



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.07.2014

Version number 10

Revision: 31.07.2014

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
 Telford
 Shropshire
 TF2 7NA
 United Kingdom
 Tel: +44 1952 231250
 Fax: +44 1952 231251
 Url: <http://www.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 Gefahrgut Büro GmbH
 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.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
 R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Classification system:**
 The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **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.

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- 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.



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-XXXX	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  N R50/53  Aquatic Acute 1, H400; Aquatic Chronic 1, H410	≤ 2.5%

- **Additional information:** For the wording of the listed risk 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 breath 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
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13463-67-7 titanium dioxide

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

7727-43-7 barium sulphate, natural

Oral	Long-term - systemic effects, consumer	13000 mg/kg/day (consumer)
Inhalative	Long-term - local effects, worker	10 mg/m ³ (worker)
	Long-term - systemic effects, consumer	10 mg/m ³ (consumer)
	Long-term - systemic effects, worker	10 mg/m ³ (worker)

1314-98-3 zinc sulphide

Inhalative	Acute - local effects, worker	5 mg Zn/m ³ (worker) (insoluble Zn)
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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, consumer	83 mg/kg/day (consumer) (5000 mg Zn/day)
Inhalative	Long-term - systemic effects, consumer	2.5 mg/m ³ (consumer)

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	Long-term - systemic effects, worker	5 mg/m ³ (worker)
· PNECs		
7727-43-7 barium sulphate, natural		
Aquatic compartment - freshwater		0.2278 mg/l (freshwater)
Aquatic compartment - sediment in freshwater		792.7 mg/kg sed dw (sediment fresh water)
Sewage treatment plant		50.1 mg/l (sewage treatment plant) (Ba)
Terrestrial compartment - soil		207.7 mg/kg dw (soil)
1314-98-3 zinc sulphide		
Aquatic compartment - freshwater		(Zn) 0.0206 mg/l (freshwater) (PNEC acid)
Aquatic compartment - marine water		(Zn) 0.0061 mg/l (marine water) (PNEC acid)
Aquatic compartment - sediment in freshwater		(Zn) 235.6 mg/kg sed dw (sediment fresh water) (Faktor 0,5; EZB 2008)
Aquatic compartment - sediment in marine water		(Zn) 113 mg/kg sed dw (sediment marine water) (Faktor 0,5; EZB 2008)
Sewage treatment plant		(Zn) 0.052 mg/l (sewage treatment plant)
Terrestrial compartment - soil		(Zn) 106.8 mg/kg dw (soil) (Faktor 3; EZB 2008)
13463-67-7 titanium dioxide		
Aquatic compartment - freshwater		0.127 mg/l (freshwater)
Aquatic compartment - marine water		1 mg/l (marine water)
Aquatic compartment - sediment in freshwater		1000 mg/kg sed dw (sediment fresh water)
Aquatic compartment - sediment in marine water		100 mg/kg sed dw (sediment marine water)
Aquatic compartment - water, intermittent releases		0.61 mg/l (freshwater)
Sewage treatment plant		100 mg/l (sewage treatment plant)
Terrestrial compartment - soil		100 mg/kg dw (soil)
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)
Sewage treatment plant		0.052 mg/l (sewage treatment plant)
Terrestrial compartment - soil		35.6 mg/kg dw (soil)

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

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- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not inhale dust / smoke / mist.
- **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.
- **Eye protection:**
In a dusty environment wear protective goggles.
Tightly sealed goggles
- **Body protection:** Protective work clothing

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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/Melting range:	> 1300 °C
Boiling point/Boiling range:	Not applicable.
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Product is not flammable.
- **Ignition temperature:**
- **Decomposition temperature:** Not determined.

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· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits: Oxidizing properties	Not applicable.
· Vapour pressure:	Not applicable
· Density at 20 °C:	0.95* g/cm ³ Bulk density
· Vapour density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with water:	Insoluble.
· Partition coefficient (n-octanol/water):	Not applicable.
· Viscosity: Dynamic: Kinematic:	Not applicable. 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**
- **10.2 Chemical stability**
- **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:**

· LD/LC50 values relevant for classification:		
7727-43-7 barium sulphate, natural		
Oral	LD50	> 5000 mg/kg (rat)
1314-98-3 zinc sulphide		
Oral	LD50	> 2000 mg/kg (rat)
Inhalative	LC50/4 h	> 5.7 mg/l (rat)
13463-67-7 titanium dioxide		
Oral	LD50	>5000 mg/kg (rat) (OECD 425)

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Dermal	LD50	>5000 mg/kg (rabbit)
Inhalative	LC50/4 h	>6.8 mg/l (rat)
1314-13-2 zinc oxide		
Oral	LD50	> 5000 mg/kg (rat)
Inhalative	LC50/4 h	> 5.7 mg/l (rat)

- **Primary irritant effect:**

- **on the skin:** Frequent persistent contact with the skin may cause skin irritation.

- **on the eye:** 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.

- **Sensitization:** No sensitizing effects known.

- **Other information (about experimental toxicology):**

Experimental analysis are not available.

- **Additional toxicological information:**

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

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

Harmful to aquatic organisms.

1314-98-3 zinc sulphide

EC 50/48h (Zn) 204 mg/l (daphnia) (pH <7)

EC 50/72 h (Zn) 144 mg/l (algae) (pH >7 - 8,5)

13463-67-7 titanium dioxide

EC 50/72 h >10000 mg/l (algae) (ISO 10253; Skeletonerna costatum)

16 mg/l (freshwater alga) (statisch, EPA-600-9/78-018)

LC 50/48h >10000 mg/l (invertebrate marine organisms) (Acartia tonsa; ISO 14669, ISO 5667-16)

> 100 mg/l (daphnia) (statisch, OECD 202)

LC 50/96 h >10000 mg/l (marine fish) (semi-statisch, OECD 203)

> 1000 mg/l (Pimephales promelas) (static, EPA-540/9-85-006)

> 100 mg/l (freshwater fish) (statisch, OECD 203)

NOEC 28d; ≥100000 mg/kg (bacteria) (semi-statisch, ASTM 1706)

1314-13-2 zinc oxide

CE 50/48h 0.67 mg/l (daphnia) (pH <7, Zn (ZnO))

EC 50/48h 0.413 mg/l (daphnia) (pH <7; Zn++)

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.

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- **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.
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 together 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 dangerous substances
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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- | | |
|--|------|
| <ul style="list-style-type: none"> · 14.1 UN-Number · ADR, IMDG, IATA | Void |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR, IMDG, IATA | Void |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, IMDG, IATA · Class | Void |
| <ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA | Void |
| <ul style="list-style-type: none"> · 14.5 Environmental hazards: · Marine pollutant: | No |

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· 14.6 Special precautions for user	Not applicable.
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	No dangerous good in sense of these transport regulations.
· UN "Model Regulation":	-

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **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)
- **Product-Code/Giscode:** M-SK02
- **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.
 - R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Department issuing MSDS:** KEIMFARBEN Germany, Product safety department
- **Contact:** Mrs. Popescu
- **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 Harmonized 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)

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PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

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 - AcuteHazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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

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