Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 14.06.2024 Version number 13.1 (replaces version 13.0) Revision: 14.06.2024

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

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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 GB 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

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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; STOT SE 3, H335 Specific concentration limits: Skin Irrit. 2; H315: C ≥40 % Eye Irrit. 2; H319: C ≥ 40 % STOT SE 3; H335: C ≥ 40 %	≥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	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: Structure: crystalline forms	≥1-≤2.5%

· **Additional information:**
Route of exposure: Inhalation/contraction not given.
Alveolar particles (diameter ≤ 10 µm) bound in the paint matrix.
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.

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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**
In case of fire, the following can be released:
carbon oxide (COx)
silicon dioxid (SiO2)
· **5.3 Advice for firefighters**
· **Special 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 and 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.

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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.
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.

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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 ≤ 10 µm]	
WEL	Long-term value: 10* 4** mg/m³ *total inhalable **respirable

· **DNELs**		
13463-67-7 titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]		
Inhalative	Long-term - systemic effects	0.8 mg/m³ (worker)

· **PNECs**	
13463-67-7 titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	
Aquatic compartment - freshwater	0.127 mg/l (Freshwater)
Aquatic compartment - marine water	>1 mg/l (Seawater)
Aquatic compartment - sediment in freshwater	>1,000 mg/kg sed dw (Freshwater)
Aquatic compartment - sediment in marine water	>100 mg/kg sed dw (Seawater)

· **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

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· **Hand protection** Protective gloves
· **Material of gloves**
suitable material e.g.:
Nitrile impregnated cotton-gloves
Butyl rubber, BR
Recommended thickness of the material: ≥ 0.5 mm
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 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:**	Not determined
· **Decomposition temperature:**	Not determined
· **pH at 20 °C**	~11*

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· **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
· **Vapour pressure at 20 °C:**	~23 hPa
· **Density and/or relative density**	
· **Density at 20 °C:**	1.4-1.7* g/cm³
· **Relative density**	Not determined
· **Vapour density**	Not applicable.
· **Particle characteristics**	See section 3.
· **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:**	Product is not selfigniting.
· **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

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· **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.
· **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 (COx)
silicon dioxid (SiO_2)
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** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**		
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) (OECD 425)
Dermal	LD50	>5,000 mg/kg (rabbit)
Inhalative	LC50/4 h	>6.8 mg/l (rat)
	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.
Based on available data, the classification criteria are not met.
· **during inhalation:** Irritant effect possible.
· **during swallowing:** Irritant effect possible
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **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.

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· **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.
· **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/m³ (rat) (90d)

· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)** Not applicable
· **11.2 Information on other hazards**

· **Endocrine disrupting properties**
None of the ingredients is listed.

*

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
13463-67-7 titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	
NOEC	≥100,000 mg/kg (Freshwater sediment) (ASTM 1706) Hyalella azteca
EC 50	>10,000 mg/l (algae) (ISO 10253)
	>100 mg/l (Freshwater algae) (OECD 201)
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)
13463-67-7 titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	
ErC50/72h	>100 mg/l (algae)
LC 50/96 h	>1,000 mg/l (Pimephales promelas)

· **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.

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· **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.
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

· **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

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· **14.6 Special precautions for user**	Not applicable
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable
· **UN "Model Regulation":**	Void

*
SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Poisons Act**

· **Regulated explosives precursors**
None of the ingredients is listed.

· **Regulated poisons**
None of the ingredients is listed.

· **Reportable explosives precursors**
None of the ingredients is listed.

· **Reportable poisons**

1314-98-3	zinc sulphide	Listed

· **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.
· **REGULATION (EC) No 1907/2006 ANNEX XVII**

· **ANNEX I EXPORT SUBSTANCES DECLARABLE FOR EXPLOSIVES in quantities > 1%.**
None of the ingredients is listed.

· **National regulations:**

· **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
· **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.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.

· **Department issuing SDS:** KEIMFARBEN Germany, Product safety department

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· **Abbreviations and acronyms:**
WEL: Workplace exposure limit
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 (UK REACH)
PNEC: Predicted No-Effect Concentration (UK 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.
UK 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
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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