tightly sealed safety glasses.
· **Hand protection**
Protective gloves.
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
· **Material of gloves**
nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
· **Penetration time of glove material**
Value for the permeation: Level = 1 (< 10 min)
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Other skin protection (body protection):** Protective work clothing.
· **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
· **Recommended filter device for short term use:** Filter P2

· **Environmental exposure controls** Do not allow product to reach sewage system or water bodies.

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **Physical state**	Solid.
· **Form:**	Tablets
· **Colour:**	White
· **Odour:**	Odourless
· **Odour threshold:**	Not applicable.
· **Melting point/Freezing point:**	Not determined.
· **Boiling point or initial boiling point and boiling range**	Not determined.
· **Flammability**	mixture with combustible ingredients
· **Explosive properties:**	The product is not capable of dust explosion in the form supplied; enrichment with fine dust causes risk of dust explosion
· **Lower and upper explosion limit**	
Lower:	Not determined.
Upper:	Not determined.
· **Flash point:**	157°C (CAS: 69-72-7 salicylic acid)
· **Auto-ignition temperature:**	Not applicable (solid).
· **Decomposition temperature:**	Not determined.
· **pH (1.9 g/l) at 20°C**	3
· **Kinematic viscosity**	Not applicable (solid).
· **Solubility**	
· **Water:**	Partially insoluble.
· **Partition coefficient n-octanol/water (log value)**	Not applicable (mixture).
· **Vapour pressure:**	Not applicable (solid).
· **Density and/or relative density**	
· **Density at 20°C:**	2.1 g/cm³
· **Relative density:**	Not determined.
· **Relative gas density**	Not applicable (solid).
· **Particle characteristics**	Not determined.
· **9.2 Other information**	
· **Information with regard to physical hazard classes**	
· **Corrosive to metals**	Void
· **Other safety characteristics**	
· **Oxidising properties:**	none
· **Additional information**	
· **Solids content:**	100.0 %

SECTION 10: Stability and reactivity

· **10.1 Reactivity** Dust can combine with air to form an explosive mixture.
· **10.2 Chemical stability**
Stable at ambient temperature (room temperature).
Loss of constitutional water on heating
· **10.3 Possibility of hazardous reactions**
Reacts with reducing agents
Reacts with strong oxidizing agents
Reacts with acids
furan-2-percarbonic acid
---> Explosive
· **10.4 Conditions to avoid** To avoid thermal decomposition do not overheat.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:**
Chlorine compounds
In case of fire: see section 5.

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SECTION 11: Toxicological information

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

· **Acute toxicity**
Classification according to calculation procedure:

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Harmful if swallowed.

· **Acute toxicity estimate ($ATE_{(MIX)}$) - Calculation method:**		
Oral	CLP $ATE_{(MIX)}$	345 mg/kg (.)

· **LD/LC50 values that are relevant for classification:**		
CAS: 10326-27-9 barium chloride dihydrate		
Oral	LD50	100 mg/kg (ATE) (for calculation)
		118 mg/kg (rat) (anhydrous - IUCLID)
Inhalative	LC50/4h	1.5 mg/l (ATE)
CAS: 69-72-7 salicylic acid		
Oral	LD50	891 mg/kg (rat) (GESTIS)
Dermal	LD50	>5000 mg/kg (rat) (GESTIS)
Inhalative	LC_0	>0.225 mg/l (rat) (4h (LC))
	LC50	>0.9 mg/l/1h (rat) (dust, aerosol) (Registrant, ECHA: no mortality at this dose)

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation**
Causes serious eye damage.
Risk of corneal clouding.
· **Information on components:**
CAS 10326-27-9: chronic: dermatitis

CAS: 69-72-7 salicylic acid		
Irritation of skin	OECD 404	(rabbit: slight irritation) (IUCLID)
Irritation of eyes	OECD 405	(rabbit: severe irritations) (IUCLID)

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Information on components:**
CAS 69-72-7: Sensitization possible in predisposed persons.

CAS: 69-72-7 salicylic acid		
Sensitisation	OECD 406	(negative) (IUCLID)

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Suspected of damaging the unborn child.

· **STOT (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
· **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

· **Additional toxicological information:**
CAS 10326-27-9: Absorption through gastro-intestinal tract, mucous membranes
Other dangerous properties can not be excluded.

CAS: 10326-27-9 barium chloride dihydrate
. (source: GESTIS) Main toxic effects: acute: Irritation of the mucous membranes, gastrointestinal complaints, hypokalemia, cardiac arrhythmia, muscle weakness, kidney damage. chronic: after repeated oral intake: kidney damage in animal experiments
CAS: 69-72-7 salicylic acid
. (source: GESTIS) Acute: Irritant to corrosive effect on the eyes, irritation of the skin and mucous membranes of the respiratory tract. and mucous membranes of the respiratory tract Effect on the respiratory centre, disturbance of basic metabolic processes and the central nervous system Chronic: Disorders of the gastrointestinal tract

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· **11.2 Information on other hazards**

· **Endocrine disrupting properties**			
CAS: 69-72-7	salicylic acid	List II; III	20–30%

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
CAS: 10326-27-9 barium chloride dihydrate	
LC50	870 mg/l/48h (gold orfe) IUCLID
EC50	21.9 mg/l/48h (Daphnia magna) (IUCLID)
CAS: 69-72-7 salicylic acid	
LC50	90 mg/l/48h (gold orfe) (DIN 38412 Teil 15)
EC50	230 mg/l/24h (Daphnia magna) (OECD 202) (Merck)

· **Other information:**
Toxic for fish:
Ba > 158 mg/l

· **12.2 Persistence and degradability**	
CAS: 69-72-7 salicylic acid	
OECD 301 C	88 % / 15 d (readily biodegradable) (Modified MITI Test)

· **12.3 Bioaccumulative potential**	
CAS: 10326-27-9 barium chloride dihydrate	
log Pow	0.85 (.)
CAS: 69-72-7 salicylic acid	
log Pow	2.26 (.) (experimental)

· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
· **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.
· **12.7 Other adverse effects** Avoid transfer into the environment.
· **Water hazard:**
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Hand over to disposers of hazardous waste.

· **European waste catalogue**	
16 05 06*	laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN number or ID number**
· **ADR, IMDG, IATA** Void

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· **14.2 UN proper shipping name** · **ADR, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)** · **ADR, IMDG, IATA** · **Class**	Void
· **14.4 Packing group** · **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	Not dangerous according to the above specifications.

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SECTION 15: Regulatory information

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

· **Poisons Act UK**

· **Regulated explosives precursors**
None of the ingredients is listed.

· **Regulated poisons**

CAS: 10326-27-9	barium chloride dihydrate	Listed

· **Reportable explosives precursors**
None of the ingredients is listed.

· **Reportable poisons**
None of the ingredients is listed.

· **Regulation (EU) 2019/1148 on the marketing and use of explosives precursors** not regulated

· **Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)**
None of the ingredients is listed.

· **Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:**
None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**
None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
None of the ingredients is listed.

· **Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:**
None of the ingredients is listed.

· **REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)**
None of the ingredients is listed.

· **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)**
None of the ingredients is listed.

· **Substances of very high concern (SVHC) according to REACH, Article 57**
This product does not contain any substances of very high concern above the legal concentration limit of ≥ 0.1% (w / w).

· **Substances of very high concern (SVHC) according to UK REACH**
This product does not contain any substances of very high concern above the legal concentration limit of ≥ 0.1% (w / w).

· **Directive 2012/18/EU (SEVESO III):**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Information about limitation of use:**
Employment restrictions concerning pregnant and lactating women must be observed (92/85/EEC).

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· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Training hints** Provide adequate information, instruction and training for operators.

· **Relevant phrases**
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H361d Suspected of damaging the unborn child.

· **Abbreviations and acronyms:**
OECD: Organisation for Economic Co-operation and Development
STOT: specific target organ toxicity
SE: single exposure
RE: repeated exposure
EC50: half maximal effective concentration
IC50: half maximal inhibitory concentration
NOEL or NOEC: No Observed Effect Level or Concentration
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
ATE: Acute toxicity estimate values
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Repr. 2: Reproductive toxicity – Category 2

· **Sources**
Data arise from safety data sheets, reference works and literature.
GESTIS- Stoffdatenbank (Substance Database, Germany)
ECHA: European CHemicals Agency http://echa.europa.eu
IUCLID (International Uniform Chemical Information Database)

· *** Data compared to the previous version altered.**