



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

Printing date 29.08.2017

Version number 13

Revision: 29.08.2017

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

- **1.1 Product identifier**
- **Trade name: KEIM KÜNSTLERFARBEN**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the mixture**  
Inorganic pigment paste for painting in KEIM-A-technique.
- **Uses advised against** All other uses are not recommended.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
KEIMFARBEN GMBH  
Keimstraße 16 / 86420 Diedorf  
Tel. +49 (0)821 4802-0  
Fax +49 (0)821 4802-210  
www.keim.com / info@keimfarben.de
- **Further information obtainable from:**  
Product safety department  
Telefon: 49(0)821/4802-138  
E-Mail: sdb.info@keimfarben.de
- **1.4 Emergency telephone number:**  
GBK GmbH Global Regulatory Compliance  
Emergency number: +49(0)6132/84463

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS09

- **Signal word** Void
- **Hazard statements**  
H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements**  
P102 Keep out of reach of children.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P273 Avoid release to the environment.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Paint-paste from purely inorganic pigments, fillers and water.

- **Dangerous components:**

CAS: 1314-13-2 EINECS: 215-222-5 Index number: 030-013-00-7 Reg.nr.: 01-2119463881-32-XXXX	zinc oxide ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	10-25%
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- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** When seeing the doctor we suggest to present this safety data sheet.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
Do not use solvents or thinners.  
If skin irritation continues, consult a doctor.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Rinse mouth and throat well with water.  
Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **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:**  
Product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
metal oxide

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- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information** In case of fire do not breathe smoke, fumes and vapours.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Product forms slippery surface when combined with water.  
Avoid contact with skin and eyes.  
Ensure adequate ventilation
- **6.2 Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
Follow local governmental rules and regulations.
- **6.3 Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Dispose of the material collected according to regulations.  
Clear contaminated areas thoroughly.  
Flush rests with sufficient amount of water.
- **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 disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Keep receptacles tightly sealed.  
Avoid contact with skin and eyes.  
See item 8 for information about suitable protective equipment and technical precautions. Respect the protection rules.
- **Information about fire - and explosion protection:**  
The product is not flammable.  
No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Keep in the original containers in a cool and dry place.  
Store only in unopened original receptacles.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Protect from frost.  
Protect from heat and direct sunlight.
- **Storage class:** 12

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- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

#### · 8.1 Control parameters

##### · **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

##### · **DNELs**

###### **1314-13-2 zinc oxide**

Oral	Long-term - systemic effects, consumer	0.83 mg/kg/day (consumer) (50 mg Zn/day)
Dermal	Long-term - systemic effects, worker	83 mg/kg bw/day (worker)
	Long-term - systemic effects, consumer	83 mg/kg/day (consumer) (5000 mg Zn/day)
Inhalative	Long-term - systemic effects, worker	5 mg/m <sup>3</sup> (worker)
	Long-term - systemic effects, consumer	2.5 mg/m <sup>3</sup> (consumer)
	Long-term - local effects, worker	0.5 mg/m <sup>3</sup> (worker)

##### · **PNECs**

###### **1314-13-2 zinc oxide**

Aquatic compartment - freshwater	0.0206 mg/l (freshwater)
Aquatic compartment - marine water	0.0061 mg/l (marine water)
Aquatic compartment - sediment in freshwater	117.8 mg/kg sed dw (sediment fresh water)
Aquatic compartment - sediment in marine water	56.5 mg/kg sed dw (sediment marine water)
Terrestrial compartment - soil	35.6 mg/kg dw (soil)
Sewage treatment plant	0.1 mg/l (sewage treatment plant)

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

#### · 8.2 Exposure controls

##### · **Personal protective equipment:**

##### · **General protective and hygienic measures:**

Avoid contact with the eyes and skin.

Do not inhale aerosols.

Wash hands before breaks and at the end of work.

Immediately remove all soiled and contaminated clothing

- **Respiratory protection:** Not necessary if room is well-ventilated.

- **Protection of hands:** Protective gloves

##### · **Material of gloves**

suitable material e.g.:

Nitrile rubber, NBR

Recommended thickness of the material:  $\geq 0.4$  mm

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. As the product is a 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.

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**· Penetration time of glove material**

The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

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

**· Eye protection:** Goggles recommended during refilling**· Body protection:** Protective work clothing**· Limitation and supervision of exposure into the environment** See Section 12 and 6.2**SECTION 9: Physical and chemical properties****· 9.1 Information on basic physical and chemical properties****· General Information****· Appearance:****Form:**

Pasty

**Colour:**

Different, according to colouring.

**· Odour:**

Weak, characteristic

**· Odour threshold:**

Not determined.

**· pH-value at 20°C:**

~7\*

**· Change in condition****Melting point/freezing point:**

Undetermined.

**Initial boiling point and boiling range:** Undetermined.**· Flash point:**

Not applicable.

**· Flammability (solid, gas):**

Not applicable.

**· Ignition temperature:**

Not determined.

**· Decomposition temperature:**

Not determined.

**· Auto-ignition temperature:**

Product is not selfigniting.

**· Explosive properties:**

Product does not present an explosion hazard.

**· Explosion limits:****Lower:**

Not applicable.

**Upper:**

Not applicable.

**· Vapour pressure:**

Not determined.

**· Density at 20°C:**1.3-1.5\* g/cm<sup>3</sup>**· Relative density**

Not determined.

**· Vapour density**

Not applicable.

**· Evaporation rate**

Not applicable.

**· Solubility in / Miscibility with water:**

miscible

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- **Partition coefficient: n-octanol/water:** Not applicable.
- **Viscosity:**
  - Dynamic:** Not determined.
  - Kinematic:** Not determined.
- **9.2 Other information** \* The values are for freshly produced material and may change with the time.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** Stable under normal conditions of storage and use.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No hazardous decomposition products if stored and handled as prescribed.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:**

1314-13-2 zinc oxide		
Oral	LD50	>5,000 mg/kg (rat)
Inhalative	LC50/4 h	>5.7 mg/l (rat)
- **Primary irritant effect:**
- **Skin corrosion/irritation** not primarily irritating on the skin
- **Serious eye damage/irritation** In case of longer exposure, slightly irritating effect is possible.
- **during inhalation:** Irritant effect possible.
- **during swallowing:** Irritant effect possible
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Other information (about experimental toxicology):** Experimental analysis are not available. The product was not tested. The statements on toxicology have been derived from the properties of the individual components.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** not applicable
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.

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- **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

Toxic to aquatic organisms.

May cause long-term adverse effects in the aquatic environment.

1314-13-2 zinc oxide	
EC 50/48h	0.67 mg/l (daphnia)
ErC50/72h	0.21 mg/l (algae) (pH >7 - 8,5; Zn (ZnO))

- **12.2 Persistence and degradability** No further relevant information available.

- **12.3 Bioaccumulative potential** No further relevant information available.

- **12.4 Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **AOX-indication:**

Due to the substance of content which do not include organic jointed halogens, the product can not take influence on the AOX-load of the waste water.

- **According to the formulation contains the following heavy metals and compounds from the EU guideline NO. 2006/11/EC:**

The product contains ZnO.

- **General notes:**

The product contains materials that are harmful to the environment.

Toxic for aquatic organisms

Do not allow product to reach ground water, water course or sewage system.

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

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

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation**

Must not be disposed with household garbage. Do not allow product to reach sewage system.

Disposal must be made according to official regulations.

European waste catalogue	
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances

- **Uncleaned packaging:**

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

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- **Recommended cleansing agents:** Water, if necessary with cleansing agents.

### SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	UN3082
· 14.2 UN proper shipping name · ADR · IMDG · IATA	3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ZINC OXIDE) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ZINC OXIDE), MARINE POLLUTANT ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ZINC OXIDE)
· 14.3 Transport hazard class(es) · ADR, IMDG, IATA 	· Class 9 Miscellaneous dangerous substances and articles. · Label 9
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant: · Special marking (ADR): · Special marking (IATA):	Product contains environmentally hazardous substances: ZINC OXIDE Symbol (fish and tree) Symbol (fish and tree) Symbol (fish and tree)
· 14.6 Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category	Warning: Miscellaneous dangerous substances and articles. 90 F-A,S-F A
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information: · ADR · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml

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·	Maximum net quantity per outer packaging: 1000 ml
· <b>Transport category</b>	3
· <b>Tunnel restriction code</b>	E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ZINC OXIDE), 9, III

### 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**  
For information on labelling please refer to section 2 of this document.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category E2** Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **National regulations:**
- **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- **Other regulations, limitations and prohibitive regulations**
- **Substances of very high concern (SVHC) according to REACH, Article 57** not applicable
- **Product-Code/Giscode:** BSW50
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.
- **Department issuing SDS:** KEIMFARBEN Germany, Product safety department
- **Abbreviations and acronyms:**  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods

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IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified 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  
PBT: Persistent, Bioaccumulative and Toxic  
SVHC: Substances of Very High Concern  
vPvB: very Persistent and very Bioaccumulative  
AGW: Arbeitsplatzgrenzwert (Germany)  
EC10: Effective concentration at 10% mortality rate.  
EC50: Half maximal effective concentration.  
LC10: Lethal concentration at 10% mortality rate.  
NOEC: No observed effect concentration.  
REACH: Registration, Evaluation and Authorisation of Chemicals (Regulation (EC) No.1907/2006)  
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1  
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1  
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2  
· **\* Data compared to the previous version altered.**

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