

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

Printing date 18.07.2018

Version number 21

Revision: 27.06.2018

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, (4)515220(BT), (4)515221, 515223(0), 00515229

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: +49 231 94510-0
e-mail: sales@tintometer.de

Tintometer GmbH
Division AQUALYTIC®
Schleefstr. 12
44287 Dortmund
Made in Germany
www.aqualytic.de

phone: +49 231 94510-755
e-mail: sales@aqualytic.de

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom

phone : +44 1980 664800
e-mail: SDS@tintometer.com

Informing department:

e-mail: sds@tintometer.de
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



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 CLP regulation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.07.2018

Version number 21

Revision: 27.06.2018

Product name: Sulfate No.1

(Contd. of page 1)

Hazard pictograms


GHS05 GHS07

Signal word Danger

Hazard-determining components of labelling:
barium chloride dihydrate
salicylic acid
Hazard statements

H302 Harmful if swallowed.

H318 Causes serious eye damage.

Precautionary statements

P280 Wear protective gloves / eye protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

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 doctor.

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.

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	25-35%
CAS: 69-72-7 EINECS: 200-712-3	salicylic acid	☠ 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; consult doctor in case of symptoms.

After skin contact Instantly wash with water and soap and rinse thoroughly.

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

after swallowing:

irritations

sickness

vomiting

diarrhoea

dizziness

pain

respiratory paralysis

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.07.2018

Version number 21

Revision: 27.06.2018

Product name: Sulfate No.1

(Contd. of page 2)

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.

Hydrogen chloride (HCl)

Carbon monoxide (CO) and carbon dioxide (CO₂)

- **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.

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:** No special precautions necessary if used correctly.

- **Hygiene measures:**

Avoid contact with the eyes.

Take off immediately all contaminated clothing.

Wash hands during breaks and at the end of the work.

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

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage**

- **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 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.

This product is hygroscopic.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.07.2018

Version number 21

Revision: 27.06.2018

Product name: Sulfate No.1

(Contd. of page 3)

- **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/m ³ Long-term value: 10* 4** mg/m ³ *inhalable dust **respirable
---------------------	---

CAS: 10326-27-9 barium chloride dihydrate

WEL (Great Britain)	Long-term value: 0.5 mg/m ³ as Ba
IOELV (European Union)	Long-term value: 0.5 mg/m ³ as Ba
OEL (Sweden)	Long-term value: 0.5 mg/m ³ som Ba, totaldamm

· Regulatory information

WEL (Great Britain): EH40/2011
IOELV (European Union): 91/322/EEC, 2000/39/EC, 2006/15/EC
OEL (Sweden): AFS2015:7

· 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.

· Personal protective equipment

· **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.

· **Recommended filter device for short term use:** Filter P2

· Protection of hands:

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.

· **Eye protection:** Tightly sealed safety glasses.

· **Body protection:** Protective work clothing.

· **Limitation and supervision of exposure into the environment:** Do not allow product to reach sewage system or water bodies.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· Appearance:

Form / Physical state:	Tablets
Colour:	White

· **Odour:** Odourless

· **Odour threshold:** Not applicable

· **pH-value (1.9 g/l) at 20°C:** 3

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.07.2018

Version number 21

Revision: 27.06.2018

Product name: Sulfate No.1

(Contd. of page 4)

· Melting point/Freezing point:	Not determined
· Initial boiling point and boiling range:	Not applicable
· Flash point:	157°C (CAS 69-72-7)
· Flammability (solid, gas):	Not determined.
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not self-igniting.
· Explosive properties:	The product is not capable of dust explosion in the form supplied; enrichment with fine dust causes risk of dust explosion
· Flammability or explosive limits:	
Lower:	Not determined.
Upper:	Not determined.
· Oxidising properties:	none
· Vapour pressure:	Not applicable.
· Density at 20°C:	2.1 g/cm ³
· Relative density:	Not determined.
· Vapour density:	Not applicable.
· Evaporation rate:	Not applicable.
· Solubility(ies):	
Water:	Partially insoluble.
· Partition coefficient: n-octanol/water:	Not applicable.
· Viscosity:	Not applicable.
· Solvent content:	
Organic solvents:	0 %
Solids content:	100 %
· 9.2 Other information	No further relevant information available.

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.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Classification according to calculation procedure:
Harmful if swallowed.
- **Acute toxicity estimate (ATE_(MIX)) - Calculation method:**

Oral	CLP ATE _(MIX)	345 mg/kg (.)
------	--------------------------	---------------

(Contd. on page 6)

— GB —

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.07.2018

Version number 21

Revision: 27.06.2018

Product name: Sulfate No.1

(Contd. of page 5)

· 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	1.5 mg/l/4h (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)

- **Primary irritant effect:**
- **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)

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** The following statements refer to the mixture:
- **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** Based on available data, the classification criteria are not met.
- **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.
- **Experience with humans:** CAS 10326-27-9: Can cause kidney damages.

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) (Merck)	

(Contd. on page 7)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.07.2018

Version number 21

Revision: 27.06.2018

Product name: Sulfate No.1

(Contd. of page 6)

EC50	230 mg/l/24h (Daphnia magna) (OECD 202) (Merck)
<ul style="list-style-type: none"> · Other information: Toxic for fish: Ba > 158 mg/l 	
<ul style="list-style-type: none"> · 12.2 Persistence and degradability 	
CAS: 69-72-7 salicylic acid	
OECD 301 C	88 % / 15 d (readily biodegradable) (Modified MITI Test)
<ul style="list-style-type: none"> · 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)
<ul style="list-style-type: none"> · 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 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

<ul style="list-style-type: none"> · 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. 	
<ul style="list-style-type: none"> · European waste catalogue 	
16 05 06*	laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals
<ul style="list-style-type: none"> · Uncleaned packagings: · Recommendation: Disposal must be made according to official regulations. 	

SECTION 14: Transport information

<ul style="list-style-type: none"> · 14.1 UN-Number · ADR, IMDG, IATA 	Void
<ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR, IMDG, IATA 	Void
<ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, IMDG, IATA · Class 	Void
<ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA 	Void
<ul style="list-style-type: none"> · 14.5 Environmental hazards: 	Not applicable.
<ul style="list-style-type: none"> · 14.6 Special precautions for user 	Not applicable.
<ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: 	Not dangerous according to the above specifications.

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.07.2018

Version number 21

Revision: 27.06.2018

Product name: **Sulfate No.1**

(Contd. of page 7)

SECTION 15: Regulatory information

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

· Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:

None of the ingredients is listed.

· 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 young persons must be observed.

· **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.

· Relevant phrases

H301 Toxic if swallowed.

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

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

· 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 européen sur le transport 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

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

· Sources

Data arise from safety data sheets, reference works and literature.

RTECS (Registry of Toxic Effects of Chemical Substances)

GESTIS- Stoffdatenbank (Substance Database, Germany)

ECHA: European CHemicals Agency <http://echa.europa.eu>