



## KALISOP<sup>®</sup> granular max. 1.0 % Cl

Version: 3.2

Revision Date: 16.01.2012

### 1. Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Trade name : KALISOP<sup>®</sup> granular max. 1.0 % Cl  
Registration number : 01-2119489441-34-0018

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

Use of the Substance/Mixture : Fertilizers

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

**Company** : K+S KALI GmbH  
Bertha-von-Suttner-Str. 7  
34131 Kassel  
Germany  
Telephone : +49-(0)561-9301-0  
Telefax : +49-(0)561-9301-1753  
E-mail address : info@kali-gmbh.com

#### 1.4 Emergency telephone number

Giftinformationszentrale Nord, Göttingen, Germany  
Telephone: +49 (0)551 19240

### 2. Hazards identification

#### 2.1 Classification of the substance or mixture

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

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

##### Classification(67/548/EEC,1999/45/EC)

This substance is not classified as dangerous according to Directive 67/548/EEC.

#### 2.2 Label elements

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

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

##### Labelling according to EC Directives ( )

Further information : The product does not need to be labelled in accordance with EC directives or respective national laws.

#### 2.3 Other hazards

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).  
This substance is not considered to be very persistent nor very bioaccumulating (vPvB).



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### 3. Composition/information on ingredients

#### 3.1 Substances

Chemical Name	CAS-No. EINECS-No. / ELINCS No.	Concentration [%]
Potassium Sulfate (K <sub>2</sub> SO <sub>4</sub> )	7778-80-5 231-915-5	> 91

### 4. First aid measures

#### 4.1 Description of first aid measures

- General advice : When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If breathed in, move person into fresh air.
- In case of skin contact : Rinse with water.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
- 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.

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

- Treatment : For specialist advice physicians should contact the Poisons Information Service.

### 5. Firefighting measures

#### 5.1 Extinguishing media

- Suitable extinguishing media : The product is not flammable.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : none

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

- Specific hazards during firefighting : Heating or fire can release toxic gas.  
Sulphur oxides

#### 5.3 Advice for firefighters

- Special protective equipment for firefighters : Respiratory protection
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.



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### 6. Accidental release measures

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

Personal precautions : Avoid breathing dust.

#### 6.2 Environmental precautions

Environmental precautions : Do not let product enter drains.

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

Methods for cleaning up : Sweep up and shovel into suitable containers for disposal.  
After cleaning, flush away traces with water.

#### 6.4 Reference to other sections

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### 7. Handling and storage

#### 7.1 Precautions for safe handling

Advice on safe handling : Avoid dust formation.  
No special precautions required.

Advice on protection against fire and explosion : The product is not flammable.  
No special protective measures against fire required.

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

Requirements for storage areas and containers : Keep in a dry place.  
Advice on common storage : No special restrictions on storage with other products.

German storage class : 13 Non Combustible Solids

Other data : Stable under recommended storage conditions.

#### 7.3 Specific end uses

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### 8. Exposure controls/personal protection

#### 8.1 Control parameters

DNEL : End Use: Workers  
Exposure routes: Skin contact  
Potential health effects: Chronic effects  
Value: 21,3 mg/kg

DNEL : End Use: Workers  
Exposure routes: Inhalation  
Potential health effects: Chronic effects  
Value: 37,6 mg/m<sup>3</sup>



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DNEL	:	End Use: Consumers Exposure routes: Skin contact Potential health effects: Chronic effects Value: 12,8 mg/kg
DNEL	:	End Use: Consumers Exposure routes: Inhalation Potential health effects: Chronic effects Value: 11,1 mg/m <sup>3</sup>
DNEL	:	End Use: Consumers Exposure routes: Ingestion Potential health effects: Chronic effects Value: 12,8 mg/kg
PNEC	:	Fresh water Value: 0,68 mg/l
PNEC	:	Marine water Value: 0,068 mg/l
PNEC	:	Ceiling Limit Value Value: 6,8 mg/l

### 8.2 Exposure controls

#### Engineering measures

Provide adequate ventilation.

#### Personal protective equipment

Respiratory protection	:	Effective dust mask.
Hand protection	:	not required under normal use
Eye protection	:	No special protective equipment required.
Skin and body protection	:	No special protective equipment required. Wear suitable protective clothing.
Hygiene measures	:	When using do not eat or drink. Wash hands before breaks and at the end of workday.
Protective measures	:	No special precautions required. Do not breathe dust.

#### Environmental exposure controls

General advice : Do not let product enter drains.

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## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance : granular



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Colour	: light grey
Odour	: very faint
pH	: ca. 8 - 9, 25 °C, Aqueous solution
Melting point/range	: 1.069 °C
Flash point	: Not applicable
Density	: 2,66 g/cm <sup>3</sup>
Water solubility	: 108 g/l, 20 °C
Autoignition temperature	: none
Thermal decomposition	: > 700 °C
Explosive properties	: none
Oxidizing properties	: none

### 9.2 Other information

Bulk density : ca. 1.250 kg/m<sup>3</sup>

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## 10. Stability and reactivity

### 10.1 Reactivity

Stable

### 10.2 Chemical stability

No decomposition if stored and applied as directed.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

### 10.4 Conditions to avoid

Conditions to avoid : None known.

### 10.5 Incompatible materials

Materials to avoid : None known.

### 10.6 Hazardous decomposition products

Hazardous decomposition products : No decomposition if stored and applied as directed.

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## 11. Toxicological information

### 11.1 Information on toxicological effects

#### Product

Acute oral toxicity	: LD50: > 2.000 mg/kg, rat, OECD 425
Acute inhalation toxicity	: LC50: > 1,2 mg/l, OECD Guideline 433
Acute dermal toxicity	: LD50: > 2.000 mg/kg, rat, OECD Test Guideline 402
Skin corrosion/irritation	: Result: No skin irritation, EU Method B.46
Serious eye damage/eye	: rabbit, Result: No eye irritation, OECD Test Guideline 405



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### irritation

Respiratory or skin sensitization : Result: Does not cause skin sensitization., OECD Guideline 429

### Germ cell mutagenicity

Genotoxicity in vitro : Result: negative, Mutagenicity (Escherichia coli - reverse mutation assay)

Genotoxicity in vivo : no data available

Assessment : Not mutagenic in Ames Test.

### Carcinogenicity

: rat, OECD Test Guideline 453

Did not show carcinogenic or mutagenic effects in animal experiments.

### Reproductive toxicity

: rat, NOAEL:  $\geq$  1.500 mg/kg, OECD Guideline 422

Assessment: Animal testing did not show any effects on fertility.

### Teratogenicity

: rat, NOAEL:  $\geq$  1.500 mg/kg, OECD Guideline 422

Assessment: Did not show mutagenic or teratogenic effects in animal experiments.

STOT - repeated exposure : rat, Oral, NOAEL: 256 mg/kg, OECD Test Guideline 453

Further information : Health injuries are not known or expected under normal use.

## 12. Ecological information

### 12.1 Toxicity

#### Product:

Toxicity to fish : LC50: 680 mg/l, 96 h, Pimephales promelas (fathead minnow), USEPA 1991 EPA/600/4-90/027

Toxicity to daphnia and other aquatic invertebrates. : LC50: 720 mg/l, 48 h, Daphnia magna (Water flea), USEPA 1991 EPA/600/4-90/027

Toxicity to algae : EC50: 2.700 mg/l, 18 DAY, Chlorella vulgaris (Fresh water algae)

Toxicity to bacteria : EC20:  $>$  20 g/l, 16 h, Pseudomonas putida, DIN 38412

### 12.2 Persistence and degradability

#### Product:

Biodegradability : The methods for determining biodegradability are not



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applicable to inorganic substances.

### 12.3 Bioaccumulative potential

#### Product:

Bioaccumulation : Bioaccumulation is unlikely.

### 12.4 Mobility in soil

#### Product:

Mobility : Not applicable  
Distribution among : Not applicable  
environmental compartments  
Physico-chemical : Not applicable  
removability

### 12.5 Results of PBT and vPvB assessment

#### Product:

Assessment : This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).  
This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

### 12.6 Other adverse effects

#### Product:

Adsorbed organic bound : Not applicable  
halogens (AOX)

## 13. Disposal considerations

### 13.1 Waste treatment methods

Product : Check if agriculture use is possible.  
Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

### 14.1 Land transport

#### ADR

Remarks : Not a dangerous substance as defined in the above regulations.  
Tunnel restriction code : Not relevant

### 14.2 Sea transport

#### ADNR

Remarks : Not classified as dangerous in the meaning of transport regulations.

#### IMDG

Remarks : Not classified as dangerous in the meaning of transport regulations.



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### **14.3 Air transport**

#### **IATA-DGR**

Remarks : Not classified as dangerous in the meaning of transport regulations.

### **14.4 Special precautions for user**

Not relevant

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

## **15. Regulatory information**

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

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

#### **Notification status**

REACH : This substance has been registered according to Regulation  
(EC) No. 1907/2006 (REACH).

### **15.2 Chemical Safety Assessment**

A Chemical Safety Assessment has been carried out for this substance.

## **16. Other 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.