



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

Printing date 29.04.2021

Version number 13.0

Revision: 29.04.2021

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

- **1.1 Product identifier**
- **Trade name:** **KEIM ECOSIL-ME**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the mixture** Silicate interior 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.keim.com / 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**
The product is not classified, according to the CLP regulation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Additional information:**
EUH210 Safety data sheet available on request.
EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
- **2.3 Other hazards** Alkaline product. Avoid contact with skin and eyes.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable
- **vPvB:** Not applicable

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Aqueous solution of alkali silicate and mineral mixture

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· Dangerous components:

CAS: 1312-76-1 EINECS: 215-199-1 Reg.nr.: 01-2119456888-17-xxxx	Silicic acid, potassium salt ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319 Specific concentration limits: Skin Irrit. 2; H315: C ≥ 40 % Eye Irrit. 2; H319: C ≥ 40 %	2.5-10%
CAS: 13463-67-7 EINECS: 236-675-5 Index number: 022-006-00-2 Reg.nr.: 01-2119486799-10-xxxx	titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] ⚠ Carc. 2, H351	2.5-10%
CAS: 13463-67-7 EINECS: 236-675-5 Index number: 022-006-00-2 Reg.nr.: 01-2119489379-17-xxxx	titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] ⚠ Carc. 2, H351 Nanoform: crystalline forms	≥0.1-≤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:** 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:

carbon oxide (COx)

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- silicon dioxid (SiO₂)
- **5.3 Advice for firefighters**
- **Specila protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
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**
Respect the protection rules (see section 7 a. 8).
Avoid contact with skin and eyes.
Ensure adequate ventilation
Particular danger of slipping on leaked/spilled product.
- **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:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
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.
Avoid contact with skin and eyes.
Do not inhale aerosols.
See item 8 (8.2) for information about suitable protective equipment and technical precautions.
Respect the protection rules.
- **Information about fire - and explosion protection:**
No special measures required.
The product is not flammable.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store only in unopened original receptacles.
Keep in the original containers in a cool and dry place.
- **Information about storage in one common storage facility:** Do not store together with acids.
- **Further information about storage conditions:**
Protect from frost.

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Store in a cool place.
Protect from heat and direct sunlight.

- **Storage class:** 12
- **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:

13463-67-7 titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

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

13463-67-7 titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

Inhalative	Long-term - local effects	10 mg/m ³ (not specified)
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· PNECs

13463-67-7 titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

Aquatic compartment - freshwater	0.127 mg/l (freshwater)
Aquatic compartment - marine water	>1 mg/l (marine water)
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)

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

· 8.2 Exposure controls

· Individual protection measures, such as 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 aerosols.

· Respiratory protection:

Use suitable respiratory protective device only when aerosol or mist is formed.

Filter: P

· Hand protection Protective gloves

· Material of gloves

suitable material e.g.:

Nitrile impregnated cotton-gloves

Butyl rubber, BR

Recommended thickness of the material: $\geq 0.5 \text{ mm}$

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 16523-1:2015 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/face protection**

Goggles recommended during refilling

Tightly sealed goggles

· **Body protection:** Protective work clothing

· **Environmental exposure controls**

See Section 12 and 6.2

No further relevant information available.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Physical state**

Fluid

· **Colour:**

Different, according to colouring.

· **Odour:**

Weak, characteristic

· **Odour threshold:**

Not determined

· **Melting point/freezing point:**

Not determined

· **Boiling point or initial boiling point and boiling range**

Not determined

· **Flammability**

Not applicable

· **Lower and upper explosion limit**

· **Lower:**

Not applicable

· **Upper:**

Not applicable

· **Flash point:**

Not applicable

· **Auto-ignition temperature:**

Product is not selfigniting.

· **Decomposition temperature:**

Not determined

· **pH at 20 °C**

~11*

· **Viscosity:**

· **Kinematic viscosity**

Not determined

· **Dynamic at 20 °C:**

1.400-1.900* mPas

· **Solubility**

· **water:**

Miscible

· **Partition coefficient n-octanol/water (log value)**

Not applicable

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· Vapour pressure at 20 °C:	~23 hPa
· Density and/or relative density	
· Density at 20 °C:	1.4-1.7* g/cm ³
· Relative density	Not determined
· Vapour density	Not applicable.
· 9.2 Other information	* The values are for freshly produced material and may change with the time.
· Appearance:	
· Form:	Pasty
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Not determined
· Explosive properties:	Product does not present an explosion hazard.
· Change in condition	
· Evaporation rate	Not applicable
· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void
· Other safety characteristics	
· Photocatalytic properties	The product has photocatalytic properties.

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.

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- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** Acids
- **10.6 Hazardous decomposition products:**
In case of fire, the following can be released:
Carbon oxides (CO_x)
silicon dioxide (SiO₂)
No hazardous decomposition products if stored and handled as prescribed.

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity**

- **LD/LC50 values relevant for classification:**

1312-76-1 Silicic acid, potassium salt

Oral	LD50	>5,000 mg/kg (rat) (OECD 401)
Dermal	LD50	>5,000 mg/kg (rat) (OECD 402)
Inhalative	LC50/4 h	>5 mg/l (rat)

13463-67-7 titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

Inhalative	ATE mix (4h)	>5 mg/l (inhalation)
	ATE mix	>2,000 mg/kg (dermal) >2,000 mg/kg (orally)
	NOAEL	3,500 mg/kg /Oral (rat) (90d)

13463-67-7 titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

Oral	LD50	>5,000 mg/kg (rat)
Inhalative	LC50/4 h	>6.82 mg/l (rat)

- **Skin corrosion/irritation** Frequent persistent contact with the skin may cause skin irritation.
- **Serious eye damage/irritation**
In case of longer exposure, slightly irritating effect to the eyes is possible.
- **during inhalation:** Irritant effect possible.
- **during swallowing:** Irritant effect possible
- **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.
- **Subacute to chronic toxicity:**

- **Repeated dose toxicity**

13463-67-7 titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

Inhalative	NOAEC	10 mg/m ³ (rat) (90d)
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- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** Not applicable

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· 11.2 Information on other hazards**· Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information**· 12.1 Toxicity****· Aquatic toxicity:****1312-76-1 Silicic acid, potassium salt**

NOEC	>1 mg/l (fish) >1 mg/l (invertebrates)
EC 50/48h	>100 mg/l (daphnia) (OECD 202)
EC 50/72 h	>100 mg/l (algae)
LC 50/96 h	>100 mg/l (fish) (DIN EN ISO 7346-2)
EC 0	>1,000 mg/l (activated sludge) (30min)

13463-67-7 titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

NOEC	$\geq 100,000$ mg/kg (sediment fresh water)
EC50	>100 mg/kg (freshwater alga) (OECD 201)
EC 50	>10,000 mg/l (algae) (ISO 10253)
LC 50	>10,000 mg/l (marine fish) (OECD 203) >1,000 mg/l (freshwater fish) (EPA-540/9-85-006) >1,000 mg/l (daphnia) (OECD 202)

· 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.**· 12.5 Results of PBT and vPvB assessment****· PBT:** Not applicable**· vPvB:** Not applicable**· 12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

· 12.7 Other adverse effects**· 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 BaSO₄, TiO₂, ZnS.**· General notes:**

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

At present there are no ecotoxicological assessments.

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The statements on ecotoxicology have been derived from the properties of the individual components.

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

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 12	waste paint and varnish other than those mentioned in 08 01 11
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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 or ID 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 Maritime transport in bulk according to IMO instruments**

Not applicable

· **UN "Model Regulation":**

Void

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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**
- **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**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
- **Department issuing SDS:** KEIMFARBEN Germany, Product safety department
- **Abbreviations and acronyms:**
ADR: Accord relatif au transport international 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)
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)
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Carc. 2: Carcinogenicity – Category 2
- *** Data compared to the previous version altered.**