

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

Printing date 23.11.2023

Version number 202.05 (replaces version 202.04)

Revision: 20.11.2023

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

- **1.1 Product identifier**
- **Trade name** Vitrex Powder
- **Article number:** AL 137 AL 137.5 AL 137.500 AL 137.000
- **CAS Number:**  
7681-38-1
- **EC number:**  
231-665-7
- **Index number:**  
016-046-00-X
- **REACH-Registration number** 01-2119552465-36
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
For details on the identifiable uses according to EC-regulation No. 1907/2006 see annex of this safety data sheet.
- **Restrictions on use:**  
Restrictions on use apply to this product according to Regulation (EU) no. 1907/2006 Annex XVII (see section 15)
- **Application of the substance / the mixture**  
Basic chemical (without special defined application)  
pH value reducer
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Bullnheimer&Co.  
GmbH & Co. KG  
Im Tal 12  
D – 86179 Augsburg  
Tel.: 0821 / 80850 - 0  
Fax: 0821 / 80850 - 90  
Mail: info@bullnheimer.de
- **Informing department:**  
e-Mail: info@bullnheimer.de
- **1.4 Emergency telephone number:**  
This is an English-language document designed for the European region. For the emergency number and other country-specific data, please refer to the specific national versions of this safety data sheet.  
Bullnheimer & Co. GmbH & Co. KG Tel. 0 821 / 80850-0. Only office hours Mon.- Thu. 08:00 – 16:00, – Fri. 08:00 – 13:00.

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
Eye Dam. 1 H318 Causes serious eye damage.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



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- **Signal word** Danger
- **Hazard statements**  
H318 Causes serious eye damage.
- **Precautionary statements**  
P280 Wear eye protection / face 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.  
P310 Immediately call a POISON CENTER/doctor.
- **2.3 Other hazards** The solid dissolves easily in water to form an acidic, corrosive solution.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Determination of endocrine-disrupting properties** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.1 Substances** Natriumhydrogensulfat NaHSO<sub>4</sub>
- **CAS No. Designation:**  
7681-38-1 sodium hydrogensulphate
- **Identification no(s):**
- **EC number:** 231-665-7
- **Index number:** 016-046-00-X

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General advice:** If unconscious, position and transport in stable lateral position.
- **After inhalation** After inhalation of product dust, supply fresh air and consult a doctor.
- **After skin contact**  
Instantly wash with water and soap and rinse thoroughly. If skin irritation persists, seek medical advice.
- **After eye contact**  
Rinse immediately opened eye for several minutes under running water. Then consult doctor.
- **After swallowing**  
Rinse out mouth with water.  
In case of persistent symptoms consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed**  
Burning and pain of the eyes, mucous membranes and skin. Ulceration of the affected areas. Irritated cough, shortness of breath.
- **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**  
CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**  
Can be released in case of fire:  
sulphur oxides (SO<sub>x</sub>)

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- **5.3 Advice for firefighters**
- **Protective equipment:**  
See section 8.  
Wear full protective suit with self-contained breathing apparatus.
- **Additional information** Collect contaminated fire fighting water separately. Do not allow to enter drains.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep off unprotected persons  
Ensure adequate ventilation  
Avoid causing dust.  
Do not inhale dust.  
Avoid eye and skin contact.
- **6.2 Environmental precautions:**  
Damp down dust with water spray jet.  
Do not allow to enter drainage system, surface or ground water.  
In case of release of larger quantities, inform competent authorities.
- **6.3 Methods and material for containment and cleaning up:**  
Take up mechanically and rinse off residues with water. Avoid formation of dust. Take up in suitable containers and send for recovery or disposal according to item 13.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling  
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**  
Ensure good ventilation/extraction at the workplace.  
Avoid formation of dust and aerosols.  
When dissolving, always put water in front and stir in the product.  
Avoid contact with eyes or skin.
- **Information about protection against explosions and fires:** The product is not flammable
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage** Store in cool, dry conditions in well sealed containers.
- **Requirements to be met by storerooms and containers:**  
Observe official regulations on storage and handling of water hazardous substances  
Keep container tightly closed and dry.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store container in a well ventilated position.
- **Storage class** 13 (TRGS 510)
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Components with critical values that require monitoring at the workplace:** Not required.
- **DNELs** No DNEL value has been established.

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### - PNECs

PNEC water	17,66 mg/l (intermittent releases)
	11,09 mg/l (freshwater)
PNEC water	1,109 mg/l (marine water)
PNEC	800 mg/l (sewage plant)
PNEC	1,54 mg/kg dw (soil)
PNEC sediment	40,2 mg/kg dw (freshwater)
	4,02 mg/kg dw (marine water)

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

### - 8.2 Exposure controls

- **Appropriate engineering controls** Extraction required in case of dust formation.

- **Individual protection measures, such as personal protective equipment**

- **General protective and hygienic measures**

Instantly remove any soiled and impregnated garments.

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

Avoid contact with the eyes and skin.

Do not inhale dust. Prevent formation of dust.

Do not eat, drink or smoke while working.

- **Breathing equipment:** Breathing protection to be used where a build-up of dust occurs.

- **Recommended filter device for short term use:** Filter P1

- **Hand protection**

Protective gloves (EN 374).

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **For the permanent contact gloves made of the following materials are suitable:**

Butylrubber (BR) with 0,7 mm or nitrile rubber (NBR) with 0,4 mm coating thickness (recommended: protective index 6, corresponding > 480 minutes of permeation time according to EN 374).

Attention! Due to conditions (stressing, temperature) the practical usage of chemical protective gloves may be much shorter than the permeation time according to EN 374.

Indication of sodium hydrogen sulphate, aqueous solution.

- **Eye/face protection** Tightly sealed safety glasses.

- **Body protection:**

Standard protective working clothes, chemical resistant safety-shoes or wellingtons. If skin contact is possible, wear impenetrable protective clothing.

## \* SECTION 9: Physical and chemical properties

### - 9.1 Information on basic physical and chemical properties

- **General Information**

- **Physical state**

Solid.

- **Colour:**

Yellowish

- **Smell:**

Odourless

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- <b>Odour threshold:</b>	Not determined.
- <b>Melting point/freezing point:</b>	180 °C
- <b>Boiling point or initial boiling point and boiling range</b>	Not determined
- <b>Flammability</b>	Product is not inflammable.
- <b>Lower and upper explosion limit</b>	
- <b>Lower:</b>	Not determined.
- <b>Upper:</b>	Not determined.
- <b>Flash point:</b>	Product is non-flammable nor potentially explosive
- <b>Decomposition temperature:</b>	460 °C
- <b>pH</b>	1-1,2
- <b>pH-value:</b>	
- <b>Viscosity:</b>	
- <b>Kinematic viscosity</b>	Not applicable.
- <b>dynamic:</b>	Not applicable.
- <b>Solubility</b>	
- <b>Water at 20 °C:</b>	1080 g/l
- <b>Partition coefficient n-octanol/water (log value)</b>	Not determined.
- <b>Vapour pressure:</b>	Not applicable.
- <b>Density and/or relative density</b>	
- <b>Density at 20 °C</b>	2,44 g/cm <sup>3</sup>
- <b>Relative density</b>	Not determined.
- <b>Settled apparent density</b>	1200-1500 kg/m <sup>3</sup>
- <b>Vapour density</b>	Not applicable.
- <b>Particle characteristics</b>	
See section 3.	

#### - 9.2 Other information

- <b>Appearance:</b>	
- <b>Form:</b>	Solid.
- <b>Important information on protection of health and environment, and on safety.</b>	
- <b>Self-inflammability:</b>	Not determined.
- <b>Explosive properties:</b>	Product is not potentially explosive Dust explosions are generally possible with organic solids.
- <b>Molecular weight</b>	120,07 g/mol
- <b>Evaporation rate</b>	Not applicable.

#### - Information with regard to physical hazard classes

- <b>Explosives</b>	Void
- <b>Flammable gases</b>	Void
- <b>Aerosols</b>	Void
- <b>Oxidising gases</b>	Void
- <b>Gases under pressure</b>	Void
- <b>Flammable liquids</b>	Void
- <b>Flammable solids</b>	Void
- <b>Self-reactive substances and mixtures</b>	Void
- <b>Pyrophoric liquids</b>	Void
- <b>Pyrophoric solids</b>	Void
- <b>Self-heating substances and mixtures</b>	Void
- <b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void

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- <b>Oxidising liquids</b>	Void
- <b>Oxidising solids</b>	Void
- <b>Organic peroxides</b>	Void
- <b>Corrosive to metals</b>	Void
- <b>Desensitised explosives</b>	Void
- <b>molecular weight (weight average/Mw):</b>	120,07 g/mol

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.  
Product forms sodium disulphate when heated, splitting off water. Above 460 °C decomposition with formation of sodium sulphate and sulphur trioxide.
- **10.3 Possibility of hazardous reactions**  
The solid dissolves easily in water to form an acidic, corrosive solution.
- **10.4 Conditions to avoid Humidity**
- **10.5 Incompatible materials:**  
Strong bases  
Oxidising agent
- **10.6 Hazardous decomposition products:**  
Thermal decomposition can result in  
Sulphur oxides (SO<sub>x</sub>)

### \* SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.

**- LD/LC50 values that are relevant for classification:**

Oral	LD50	2140 mg/kg (rat)
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### \* SECTION 12: Ecological information

#### - 12.1 Toxicity

##### - Aquatic toxicity:

LC 50 / 48 h	7960 mg/l (Pimephales promelas)
	1766 mg/l (Daphnia magna)
LC 50	>2,4 mg/l (rat)

#### - 12.2 Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

#### - 12.3 Bioaccumulative potential

Bioaccumulation is unlikely.

#### - 12.4 Mobility in soil

No further relevant information available.

#### - 12.5 Results of PBT and vPvB assessment

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

#### - 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

#### - 12.7 Other adverse effects

- **Behaviour in sewage processing plants:** NOEC activated sludge: 8 g/L/37d

#### - Additional ecological information:

##### - General notes:

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

Water hazard class 1 (Assessment by list): slightly hazardous for water.

### SECTION 13: Disposal considerations

#### - 13.1 Waste treatment methods

The note below refers to the product left as it is and not to further processed products. When mixed with other products, other disposal routes may be required; if in doubt, consult the supplier of the product or the local authority.

##### - Recommendation

After prior treatment product has to be landfilled under adherence to the regulations pertaining to the disposal of particularly hazardous waste.

##### - Waste disposal key number:

Since 01/01/99 the waste code numbers have not only been product-related but are also essentially application-related. The valid waste code number of the application can be obtained from the European waste catalogue.

##### - European waste catalogue

06 00 00	WASTES FROM INORGANIC CHEMICAL PROCESSES
06 03 00	wastes from the MFSU of salts and their solutions and metallic oxides
06 03 14	solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13

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

##### - Recommendation:

Empty containers completely and send them cleaned for reconditioning or recycling. Dispose of containers only in consultation with local authorities.

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Uncleaned empty containers must be treated in the same way as the ingredients.

#### SECTION 14: Transport information

- 14.1 UN number or ID number	
- ADR/RID/ADN, IMDG, IATA	Void
- 14.2 UN proper shipping name	
- ADR/RID/ADN, IMDG, IATA	Void
- 14.3 Transport hazard class(es)	
- ADR/RID/ADN, IMDG, IATA	
- Class	Void
- 14.4 Packing group	
- ADR/RID/ADN, IMDG, IATA	Void
- 14.5 Environmental hazards:	
- Marine pollutant:	No
- 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.
- UN "Model Regulation":	Void

#### SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Labelling according to Regulation (EC) No 1272/2008  
The substance is classified and labelled according to the CLP regulation.
- Hazard pictograms



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- **Signal word** Danger
- **Hazard statements**  
H318 Causes serious eye damage.
- **Precautionary statements**  
P280 Wear eye protection / face 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.  
P310 Immediately call a POISON CENTER/doctor.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)** Substance is not listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 75

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- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**  
Substance is not listed.
- **REGULATION (EU) 2019/1148**
- **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**  
Substance is not listed.
- **National regulations**
- **Information about limitation of use:**  
Employment restrictions concerning young persons must be observed.
- **Other regulations, limitations and prohibitive regulations**
- **Substances of very high concern (SVHC) according to REACH, Article 57** Substance is not listed.
- **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.  
This safety data sheet complies with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

- **Department issuing data specification sheet:**

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- **Version number of previous version:** 202.04

- **Abbreviations and acronyms:**

LEV: Local Exhaust Ventilation  
RPE: Respiratory Protective Equipment  
RCR: Risk Characterisation Ratio (RCR= PEC/PNEC)  
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
CLP: Classification, Labelling and Packaging (Regulation (EC) No. 1272/2008)  
EINECS: European Inventory of Existing Commercial Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
TRGS: Technische Regeln für Gefahrstoffe (Technical Rules for Dangerous Substances, BAuA, Germany)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted No-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
SVHC: Substances of Very High Concern  
vPvB: very Persistent and very Bioaccumulative  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

- **\* Data compared to the previous version altered.**

- **ANNEX**

**Exposure Scenarios:**

Manufacture of substance  
Industrial use  
Commercial uses  
Consumer end use  
Use as pH regulator(s)