

### Safety Data Sheet acc. to OSHA HCS (HazCom 2012)

Printing date 01/28/2020

Reviewed on 01/28/2020

## 1 Identification

- **Product identifier**
- **Trade name: Sulfate No.1**
- **Catalogue number:** 00515221, 505291, 515220BT, 4515220BT, 00515229BT, 00505291
- **Application of the substance / the mixture:** Reagent for water analysis
- **Manufacturer/Supplier:**  
Tintometer Inc.  
6456 Parkland Drive  
Sarasota, FL 34243  
USA  
phone: (941) 756-6410  
fax: (941) 727-9654  
www.lovibond.us  
Made in Germany
- **Emergency telephone number:** + 1 866 928 0789 (English, French, Spanish)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Hazard Communication Standard (HCS).

- **Hazard pictograms**



GHS05



GHS07



GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

barium chloride dihydrate  
salicylic acid

- **Hazard statements**

H302 Harmful if swallowed.  
H318 Causes serious eye damage.  
H361 Suspected of damaging fertility or the unborn child.

- **Precautionary statements**

P201 Obtain special instructions before use.  
P280 Wear protective gloves/protective clothing/eye protection.  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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P308+P313 IF exposed or concerned: Get medical advice/attention.  
 P405 Store locked up.

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

### \* 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of organic and inorganic compounds
- **Composition and Information on Ingredients:**  
 Percent ranges are used due to the confidential product information.

CAS: 9004-34-6 EINECS: 232-674-9 RTECS: FJ5691460	cellulose	40–50%
CAS: 10326-27-9 EINECS: 233-788-1 Index number: 056-004-00-8 RTECS: CQ 8751000	barium chloride dihydrate ⚠ Acute Tox. 3, H301; ⚠ Acute Tox. 4, H332	20–30%
CAS: 69-72-7 EINECS: 200-712-3 Index number: 607-732-00-5	salicylic acid ⚠ Repr. 2, H361; ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302	20–30%

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

### \* 4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air and to be sure call for a doctor.
- **After skin contact:**  
 Immediately 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.
- **Most important symptoms and effects, both acute and delayed**  
 Irritation and corrosion  
 after inhalation:  
 mucosal irritations, cough, breathing difficulty  
 after swallowing:  
 irritations  
 sickness  
 vomiting  
 diarrhoea  
 dizziness  
 pain  
 respiratory paralysis  
 CNS disorders  
 cardiovascular disorders
- **Danger:**  
 Danger of circulatory collapse.  
 Danger of disturbed cardiac rhythm.
- **Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

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- **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.  
In case of fire, the following can be released:  
Hydrogen chloride (HCl)  
Carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>)

- **Advice for firefighters**

- **Protective equipment:**

Wear self-contained respiratory protective device.  
Wear fully protective suit.

- **Additional information**

Collect contaminated fire fighting water separately. It must not enter the sewage system.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Ambient fire may liberate hazardous vapours.

## \* 6 Accidental release measures

- **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

- **Environmental precautions:** Do not allow product to reach sewage system or any water course.

- **Methods and material for containment and cleaning up:**

Ensure adequate ventilation.  
Pick up mechanically.  
Dispose contaminated material as waste according to item 13.

- **Reference to other sections**

See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## \* 7 Handling and storage

- **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 before breaks and at the end of work.  
Do not eat, drink or smoke when using this product.

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

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** Store in a cool location.

- **Information about storage in one common storage facility:** Not required.

- **Further information about storage conditions:**

Store under lock and key and with access restricted to technical experts or their assistants only.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.  
Protect from exposure to the light.  
Protect from humidity and water.

- **Recommended storage temperature:** 20°C +/- 5°C (approx. 68°F)

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

## \* 8 Exposure controls/personal protection

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

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<b>CAS: 9004-34-6 cellulose</b>	
PEL (USA)	Long-term value: 15* 5** mg/m <sup>3</sup> *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m <sup>3</sup> *total dust **respirable fraction
TLV (USA)	Long-term value: 10 mg/m <sup>3</sup>
EL (Canada)	Long-term value: 10* 3** mg/m <sup>3</sup> *total dust, **respirable fraction
EV (Canada)	Long-term value: 10 mg/m <sup>3</sup> paper fibre, total dust
<b>CAS: 10326-27-9 barium chloride dihydrate</b>	
PEL (USA)	Long-term value: 0.5 mg/m <sup>3</sup> as Ba
REL (USA)	Long-term value: 0.5 mg/m <sup>3</sup> as Ba
TLV (USA)	Long-term value: 0.5 mg/m <sup>3</sup> as Ba
EL (Canada)	Long-term value: 0.5 mg/m <sup>3</sup> as Ba

- **Additional information:** The lists that were valid during the creation were used as basis.
- **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:**  
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
- **Breathing equipment:** Use respiratory protective device against the effects of fume/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:  $\geq 0.11$  mm
- **Penetration time of glove material**  
Value for the permeation: Level  $\leq 1$  (10 min)  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Tightly sealed goggles
- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment:**  
Do not allow product to reach sewage system or any water course.

## 9 Physical and chemical properties

· <b>Information on basic physical and chemical properties</b>	
· <b>Appearance:</b>	
Form / Physical state:	Tablets
Color:	White
· <b>Odor:</b> Odorless	
· <b>Odor threshold:</b> Not applicable.	
· <b>pH-value (1.9 g/l) at 20°C (68°F):</b> 3	
· <b>Melting point/freezing point:</b> Not determined.	
· <b>Initial boiling point and boiling range:</b> Not applicable.	
· <b>Flash point:</b> 157°C (314.6°F) (CAS: 69-72-7 salicylic acid)	

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· <b>Flammability (solid, gas):</b>	Not determined.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto-ignition temperature:</b>	Product is not self-igniting.
· <b>Danger of explosion:</b>	As the product is supplied it is not capable of dust explosion; however enrichment with fine dust causes risk of dust explosion.
· <b>Flammability or explosive limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Oxidizing properties:</b>	none
· <b>Vapor Pressure:</b>	Not applicable.
· <b>Density at 20°C (68°F):</b>	2.1 g/cm <sup>3</sup> (17.52 lbs/gal)
· <b>Relative density:</b>	Not determined.
· <b>Vapor density:</b>	Not applicable.
· <b>Evaporation rate:</b>	Not applicable.
· <b>Solubility(ies)</b>	
<b>Water:</b>	Partially insoluble.
· <b>Partition coefficient (n-octanol/water):</b>	Not applicable.
· <b>Viscosity:</b>	Not applicable.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0 %
<b>Solids content:</b>	100 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

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

## \*11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Classification according to calculation procedure.

### · **Acute toxicity estimate (ATE<sub>(MX)</sub>) - Calculation method:**

Oral	GHS ATE <sub>(MX)</sub>	345 mg/kg (.)
Inhalative	GHS ATE <sub>(MX)</sub>	5.7 mg/l/4h (dust)

### · **LD/LC50 values that are relevant for classification:**

#### **CAS: 9004-34-6 cellulose**

Oral	LD50.	>5000 mg/kg (rat)
Dermal	LD50.	>2000 mg/kg (rabbit) (RTECS, limit test)

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Inhalative	LC50.	>5.8 mg/l/4h (rat) (RTECS, limit test)
<b>CAS: 10326-27-9 barium chloride dihydrate</b>		
Oral	LD50	100 mg/kg (ATE) (for calculation) 118 mg/kg (rat) (anhydrous - IUCLID)
Inhalative	LC50	1.5 mg/l/4h (ATE)
<b>CAS: 69-72-7 salicylic acid</b>		
Oral	LD50	891 mg/kg (rat) (GESTIS)
Dermal	LD50	>5000 mg/kg (rat) (GESTIS)
Inhalative	LC <sub>0</sub>	>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:**
- **on the skin:** Based on available data, the classification criteria are not met.
- **on the eye:**  
Causes serious eye damage.  
Risk of corneal clouding.
- **Information on components:**  
CAS 10326-27-9: chronic: dermatitis

<b>CAS: 9004-34-6 cellulose</b>		
Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: no irritation)
<b>CAS: 69-72-7 salicylic acid</b>		
Irritation of skin	OECD 404	(rabbit: slight irritation) (IUCLID)
Irritation of eyes	OECD 405	(rabbit: severe irritations) (IUCLID)

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

<b>CAS: 9004-34-6 cellulose</b>		
Sensitization	OECD 406	(guinea pig: negative)
<b>CAS: 69-72-7 salicylic acid</b>		
Sensitization	OECD 406	(negative) (IUCLID)

- **Carcinogenic categories**

<b>· IARC (International Agency for Research on Cancer)</b>	
None of the ingredients is listed.	
<b>· NTP (National Toxicology Program)</b>	
None of the ingredients is listed.	
<b>· OSHA-Ca (Occupational Safety &amp; Health Administration)</b>	
None of the ingredients is listed.	

- **Other information:** see section 8 / 15

- **Synergistic Products:** None

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**

The following statements refer to the mixture:

Repr. 2

- **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 fertility or 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.

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- **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.

## 12 Ecological information

- **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)

EC50 230 mg/l/24h (Daphnia magna) (OECD 202)  
(Merck)

- **Other information:**

Toxic for fish:  
Ba > 158 mg/l

- **Persistence and degradability**

**CAS: 69-72-7 salicylic acid**

OECD 301 C 88 % / 15 d (readily biodegradable) (Modified MITI Test)

- **Bioaccumulative potential**

**CAS: 10326-27-9 barium chloride dihydrate**

log Pow 0.85 (.)

**CAS: 69-72-7 salicylic acid**

log Pow 2.26 (.) (experimental)

- **Mobility in soil** No further relevant information available.
- **Other adverse effects** Avoid transfer into the environment.

## 13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Hand over to hazardous waste disposers.

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- **UN-Number**

· DOT, IMDG, IATA none

- **UN proper shipping name**

· DOT, IMDG, IATA none

- **Transport hazard class(es)**

· DOT, IMDG, IATA

· Class none

- **Packing group**

· DOT, IMDG, IATA none

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· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	Not dangerous according to the above specifications.

### \*15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· <b>Section 355 (Extremely hazardous substances):</b>
None of the ingredients is listed.

· <b>Section 313 (Specific toxic chemical listings):</b>
CAS: 10326-27-9   barium chloride dihydrate

· <b>TSCA (Toxic Substances Control Act):</b>
All components have the value ACTIVE.

· <b>Hazardous Air Pollutants</b>
None of the ingredients is listed.

- **Proposition 65**

· <b>Chemicals known to cause cancer:</b>
None of the ingredients is listed.

· <b>Chemicals known to cause reproductive toxicity for females:</b>
None of the ingredients is listed.

· <b>Chemicals known to cause reproductive toxicity for males:</b>
None of the ingredients is listed.

· <b>Chemicals known to cause developmental toxicity:</b>
None of the ingredients is listed.

· <b>New Jersey Right-to-Know List:</b>
CAS: 9004-34-6   cellulose

· <b>New Jersey Special Hazardous Substance List:</b>
None of the ingredients is listed.

· <b>Pennsylvania Right-to-Know List:</b>
CAS: 9004-34-6   cellulose

· <b>Pennsylvania Special Hazardous Substance List:</b>
None of the ingredients is listed.

· <b>EPA (Environmental Protection Agency)</b>
CAS: 10326-27-9   barium chloride dihydrate
D, CBD(inh), NL(oral)

· <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>
None of the ingredients is listed.

- **Information about limitation of use:** Employment restrictions concerning pregnant and lactating women must be observed.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

This information is based on our present knowledge. However, this 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.

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H361 Suspected of damaging fertility or the unborn child.

• **Date of preparation / last revision** 01/28/2020 / 21• **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  
 ACGIH® - American Conference of Governmental Industrial Hygienists  
 •A1 - Confirmed human carcinogen  
 •A2 - Suspected human carcinogen  
 •A3 - Confirmed animal carcinogen with unknown relevance to humans  
 •A4 - Not classifiable as a human carcinogen  
 •A5 - Not suspected as a human carcinogen  
 IARC - International Agency for Research on Cancer  
 •Group 1 - Carcinogenic to humans  
 •Group 2A - Probably carcinogenic to humans  
 •Group 2B - Possibly carcinogenic to humans  
 •Group 3 - Not classifiable as to carcinogenicity to humans  
 •Group 4 - Probably not carcinogenic to humans  
 NTP - National Toxicology Program, U.S. Department of Health and Human Services  
 •Group K - Known to be Human Carcinogens  
 •Group R - Reasonably Anticipated to be Human Carcinogens  
 IMDG: International Maritime Code for Dangerous Goods  
 DOT: US Department of Transportation  
 IATA: International Air Transport Association  
 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  
 NIOSH: National Institute for Occupational Safety  
 OSHA: Occupational Safety & Health  
 TLV: Threshold Limit Value  
 PEL: Permissible Exposure Limit  
 REL: Recommended Exposure Limit  
 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.**