



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

Printing date 31.07.2017

Version number 12

Revision: 31.07.2017

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

- **1.1 Product identifier**
- **Trade name: KEIM PURKRISTALAT PAINT-POWDER
(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 componet silicate paint
- **Uses advised against** All other uses are not recommended.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
KEIM MINERAL PAINTS LTD
Santok Building / Deer Park Way, Donnington Wood GB-Telford, Shropshire TF2 7NA
Tel +44 1952 231 250 / Fax +44 1952 231 251
www.keimpaints.co.uk / sales@keimpaints.co.uk
- **Further information obtainable from:**
David Pratt
Telefon: +44 1952 231250
E-Mail: sales@keimpaints.co.uk
- **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: 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.

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.

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- **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.
No special measures required.

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- **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

WEL	Long-term value: 10* 4** mg/m ³ *inhalable dust **respirable dust
-----	---------------------------------------------------------------------------------

13463-67-7 titanium dioxide

WEL	Long-term value: 10* 4** mg/m ³ *total inhalable **respirable
-----	-----------------------------------------------------------------------------

· 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)

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)

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Inhalative	Long-term - systemic effects, consumer	83 mg/kg/day (consumer) (5000 mg Zn/day)
	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)

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)
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

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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.
· Odour:	Odourless

· **pH-value:** Not applicable

· **Change in condition**

· Melting point/freezing point:	$>1,300^{\circ}\text{C}$
· 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.

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· Vapour pressure:	Not applicable.
· Density at 20°C:	0.6-0.8* g/cm ³ Stamp-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.
- **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)

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)

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	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.
- **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)
13463-67-7 titanium dioxide	
NOEC	10 mg/kg (daphnia)
EC 50/72 h	>10,000 mg/l (algae) 16 mg/l (freshwater alga)

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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.
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.

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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.
· 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

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· **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

vPvB: very Persistent and very Bioaccumulative

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.**