

# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 13.01.2025

Version: 7.3

Print date: 13.01.2025

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

### 1.1 Product identifier

Trade name/designation:	Tetrabutylammonium hydrogen sulphate HiPerSolv CHROMANORM® for HPLC
Product No.:	85794
CAS No.:	32503-27-8
Index No.:	000-000-00-0
EU REACH No.:	A registration number is not available for this substance as the substance or its use is exempted from registration according to REACH Article 2 or the annual tonnage does not require a registration.
Other means of identification:	Tetrabutylammonium bisulphate

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

Relevant identified uses:	General chemical reagent
Uses advised against:	The product, as such or as a component of a mixture, is not intended to be used by consumers (as defined by the REACH Regulation).

### 1.3 Details of the supplier of the safety data sheet

*United Kingdom*

#### **VWR International Ltd.**

Street	Hunter Boulevard, Magna Park
Postal code/City	Lutterworth, LE17 4XN, UK
Telephone	0800 22 33 44
Telefax	01455 55 85 86
E-mail (competent person)	SDS@avantorsciences.com

### 1.4 Emergency phone number

Telephone	+44 (0) 1270 502894 (CareChem24)
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## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements
Skin irritation, category 2	H315
Eye irritation, category 2	H319

### 2.2 Label elements

#### 2.2.1 Labelling according to Regulation (EC) No. 1272/2008 [CLP]

##### Hazard pictograms



Signal word: Warning

Hazard statements	
H315	Causes skin irritation.
H319	Causes serious eye irritation.

Precautionary statements	
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### 2.3 Other hazards

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

This product does not contain a substance that has endocrine disrupting properties.

## SECTION 3: Composition / information on ingredients

### 3.1 Substances

Substance name:	Tetrabutylammonium hydrogen sulphate
Molecular formula:	C <sub>16</sub> H <sub>37</sub> NO <sub>4</sub> S
Molecular weight:	339.54 g/mol
CAS No.:	32503-27-8

EU REACH registration No.:	A registration number is not available for this substance as the substance or its use is exempted from registration according to REACH Article 2 or the annual tonnage does not require a registration.
EC No.:	251-068-5
ATE, SCL and/or M-factor:	none

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General information

Do not leave affected person unattended. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. When in doubt or if symptoms are observed, get medical advice.

#### After inhalation

Remove casualty to fresh air and keep warm and at rest. If unconscious but breathing normally, place in recovery position and seek medical advice. Seek medical advice immediately.

#### In case of skin contact

Wash off any skin contamination immediately. When in doubt or if symptoms are observed, get medical advice.

#### After eye contact:

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an ophthalmologist.

#### In case of ingestion

Rinse mouth thoroughly with water. Do NOT induce vomiting. Call a POISON CENTER.

#### Self-protection of the first aider

First aider: Pay attention to self-protection! Wear personal protection equipment (refer to section 8). Avoid contact with skin, eyes and clothes.

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

After inhalation: May cause respiratory irritation. Shortness of breath. Cough. After skin contact: Irritation. After eye contact: Irritation. After ingestion: Nausea. Vomiting. Hypocalcämie.

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

After inhalation: After inhalation, immediate application of glucocorticoids (inhalative), administration of oxygen and immobilization of the affected person are indicated. If necessary, all further measures of pulmonary edema prophylaxis. After skin contact: Wash with plenty of soap and water. If necessary, treat skin irritations with a dermatocorticoid foam. After eye contact: Treat symptomatically. After ingestion: Let water be drunken in little sips (dilution effect). After ingestion of large amounts, immediate gastric lavage in intubation should be considered. Even if there are no symptoms, long-term monitoring of the phosphorus and calcium levels and cardiovascular parameters is advisable.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

no data available

**Extinguishing media which must not be used for safety reasons**

Full water jet

**5.2 Special hazards arising from the substance or mixture**

Combustible substance.

Fire may produce irritating, corrosive and/or toxic gases.

In case of fire may be liberated:

Carbon monoxide

Carbon dioxide (CO<sub>2</sub>).

Nitrogen oxides (NO<sub>x</sub>)

Sulphur oxides

**5.3 Advice for firefighters**

Co-ordinate fire-fighting measures to the fire surroundings.

In case of fire: Evacuate area.

In case of fire and/or explosion do not breathe fumes.

Special protective equipment for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel: Use personal protective equipment as required. Do not breathe dust. Use a dust mask if there is a lot of dust. Avoid substance contact. Remove victim out of the danger area. Remove victim to fresh air and keep at rest in a position comfortable for breathing. First Aid, decontamination, treatment of symptoms.

**6.2 Environmental precautions**

No special environmental measures are necessary.

**6.3 Methods and material for containment and cleaning up**

Take up mechanically, placing in appropriate containers for disposal. Rinse affected areas with water. Avoid dust formation.

Dispose according to local legislation.

**6.4 Reference to other sections**

Personal protection equipment: see section 8 Disposal information: see section 13

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

Advices on safe handling

Wear personal protection equipment (refer to section 8).

Avoid contact with eyes and skin.

Avoid inhalation of the product.

Use extractor hood (laboratory).

Measures to prevent fire, aerosol and dust generation

Use extractor hood (laboratory).

Provide adequate ventilation.

Measures required to protect the environment

Avoid release to the environment.

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

## 7.2 Conditions for safe storage, including any incompatibilities

Recommended storage temperature: no data available

Storage class: 10-13

Storage: Keep container tightly closed and in a well-ventilated place. Keep/Store only in original container. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Keep in a cool place. Suitable container/equipment material: Glass Polyethylene (PE) Unsuitable container/equipment material: No information available.

## 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

# SECTION 8: Exposure controls/personal protection

## 8.1 Control parameters

Does not contain substances above concentration limits fixing an occupational exposure limit.

### Recommended monitoring procedures:

European Standard EN 14042 (Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents)

European Standard EN 482 (Workplace exposure. Procedures for the determination of the concentration of chemical agents - Basic performance requirements)

## 8.2 Exposure controls

### 8.2.1 Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

### 8.2.2 Personal protection equipment

Wear suitable protective clothing. When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn.

#### *Eye/face protection*

Eye glasses with side protection DIN-/EN-Norms EN 166

Recommendation: VWR 111-0432

#### *Skin protection*

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. Recommended glove articles DIN-/EN-Norms EN ISO 374 In the case of wanting to use the gloves again, clean them before taking off and air them well.

#### By short-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,12 mm
Breakthrough time:	> 480 min
Recommended glove articles:	VWR 112-0998

By long-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,38 mm
Breakthrough time:	> 480 min
Recommended glove articles:	VWR 112-3717 / 112-1381

*Respiratory protection*

Usually no personal respiratory protection necessary. Required when dusts are generated. Generation/formation of dust

Suitable respiratory protection apparatus:	Filtering Half-face mask (EN 149)
Recommendation:	VWR 111-0451
Suitable material:	P3
Recommendation:	VWR 111-0244

*Additional information*

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

**8.2.3** *Environmental exposure controls*  
no data available

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance	
Physical state:	solid
Colour:	white
Odour:	no data available

#### Safety relevant basic data

pH:	2.1 (50 g/l; H <sub>2</sub> O; 20 °C)
Melting point/freezing point:	169-172 °C
Initial boiling point and boiling range:	no data available
Flash point:	no data available
Flammability:	Not applicable
Lower and upper explosion limit	
Lower explosion limit:	no data available
Upper explosion limit:	no data available
Vapour pressure:	no data available
Relative vapour density:	no data available
Density and/or relative density	
Density:	1.01 g/cm <sup>3</sup> (25 °C)
Solubility(ies)	
Water solubility:	soluble (20 °C)
Partition coefficient: n-octanol/water:	no data available
Auto-ignition temperature:	no data available
Decomposition temperature:	Not applicable
Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	no data available
Particle characteristics:	no nanoform

### 9.2 Other information

Evaporation rate:	no data available
Explosive properties:	no data available
Oxidising properties:	Not applicable
Bulk density:	no data available
Refraction index:	no data available
Dissociation constant:	no data available
Surface tension:	no data available
Henry's Law Constant:	no data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is non-reactive under normal conditions.

## 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

## 10.3 Possibility of hazardous reactions

No further relevant information available.

## 10.4 Conditions to avoid

Keep away from heat.

## 10.5 Incompatible materials:

No further relevant information available.

## 10.6 Hazardous decomposition products

no data available

# SECTION 11: Toxicological information

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

### Acute effects

#### *Acute oral toxicity:*

Based on available data, the classification criteria are not met.

#### *Acute dermal toxicity:*

Based on available data, the classification criteria are not met.

#### *Acute inhalation toxicity:*

Based on available data, the classification criteria are not met.

### Irritant and corrosive effects:

#### *Primary irritation to the skin:*

Causes skin irritation.

#### *Irritation to eyes:*

Causes serious eye irritation.

#### *Irritation to respiratory tract:*

Not applicable



**Respiratory or skin sensitisation**

In case of skin contact: not sensitising

After inhalation: not sensitising

**STOT-single exposure**

Not applicable

**STOT-repeated exposure**

Not applicable

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

**Carcinogenicity**

No indication of human carcinogenicity.

**Germ cell mutagenicity**

No indications of human germ cell mutagenicity exist.

**Reproductive toxicity**

No indications of human reproductive toxicity exist.

**Aspiration hazard**

Not applicable

**Other adverse effects**

no data available

**Additional information**

no data available

**11.2 Information on other hazards**

This substance does not have endocrine disrupting properties with respect to humans.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Fish toxicity:**

no data available

**Daphnia toxicity:**

no data available

**Algae toxicity:**

no data available

**Bacteria toxicity:**

no data available

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water: no data available

### 12.4 Mobility in soil:

no data available

### 12.5 Results of PBT/vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

### 12.6 Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to the environment.

### 12.7 Other adverse effects

no data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Appropriate disposal / Product

Dispose according to local legislation. Consult the appropriate local waste disposal expert about waste disposal. Send to a hazardous waste incinerator facility under observation of official regulations.

Waste code product: no data available

#### Appropriate disposal / Package

Dispose according to local legislation. Handle contaminated packages in the same way as the substance itself.

#### Additional information

European waste management legislation  
Directive 2008/98/EC (Waste Framework Directive)

National waste management legislation  
The Waste (England & Wales) Regulations 2011  
Hazardous Waste (England & Wales) Regulations 2005

## SECTION 14: Transport information

### Land transport (ADR/RID)

14.1	UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2	UN proper shipping name:	not assigned
14.3	Transport hazard class(es):	none
14.4	Packing group:	not assigned
14.5	Environmental hazards:	none
14.6	Special precautions for user:	none

## Sea transport (IMDG)

14.1	UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2	UN proper shipping name:	not assigned
14.3	Transport hazard class(es):	none
14.4	Packing group:	not assigned
14.5	Environmental hazards:	none
14.6	Special precautions for user:	none
14.7	Maritime transport in bulk according to IMO instruments	not relevant

## Air transport (ICAO-TI / IATA-DGR)

14.1	UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2	UN proper shipping name:	not assigned
14.3	Transport hazard class(es):	none
14.4	Packing group:	not assigned
14.5	Special precautions for user:	none

## SECTION 15: Regulatory information

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

#### EU legislation

- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (Text with EEA relevance)
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance)
- Commission Regulation (EU) 2020/878 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

#### National regulations

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Water hazard class: hazardous to water (WGK 2)

### 15.2 Chemical Safety Assessment

For this substance a chemical safety assessment has not been carried out.

## SECTION 16: Other information

### Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists  
 ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road  
 AGS - Committee on Hazardous Substances (Ausschuss für Gefahrstoffe)  
 CLP - Regulation on Classification, Labelling and Packaging of Substances and Mixtures  
 DFG - German Research Foundation (Deutsche Forschungsgemeinschaft)  
 DNEL - Derived No Effect Level  
 Gestis - Information system on hazardous substances of the German Social Accident Insurance (Gefahrstoffinformationssystem der Deutschen Gesetzlichen Unfallversicherung)  
 IATA-DGR - International Air Transport Association-Dangerous Goods Regulations  
 ICAO-TI - International Civil Aviation Organization-Technical Instructions  
 IMDG - International Maritime Code for Dangerous Goods  
 KOSHA - Korea Occupational Safety and Health Agency  
 LTV - Long Term Value  
 NIOSH - National Institute for Occupational Safety and Health  
 OSHA - Occupational Safety & Health Administration  
 PBT - Persistent, Bioaccumulative and Toxic  
 PNEC - Predicted No Effect Concentration  
 RID - Regulation concerning the International Carriage of Dangerous Goods by Rail  
 STV - Short Term Value  
 SVHC - Substances of Very High Concern  
 vPvB - very Persistent, very Bioaccumulative

Training advice: Provide adequate information, instruction and training for operators.

### Key literature references and sources for data

This Safety Data Sheet has been prepared based on information available for public as TOXNET information, European Chemicals Agency (ECHA) substance dossier, papers from international cancer research institutes (IARC Monographs), U.S. National Toxicology Program data, U.S. Agency for Toxic Substances and Disease Control (ATSDR), PubChem websites and SDS from our raw material manufacturers.

### Additional information

Indication of changes                      Section 11

If you need an explanation of the change, contact the supplier (SDS@avantorsciences.com).

*The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.*