

# Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006

**Vitanica® SI**



Version: 2.14  
Date of last issue: 06.04.2023  
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Trade name : Vitanica® SI  
UFI : 6NS2-V06X-V00M-8PAR

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

Use of the : Fertiliser  
Substance/Mixture

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

Company : COMPO EXPERT GmbH  
Krögerweg 10  
D-48155 Münster  
Telephone : +49 (0) 251 29 79 81 – 000  
Telefax : +49 (0) 251 29 79 81 - 111  
E-mail address of person : info@compo-expert.com  
responsible for the SDS

### 1.4 Emergency telephone number

GBK GmbH - Global Regulatory Compliance - 24h  
Telephone: +49 (0) 6132 - 84463

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## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification (REGULATION (EC) No 1272/2008)

Skin corrosion, Category 1 H314: Causes severe skin burns and eye damage.

Specific target organ toxicity - single exposure, Category 3 H335: May cause respiratory irritation.

### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

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Hazard pictograms

:



Signal word

: Danger

Hazard statements

: H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.

Precautionary statements

: **Prevention:**  
P260 Do not breathe mist or vapours.  
P280 Wear protective gloves/ eye protection/ face protection.  
**Response:**  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P310 Immediately call a POISON CENTER/ doctor.  
**Storage:**  
P405 Store locked up.

## 2.3 Other hazards

None known.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Liquid mixture of organic and inorganic salts of fertilizers.  
extract of brown algae

#### Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)

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potassium hydroxide	1310-58-3	Acute Tox. 4; H302 Skin Corr. 1A; H314 Met. Corr. 1; H290	>= 1 - <= 5
	215-181-3		
	01-2119487136-33-XXXX	specific concentration limit  Skin Corr. 1A; H314  >= 5 %  Skin Corr. 1B; H314  2 - < 5 %  Skin Irrit. 2; H315  0,5 - < 2 %	
Tripotassium phosphate	7778-53-2	Eye Dam. 1; H318 STOT SE 3; H335	>= 7 - <= 17
	231-907-1		
disodium metasilicate	6834-92-0	Skin Corr. 1B; H314 STOT SE 3; H335	>= 10 - <= 30
	229-912-9		

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- General advice : Take off immediately all contaminated clothing.
- If inhaled : Fresh air.  
If symptoms persist, call a physician.
- In case of skin contact : Wash off immediately with soap and plenty of water.  
If symptoms persist, seek medical advice.
- In case of eye contact : Rinse thoroughly with plenty of water for at least 15 minutes  
and consult a physician.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.  
Do NOT induce vomiting.

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

Symptoms : No information available.

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

Treatment : Treat symptomatically.

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Water  
Dry powder

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

Specific hazards during firefighting : Cool closed containers exposed to fire with water spray.

### 5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
In the event of fire and/or explosion do not breathe fumes.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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## SECTION 6: Accidental release measures

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

Personal precautions : Wear personal protective equipment.  
Keep people away from and upwind of spill/leak.  
In case of involuntary exposition of the product contact producer or supplier.

### 6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.

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

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

### 6.4 Reference to other sections

none

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Advice on safe handling : Avoid contact with skin and eyes.
- Advice on protection against fire and explosion : No special precautions required.
- Hygiene measures : Keep away from food, drink and animal feedingstuffs. Take off immediately all contaminated clothing. Wash hands before breaks and at the end of workday.

### 7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Keep containers tightly closed in a cool, well-ventilated place.
- Further information on storage conditions : Metal containers must be lined.
- Advice on common storage : Keep away from strong acids.
- Storage class (TRGS 510) : 8B, Non-combustible, corrosive hazardous materials

### 7.3 Specific end use(s)

- Specific use(s) : Always read the label and product information before use.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

The product does not contain any relevant quantities of materials with workplace related values that require supervising.

### 8.2 Exposure controls

#### Personal protective equipment

- Eye protection : Tightly fitting safety goggles (splash goggles) (EN 166)

#### Hand protection

- Remarks : Chemical resistant protective gloves (EN 374). chloroprene rubber (CR) - 0.5 mm coating thickness The selection of suitable depends upon the material, and also upon the quality of the gloves. The degree of protection will vary from manufacturer to manufacturer. As the product is a

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preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Skin and body protection : Long sleeved clothing

Respiratory protection : Breathing apparatus needed only when aerosol or mist is formed.

Protective measures : Handle in accordance with good industrial hygiene and safety practice.

Do not breathe gas/fumes/vapour/spray.

Avoid contact with skin and eyes.

When using do not eat or drink.

## Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	: liquid
Colour	: product specific
Odour	: characteristic
pH	: > 12, (20 °C)
Boiling point/boiling range	: ca. > 100 °C
Flash point	: Not applicable
Evaporation rate	: No data available
Flammability (solid, gas)	: The product is not flammable.

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Upper explosion limit	: Not applicable
Lower explosion limit	: Not applicable
Vapour pressure	: No data available
Relative vapour density	: No data available
Density	: ca. 1,233 g/cm <sup>3</sup> (20 °C)
Solubility(ies)	
Water solubility	: soluble
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No decomposition if stored and applied as directed.
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Explosive properties	: Not explosive
Oxidizing properties	: Not considered an oxidizing substance

## 9.2 Other information

Surface tension	: No data available
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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No decomposition if stored and applied as directed.

### 10.2 Chemical stability

No decomposition if stored and applied as directed.

### 10.3 Possibility of hazardous reactions

Hazardous reactions	: Corrosive in contact with metals With acid and aluminium.
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## 10.4 Conditions to avoid

Conditions to avoid : No dangerous reaction known under conditions of normal use.

## 10.5 Incompatible materials

Materials to avoid : Metals  
Alkaline earth metals  
Acids

## 10.6 Hazardous decomposition products

Hydrogen, by reaction with metals

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## SECTION 11: Toxicological information

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

#### Acute toxicity

##### Product:

Acute oral toxicity : Remarks: This information is not available.

##### Components:

##### **potassium hydroxide:**

Acute oral toxicity : LD50 (Rat): 365 mg/kg

##### **Tripotassium phosphate:**

Acute oral toxicity : LD50 (Rat, female): > 2.000 mg/kg  
Method: OECD Test Guideline 420

Acute inhalation toxicity : LC50 (Rat, male and female): Exposure time: 4 h  
Test atmosphere: dust/mist

Acute dermal toxicity : Remarks: Based on available data, the classification criteria are not met.

##### **disodium metasilicate:**

Acute oral toxicity : LD50 (Rat): 1.153 mg/kg

#### Skin corrosion/irritation

##### Product:

Remarks: Causes severe irritation of eyes, skin and mucous membranes.

##### Components:

##### **potassium hydroxide:**

Remarks: Causes skin burns.

##### **Tripotassium phosphate:**



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

**disodium metasilicate:**

Species: Rabbit  
Exposure time: 24 h  
Result: Severe skin irritation

**Serious eye damage/eye irritation**

**Product:**

Remarks: The product causes irritation of eyes, skin and mucous membranes.

**Components:**

**potassium hydroxide:**

Remarks: Causes eye burns.

**Tripotassium phosphate:**

Species: Rabbit  
Exposure time: 7 Days  
Result: Risk of serious damage to eyes.  
Remarks: Based on available data, the classification criteria are not met.

**disodium metasilicate:**

Remarks: No data available

**Respiratory or skin sensitisation**

**Product:**

Remarks: None known.

**Components:**

**Tripotassium phosphate:**

Test Type: Local lymph node assay (LLNA)  
Species: Mouse  
Method: OECD Test Guideline 429  
Result: negative

**germ cell mutagenicity**

**Product:**

Genotoxicity in vitro : Remarks: In vitro tests did not show mutagenic effects  
Information given is based on data obtained from similar substances.

**Components:**

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## **Tripotassium phosphate:**

Genotoxicity in vitro : Remarks: Based on available data, the classification criteria are not met.

Genotoxicity in vivo : Result:

## **Carcinogenicity**

### **Product:**

Remarks: Contains no ingredient listed as a carcinogen

### **Components:**

#### **Tripotassium phosphate:**

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

## **Reproductive toxicity**

### **Product:**

Effects on fertility :  
Remarks: No toxicity to reproduction

Effects on foetal development : Remarks: Contains no ingredient listed as toxic to reproduction

### **Components:**

#### **Tripotassium phosphate:**

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: Based on available data, the classification criteria are not met.

## **STOT - single exposure**

### **Product:**

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

### **Components:**

#### **Tripotassium phosphate:**

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

#### **disodium metasilicate:**

Assessment: May cause respiratory irritation.

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## STOT - repeated exposure

### Product:

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

### Components:

#### **Tripotassium phosphate:**

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

## Repeated dose toxicity

### Components:

#### **Tripotassium phosphate:**

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

## Aspiration hazard

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

## 11.2 Information on other hazards

### Endocrine disrupting properties

No data available

### Further information

#### Product:

Remarks: Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product:

Toxicity to fish : Remarks: No data available

#### Components:

##### **potassium hydroxide:**

Toxicity to fish : LC50 (Fish): 50 - 165 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 30 - 1.000 mg/l  
aquatic invertebrates Exposure time: 48 h

##### **Tripotassium phosphate:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

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Exposure time: 96 h  
Test Type: semi-static test  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 100 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202

Toxicity to algae : (Desmodesmus subspicatus (green algae)): > 100 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201

Toxicity to bacteria : (activated sludge): 1.000 mg/l  
Exposure time: 3 h  
Test Type: static test  
Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity) : Remarks: No data available

Ecotoxicology Assessment

## 12.2 Persistence and degradability

### Product:

Biodegradability : Remarks: The product works in the soil as fertilizer and is diminished in a few weeks.

## 12.3 Bioaccumulative potential

### Product:

Bioaccumulation : Remarks: No data available

### Components:

#### **Tripotassium phosphate:**

Partition coefficient: n-octanol/water : Remarks: Not applicable

## 12.4 Mobility in soil

### Product:

Mobility : Remarks: No data available

## 12.5 Results of PBT and vPvB assessment

### Product:

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Assessment : Remarks: No data available

**Components:**

**Tripotassium phosphate:**

Assessment : Remarks: No data available

## 12.6 Endocrine disrupting properties

No data available

## 12.7 Other adverse effects

**Product:**

Additional ecological information : See information supplied by the manufacturer.  
Do not flush into surface water or sanitary sewer system.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Must not be disposed together with household garbage. Do not allow product to reach sewage system.  
Check if agriculture use is possible.

Contaminated packaging : Dispose of as unused product.  
Observe national and local legal requirements.

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## SECTION 14: Transport information

### 14.1 UN number or ID number

ADN : UN 1719

ADR : UN 1719

RID : UN 1719

IMDG : UN 1719

IATA : UN 1719

### 14.2 UN proper shipping name

ADN : CAUSTIC ALKALI LIQUID, N.O.S.  
(potassium hydroxide, disodium metasilicate)

ADR : CAUSTIC ALKALI LIQUID, N.O.S.  
(potassium hydroxide, disodium metasilicate)

RID : CAUSTIC ALKALI LIQUID, N.O.S.  
(potassium hydroxide, disodium metasilicate)

IMDG : CAUSTIC ALKALI LIQUID, N.O.S.

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**IATA** (potassium hydroxide, disodium metasilicate)  
: Caustic alkali liquid, n.o.s.  
(potassium hydroxide, disodium metasilicate)

## 14.3 Transport hazard class(es)

**ADN** : 8  
**ADR** : 8  
**RID** : 8  
**IMDG** : 8  
**IATA** : 8

## 14.4 Packing group

**ADN**  
Packing group : III  
Classification Code : C5  
Hazard Identification Number : 80  
Labels : 8

**ADR**  
Packing group : III  
Classification Code : C5  
Hazard Identification Number : 80  
Labels : 8  
Tunnel restriction code : (E)

**RID**  
Packing group : III  
Classification Code : C5  
Hazard Identification Number : 80  
Labels : 8

**IMDG**  
Packing group : III  
Labels : 8  
EmS Code : F-A, S-B  
Segregation group : 18: Alkalis

**IATA**  
Packing instruction (cargo aircraft) : 856  
Packing instruction (passenger aircraft) : 852  
Packing instruction (LQ) : Y841  
Packing group : III  
Labels : 8

## 14.5 Environmental hazards

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## **ADN**

Environmentally hazardous : no

## **ADR**

Environmentally hazardous : no

## **RID**

Environmentally hazardous : no

## **IMDG**

Marine pollutant : no

### **14.6 Special precautions for user**

Not applicable

### **14.7 Maritime transport in bulk according to IMO instruments**

Remarks : Not relevant

## **SECTION 15: Regulatory information**

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

Water hazard class : WGK 1 slightly hazardous to water  
(Germany)

### **15.2 Chemical safety assessment**

A Chemical Safety Assessment is not required for this substance.

## **SECTION 16: Other information**

### **Full text of H-Statements**

H290 : May be corrosive to metals.  
H302 : Harmful if swallowed.  
H314 : Causes severe skin burns and eye damage.  
H318 : Causes serious eye damage.  
H335 : May cause respiratory irritation.

### **Full text of other abbreviations**

Acute Tox. : Acute toxicity  
Eye Dam. : Serious eye damage  
Met. Corr. : Corrosive to metals  
Skin Corr. : Skin corrosion  
STOT SE : Specific target organ toxicity - single exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the

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Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

## Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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