



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

Printing date 25.07.2017

Version number 12

Revision: 25.07.2017

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

- **1.1 Product identifier**
- **Trade name:** **KEIM Purkristalat-Farbpulver**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the mixture** Paint-powder for two component silicate paint
- **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 3 H412 Harmful 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** Void
- **Signal word** Void
- **Hazard statements**
H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements**
P102 Keep out of reach of children.
P273 Avoid release to the environment.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.



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SECTION 3: Composition/information on ingredients

3.2 Mixtures**Description:**

Paint powder based on silicatic and calcitic fillers as well as titanium dioxide and anorganic paint pigments

Dangerous components:

CAS: 7727-43-7 EINECS: 231-784-4 Reg.nr.: 01-2119491274-35	barium sulphate, natural substance with a Community workplace exposure limit	10-25%
CAS: 1314-98-3 EINECS: 215-251-3 Reg.nr.: 01-2119475779-15-xxxx	zinc sulphide substance with a Community workplace exposure limit	2.5-10%
CAS: 13463-67-7 EINECS: 236-675-5 Reg.nr.: 01-2119489379-17-xxxx	titanium dioxide substance with a Community workplace exposure limit	2.5-10%
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	≤2.5%

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:**

Seek medical treatment in case of complaints.

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:

Wash off immediately with water and soap and rinse well afterwards.

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.

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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**
No further relevant information available.
- **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.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Avoid formation of dust.
Use respiratory protective device against the effects of fumes/dust/aerosol.
Respect the protection rules (see section 7 a. 8).
Avoid contact with skin and eyes.
Do not inhale dust.
- **6.2 Environmental precautions:**
Do not allow product to reach soil, 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.
Avoid formation of dust.
Dispose of the material collected according to regulations.
Clear contaminated areas thoroughly.
- **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.
Prevent formation of dust.
Do not inhale dust.
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.

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No special measures required.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

Store only in the original receptacle.

Suitable material for receptacles:

Paper

Polyethylene

- **Information about storage in one common storage facility:** Not required.

- **Further information about storage conditions:**

Avoid dust formations and deposits.

Protect from humidity and water.

Store in cool, dry conditions in well sealed receptacles.

Protect from frost.

Protect from heat and direct sunlight.

- **Storage class:** 13

- **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:**

General Threshold Limit Value for Dust:

total dust (inhalable fraction) MAK 4 mg/m³

7727-43-7 barium sulphate, natural	
AGW (Germany)	Long-term value: 1.25* 10** mg/m ³ 2(II);*alveolengängig**eintembar; AGS, DFG
1314-98-3 zinc sulphide	
MAK (Germany)	Long-term value: 0.1A* 2E** mg/m ³ *alveolengängig; **eintembar
13463-67-7 titanium dioxide	
AGW (Germany)	Long-term value: 1.25* 10** mg/m ³ 2(II);*alveolengängig**eintembar; AGS, DFG
1314-13-2 zinc oxide	
MAK (Germany)	Long-term value: 1A mg/m ³ Rauch

- **DNELs**

7727-43-7 barium sulphate, natural		
Oral	Long-term - systemic effects, consumer	13,000 mg/kg/day (consumer)
Inhalative	Long-term - systemic effects, worker	10 mg/m ³ (worker)
	Long-term - systemic effects, consumer	10 mg/m ³ (consumer)
	Long-term - local effects, worker	10 mg/m ³ (worker)

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1314-98-3 zinc sulphide		
Inhalative	Acute - local effects, worker	5 (worker) (insoluble Zn)
13463-67-7 titanium dioxide		
Oral	Long-term - systemic effects, consumer	700 mg/kg/day (consumer)
Inhalative	Long-term - local effects, worker	10 mg/m ³ (worker)
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 ³ (worker)
	Long-term - systemic effects, consumer	2.5 mg/m ³ (consumer)
	Long-term - local effects, worker	0.5 mg/m ³ (worker)
· PNECs		
7727-43-7 barium sulphate, natural		
Aquatic compartment - freshwater		0.115 mg/l (freshwater)
Aquatic compartment - sediment in freshwater		600.4 mg/kg sed dw (sediment fresh water)
Terrestrial compartment - soil		207.7 mg/kg dw (soil)
Sewage treatment plant		62.2 mg/l (sewage treatment plant) (Ba)
1314-98-3 zinc sulphide		
Aquatic compartment - freshwater		0.0206 mg/l (freshwater) (PNEC acid)
Aquatic compartment - marine water		0.0061 mg/l (marine water) (PNEC acid)
Aquatic compartment - sediment in freshwater		235.6 mg/kg sed dw (sediment fresh water) (Faktor 0,5; EZB 2008)
Aquatic compartment - sediment in marine water		113 mg/kg sed dw (sediment marine water) (Faktor 0,5; EZB 2008)
Terrestrial compartment - soil		106.8 mg/kg dw (soil) (Faktor 3; EZB 2008)
Sewage treatment plant		0.052 mg/l (sewage treatment plant)
13463-67-7 titanium dioxide		
Aquatic compartment - freshwater		0.127 mg/l (freshwater)
Aquatic compartment - marine water		1 mg/l (marine water)
Aquatic compartment - water, intermittent releases		0.61 mg/l (not specified)
Aquatic compartment - sediment in freshwater		1,000 mg/kg sed dw (sediment fresh water)
Aquatic compartment - sediment in marine water		100 mg/kg sed dw (sediment marine water)
Terrestrial compartment - soil		100 mg/kg dw (soil)
Sewage treatment plant		100 mg/l (sewage treatment plant)
1314-13-2 zinc oxide		
Aquatic compartment - freshwater		0.0206 mg/l (freshwater)
Aquatic compartment - marine water		0.0061 mg/l (marine water)

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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 dust / smoke / mist.
Wash hands before breaks and at the end of work.
- **Respiratory protection:**
Use suitable respiratory protective device in case of insufficient ventilation.
Filter: P2
- **Protection of hands:** Protective gloves
- **Material of gloves**
suitable material e.g.:
Nitrile impregnated cotton-gloves
PVC or PE gloves
Recommended thickness of the material: ≥ 0.5 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.
- **Penetration time of glove material**
Value for the permeation: Level ≥ 6 (480 min)
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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**
In a dusty environment wear protective goggles.
Tightly sealed goggles
- **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: Powder
Colour: Different, according to colouring.

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· Odour:	Odourless
· pH-value:	Not applicable
· Change in condition Melting point/freezing point:	>1,300°C
Initial boiling point and boiling range:	Not applicable.
· Flash point:	Not applicable.
· Flammability (solid, gas):	Product is not flammable.
· 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.
· Oxidising properties	Not applicable.
· Vapour pressure:	Not applicable.
· Density at 20°C:	0.6-0.8* g/cm ³ (tamped density)
· Vapour density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with water:	Insoluble.
· Partition coefficient: n-octanol/water:	Not applicable.
· Viscosity: Dynamic:	Not applicable.
Kinematic:	Not applicable.
· 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** Humidity
- **10.5 Incompatible materials:** No further relevant information available.

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- **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:**

7727-43-7 barium sulphate, natural

Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
	NOAEL	>104 mg/kg (rat)

1314-98-3 zinc sulphide

Oral	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	>5.7 mg/l (rat)

13463-67-7 titanium dioxide

Oral	LD50	>5,000 mg/kg (rat) (OECD 425)
Dermal	LD50	>5,000 mg/kg (rabbit)
Inhalative	LC50/4 h	>6.8 mg/l (rat)
	NOAEL	3,500 mg/kg (rat)

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** Frequent persistent contact with the skin may cause skin irritation.
- **Serious eye damage/irritation** Product powder can cause temporary mechanical eye irritation.
- **during inhalation:**
By excess of "General Threshold Limit Value for Dust" is - comparable to inert dust - a mechanical overload of respiratory tracts 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:**

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

7727-43-7 barium sulphate, natural

NOEC	72 mg/l (algae) 3 mg/l (activated sludge) 33 mg/l (fish) 21 mg/l (daphnia)
EC 50/48h	14.5 mg/l (daphnia)
ErC50/72h	>1.15 mg/l (algae)
LC 50/96 h	>3.5 mg/l (fish)

1314-98-3 zinc sulphide

EC 50/48h	204 mg/l (daphnia) (pH <7)
EC 50/72 h	144 mg/l (algae) (pH >7 - 8,5)

13463-67-7 titanium dioxide

NOEC	10 mg/kg (daphnia)
EC 50/72 h	>10,000 mg/l (algae) 16 mg/l (freshwater alga)
LC 50/96 h	>10,000 mg/l (marine fish) >100 mg/l (freshwater fish)
LC 50/48h	>100 mg/l (daphnia)

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 TiO₂, ZnS, BaSO₄, ZnO.

· **General notes:**

The product may not be released into the environment without control.

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The product does only consist of anorganic substances; the definition of ecological data like biological degradability, COD and BOD is not expedient.

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

Water hazard class 1 (German Regulation) (Self-assessment): slightly 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**

Disposal must be made according to official regulations.

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

· **European waste catalogue**

08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
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· **Uncleaned packaging:**

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

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

SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR, IMDG, IATA**

Void

· **14.2 UN proper shipping name**

· **ADR, IMDG, IATA**

Void

· **14.3 Transport hazard class(es)**

· **ADR, IMDG, IATA**

· **Class**

Void

· **14.4 Packing group**

· **ADR, IMDG, IATA**

Void

· **14.5 Environmental hazards:**

· **Marine pollutant:**

No

· **14.6 Special precautions for user**

Not applicable.

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**

No dangerous good in sense of these transport regulations.

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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**
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.
- **National regulations:**
- **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **Other regulations, limitations and prohibitive regulations**
- **Please note:**
 - TRGS 200 (Germany)
 - TRGS 500 (Germany)
 - TRGS 510 (Germany)
 - TRGS 900 (Germany)
- **Substances of very high concern (SVHC) according to REACH, Article 57** not applicable
- **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
 - 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)
 - VOC: Volatile Organic Compounds (USA, EU)
 - 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

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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 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· * **Data compared to the previous version altered.**

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