

## Hakaphos basis 3 3+15+36+4

Version: 2.3

Revision Date:  
28.11.2019

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

#### 1.1 Product identifier

Trade name : Hakaphos basis 3 3+15+36+4

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

Use of the Sub-  
stance/Mixture : Fertilizer

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

Company : COMPO EXPERT GmbH  
Kroegerweg 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  
responsible for the SDS : info@compo-expert.com

#### 1.4 Emergency telephone number

Quality / Safety / Environment  
Telephone:+49 (0) 2151 - 579 - 0

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Serious eye damage, Category 1 H318: Causes serious eye damage.

#### 2.2 Label elements

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

Hazard pictograms :



Signal word : Danger

Hazard statements : H318 Causes serious eye damage.

Precautionary statements : **Prevention:**  
P280 Wear protective gloves/ protective clothing/  
eye protection/ face protection.

**Response:**

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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 or doctor/ physician.

### 2.3 Other hazards

Contact with eyes may cause irritation.  
This product is a mixture. Health hazard information is based on its components.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Mixture of nutrient salts based on various inorganic salts.

#### Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
potassium nitrate	7757-79-1 231-818-8 01-2119488224-35-XXXX	Ox. Sol. 3; H272	>= 10 - <= 40
potassium hydrogensulphate	7646-93-7 231-594-1	Skin Corr. 1B; H314 STOT SE 3; H335	>= 2 - <= 10

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 : Move to fresh air.  
If symptoms persist, call a physician.  
If unconscious place in recovery position and seek medical advice.

In case of skin contact : Wash off with soap and water.

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.

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

Symptoms : No information available.

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### 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  
Water spray  
Dry chemical

Unsuitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
Foam  
Sand

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

Specific hazards during fire-fighting : Can decompose at above 130 °C. Thermal decomposition products: Nitrogen monoxide, nitrogen dioxide, dinitrogen oxide, ammonia, chloride, hydrogen chloride.

### 5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

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 : Remove all sources of ignition.

### 6.2 Environmental precautions

Environmental precautions : Do not empty into drains.  
Retain and dispose of contaminated wash water.

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

Methods for cleaning up : Use mechanical handling equipment.

### 6.4 Reference to other sections

For personal protection see section 8.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling : not required under normal use

Advice on protection against : The product is not flammable.

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fire and explosion

Hygiene measures : 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 : To maintain product quality, do not store in heat or direct sunlight. Keep away from sources of ignition - No smoking. Keep away from combustible material. Protect from contamination. Protect from moisture.

Storage class (TRGS 510) : 13, Non Combustible Solids

### 7.3 Specific end use(s)

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

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
potassium nitrate	Workers	Inhalation	Systemic effects	36,7 mg/m <sup>3</sup>
	Workers	Skin contact	Systemic effects	20,8 mg/kg
Remarks:	Exposure time: 1 d			
	Consumers	Ingestion	Systemic effects	12,5 mg/kg
Remarks:	Exposure time: 1 d			
	Consumers	Skin contact	Systemic effects	12,5 mg/kg
Remarks:	Exposure time: 1 d			
	Consumers	Inhalation	Systemic effects	10,9 mg/m <sup>3</sup>

#### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
potassium nitrate	Fresh water	0,45 mg/l
	Marine water	0,045 mg/l
	Ceiling Limit Value	4,5 mg/l
	Sewage treatment plant	18 mg/l

### 8.2 Exposure controls

#### Personal protective equipment

Eye protection : In case of dust formation:

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Tightly fitting safety goggles

Hand protection  
Material

: Gloves

Skin and body protection

: Wearing of closed work clothing is recommended.

Respiratory protection

: respiratory protection only if aerosol or dust is formed.

### Environmental exposure controls

General advice

: Do not empty into drains.  
Retain and dispose of contaminated wash water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance

: crystalline

Colour

: various

Odour

: odourless

pH

: ca. 5, Concentration: 100 g/l (20 °C)

Melting point/range

: No data available

Boiling point/boiling range

: Not applicable

Flash point

: Not applicable

Evaporation rate

: Not applicable

Flammability (solid, gas)

: The product is not flammable.

Upper explosion limit

: Not applicable

Lower explosion limit

: Not applicable

Vapour pressure

: Not applicable

Relative vapour density

: Not applicable

Relative density

: Not applicable

Bulk density

: ca. 1.370 kg/m<sup>3</sup>

Solubility(ies)

Water solubility

: soluble

Partition coefficient: n-  
octanol/water

: Not applicable

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Decomposition temperature	:	ca. 130 °C To avoid thermal decomposition, do not overheat.
Viscosity		
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable
Explosive properties	:	Not explosive
Oxidizing properties	:	
		Method: Manual of tests and criteria. Test O.1 (United Nations Recommendations on the Transport of Dangerous Goods).

### 9.2 Other information

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 : No decomposition if stored and applied as directed.

### 10.4 Conditions to avoid

Conditions to avoid : Temperature 130 degrees Celsius  
Heat, flames and sparks.

### 10.5 Incompatible materials

Materials to avoid : Acids  
Bases  
Organic materials  
Powdered metals

### 10.6 Hazardous decomposition products

Hazardous decomposition products : Nitrogen oxides (NO<sub>x</sub>)  
ammonia

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## SECTION 11: Toxicological information

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### 11.1 Information on toxicological effects

#### Acute toxicity

**Product:**

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg

**Components:**

**potassium nitrate:**

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0,527 mg/l

Acute dermal toxicity : LD50 (Rat): > 5.000 mg/kg

**potassium hydrogensulphate:**

Acute oral toxicity : LD50 Oral (Rat): 2.340 mg/kg

#### Skin corrosion/irritation

**Product:**

Result: No skin irritation

Remarks: Calculation method

**Components:**

**potassium nitrate:**

Species: Rabbit

Result: No skin irritation

#### Serious eye damage/eye irritation

**Product:**

Result: Serious eye damage

Remarks: Calculation method

**Components:**

**potassium nitrate:**

Species: Rabbit

Result: No eye irritation

#### Respiratory or skin sensitisation

**Product:**

Result: non-sensitizing

**Components:**

**potassium nitrate:**

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Result: non-sensitizing

### Germ cell mutagenicity

**Product:**

Genotoxicity in vitro : Remarks: Contains no hazardous ingredients according to GHS

**Components:**

**potassium nitrate:**

Genotoxicity in vitro : Remarks: No data available

### Carcinogenicity

**Product:**

Remarks: Contains no ingredient listed as a carcinogen

**Components:**

**potassium nitrate:**

Remarks: Did not show carcinogenic effects in animal experiments.

### Reproductive toxicity

**Product:**

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

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

**Components:**

**potassium nitrate:**

Effects on fertility :  
Remarks: No toxicity to reproduction

Effects on foetal development : Remarks: Did not show teratogenic effects in animal experiments.

### STOT - single exposure

**Product:**

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

**Components:**



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### **potassium nitrate:**

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

### **STOT - repeated exposure**

#### **Product:**

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

#### **Components:**

##### **potassium nitrate:**

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

### **Repeated dose toxicity**

#### **Components:**

##### **potassium nitrate:**

Species: Rat  
NOAEL:  $\geq 1.500$  mg/kg  
Exposure time: 1 d

### **Experience with human exposure**

#### **Product:**

General Information : Danger of methaemoglobin formation.

### **Further information**

#### **Product:**

Remarks: The toxicological data has been taken from products of similar composition.

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## **SECTION 12: Ecological information**

### **12.1 Toxicity**

#### **Product:**

Ecotoxicology Assessment  
Toxicity Data on Soil : Not expected to adsorb on soil.

#### **Components:**

##### **potassium nitrate:**

Toxicity to fish : LC50 (Fish):  $> 100$  mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 490 mg/l

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aquatic invertebrates Exposure time: 48 h

Toxicity to algae : LC50 :  $\geq$  1.700 mg/l  
Exposure time: 10 d

**potassium hydrogensulphate:**

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 3.500 mg/l

### 12.2 Persistence and degradability

**Components:**

**potassium nitrate:**

Biodegradability : Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.

### 12.3 Bioaccumulative potential

**Product:**

Bioaccumulation : Remarks: Does not accumulate in organisms.

**Components:**

**potassium nitrate:**

Bioaccumulation : Remarks: Does not bioaccumulate.

### 12.4 Mobility in soil

**Product:**

Distribution among environmental compartments : Remarks: Slightly mobile in soils

**Components:**

**potassium nitrate:**

Mobility : Remarks: No data available

### 12.5 Results of PBT and vPvB assessment

**Product:**

Assessment : Remarks: No data available

**Components:**

**potassium nitrate:**

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB)..

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### 12.6 Other adverse effects

**Product:**

Additional ecological information : No reports of ill effects provided the product was correctly handled and processed.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Check if agriculture use is possible.  
Contact manufacturer.

Contaminated packaging : Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

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## SECTION 14: Transport information

### 14.1 UN number

Not regulated as a dangerous good

### 14.2 UN proper shipping name

Not regulated as a dangerous good

### 14.3 Transport hazard class(es)

Not regulated as a dangerous good

### 14.4 Packing group

Not regulated as a dangerous good

### 14.5 Environmental hazards

Not regulated as a dangerous good

### 14.6 Special precautions for user

Not applicable

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Remarks : Not relevant

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## SECTION 15: Regulatory information

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

Water contaminating class (Germany) : WGK 1 slightly water endangering

### 15.2 Chemical Safety Assessment

Not relevant

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## SECTION 16: Other information

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### Full text of H-Statements

H272	: May intensify fire; oxidizer.
H314	: Causes severe skin burns and eye damage.
H335	: May cause respiratory irritation.

### Full text of other abbreviations

Ox. Sol.	: Oxidizing solids
Skin Corr.	: Skin corrosion
STOT SE	: Specific target organ toxicity - single exposure

(Q)SAR - (Quantitative) Structure Activity Relationship; ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; DIN - Standard of the German Institute for Standardization; 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; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; 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; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; 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; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; 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; TRGS - Technical Rule for Hazardous Substances; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice

### 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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**Material Safety Data Sheet**  
according to Regulation (EC) No. 1907/2006

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