



Safety Data Sheet

KEIM Silan 100

1. Identification

Product identifier

KEIM Silan 100
CAS No: 35435-21-3

Recommended use of the chemical and restrictions on use

Use of the substance/mixture

Hydrophobing agent

Details of the supplier of the safety data sheet

Company name: KEIM Mineral Coatings of America, Inc
Street: 10615 Texland Boulevard, #600
Place: Charlotte, NC 28273, USA
Telephone: 1 704-588-4811

Emergency phone number: in US and Canada:
1 800 535 5053 (INFOTRAC)

2. Hazard(s) identification

Classification of the chemical

29 CFR Part 1910.1200 Hazard categories:
Flammable liquids: Flam. Liq. 3
Hazard Statements: Flammable liquid and vapor

Label elements

29 CFR Part 1910.1200 Signal word: Warning



Pictograms:

Hazard statements

Flammable liquid and vapor

Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Wear protective gloves/protective clothing/eye protection/face protection.
Keep container tightly closed.
In case of fire: Use Sand, Carbon dioxide (CO₂), Dry powder to extinguish.
Store product in a well-ventilated cool place.
Dispose of contents/container to hazardous or special waste collection point.

3. Composition/information on ingredients

Substances

Chemical characterization

Triethoxy(2,4,4-trimethylpentyl)silane



4. First-aid measures

Description of first aid measures

General information

Seek medical advice if any symptoms occur or in cases of doubt.
Show this safety data sheet to the doctor in attendance.
Remove contaminated clothing immediately.

After inhalation

Supply fresh air, if required oxygen, consult a physician.

After contact with skin

Wash off immediately with soap and plenty of water.
Consult a doctor if skin irritation persists.

After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult a physician.

After ingestion

Rinse out mouth and give plenty of water to drink.
Do not induce vomiting. Seek medical treatment immediately.

Most important symptoms and effects, both acute and delayed

WARNING ! Flammable

OSHA Hazard Communication: This material is considered hazardous by the OSHA Hazard Communication Standard 29CFR 1910.1200.

Indication of any immediate medical attention and special treatment needed No information available.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Sand, earth, powder or foam.
Never use water

Unsuitable extinguishing media

Water spray jet, Full water jet.

Specific hazards arising from the chemical

In the event of fire the following can be released: silicon dioxide (SiO₂)
Carbon monoxide and carbon dioxide (CO_x)
Alcohols

Special protective equipment and precautions for fire-fighters

Use breathing apparatus with independent air supply.

Additional information

In case of fire and/or explosion do not breathe fumes.
Collect contaminated firefighting water separately, must not be discharged into the drains.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes and clothing.
Do not breathe vapors.
Keep away sources of ignition.
Observe protective instructions (see Sections 7 and 8).
Use personal protective clothing.
High risk of slipping due to leakage/spillage of product.

Environmental precautions

National and local regulations concerning chemicals shall be observed.
Do not discharge into the drains/surface waters/groundwater.



Methods and material for containment and cleaning up

Do not dilute with water. For small quantities: Clean up with absorbent material (e.g. sand, diatomaceous earth, acid binder, general-purpose binder, sawdust). Pick up mechanically and collect in suitable container for disposal. Dam up larger quantities and pump into salvage receptacles. Ensure adequate ventilation.

Reference to other sections

Observe protective instructions (see Sections 7 and 8).
Information for disposal (see Section 13).

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Keep container tightly closed.
Provide appropriate ventilation and exhaust ventilation at the workplaces.
Avoid formation of aerosols.
Avoid contact with skin, eyes and clothing. Use personal protective clothing. (Refer to section 8) Respect the protection rules..

Advice on protection against fire and explosion

Vapors may form explosive mixture with air.
Keep away from sources of ignition - No smoking.
Take measures against electrostatic charging.
Cool containers at risk with water spray jet.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store only in original container.
Keep in a dry, cool and well-ventilated place.

Advice on storage compatibility

Do not store near combustible materials or an ignition source.
Do not store with acids.
Do not store with alkalis.
Do not store near water.

Further information on storage conditions

Protect from atmospheric moisture and water.
Keep container in a well-ventilated place.
Store in cool, dry place in tightly closed containers. Protect from heat and direct solar radiation.

8. Exposure controls/personal protection

Control parameters

Additional advice on limit values

Exposure limit values (DNEL, PNEC): DNEL = Derived No effect levels
Triethoxy(2,4,4-trimethylpentyl)silane, CAS-No.: 35435-21-3

Oral acute local effects, consumer: 7,5 mg/kg/day (consumer)
long term systemic effects, consumer: 1,25 mg/kg/day (consumer)
dermal acute local effects, consumer: 43 mg/kg/day (consumer)
long term systemic effects, consumer: 7,2 mg/kg/day (consumer)
long term systemic effects, Workers : 12 mg/kg body weight/day (Workers)

Inhalation

acute local effects, consumer: 107 mg/m# (consumer)
long term systemic effects, consumer: 17,9 mg/m# (consumer)
long term systemic effects, Workers : 84 mg/m# (Workers)

Exposure controls

Protective and hygiene measures

Remove contaminated soaked clothing immediately.



Do not breathe vapors and aerosols.
Avoid contact with eyes and skin.

Eye/face protection

Tightly fitting splash protection goggles.

Hand protection

Protective gloves

Also suitable are gloves made of: Butyl rubber Recommended thickness of the material: $\geq 0,5$ mm

Material of gloves: 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.

Permeation time of the glove material: ≥ 3 (60)

This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN 374 carried out under lab conditions. Follow the recommendations of the glove manufacturer for breakthrough properties especially for workplace conditions involving mechanical stress and contact duration.

The exact breakthrough time must be determined by the manufacturer of the protective gloves.

Skin protection

Protective clothing.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	Liquid
Color:	Colorless
Odor:	Low, Characteristic
pH-Value:	n.a.

Changes in the physical state

Melting point/freezing point:	< -50 °C	OECD 102
Initial boiling point and boiling range:	(1013 hPa) 236 °C	
Flash point:	> 40 °C	ISO 3679
Explosive properties	The product is considered non-explosive; nevertheless explosive vapor/air mixture can be generated.	
Lower explosion limits:	0,4 Vol %	
Upper explosion limits:	Not determined	
Ignition temperature:	265 °C	DIN 51794
Vapor pressure: (at 25 °C)	6 hPa	EG-RL A4
Density (at 20 °C):	0,88* g/cm ³	DIN 51757
Water solubility: (at 20 °C)	Insoluble / < 0,00025 g/L	
Partition coefficient:	6,1	
Viscosity / dynamic: (at 25 °C)	1,9* mPa·s	DIN 51562
Evaporation rate:	n.a.	

Other information

* The values are for freshly produced material and may change with the time.

10. Stability and reactivity

Reactivity

No data available.

Chemical stability

Stability: Stable

No decomposition if stored and applied as directed.

Possibility of hazardous reactions

Hazardous reactions: Will not occur

No hazardous reactions known.

Conditions to avoid

Moisture



Incompatible materials

Water

Acids.

Bases.

Hazardous decomposition products

In the event of fire the following can be released: silicon dioxide (SiO₂)

Carbon monoxide and carbon dioxide (CO_x)

Ethanol

No decomposition if stored and applied as directed.

11. Toxicological information

Information on toxicological effects

Route(s) of Entry

Skin and eye contact, inhalation and ingestion.

Acute toxicity

Triethoxy(2,4,4-trimethylpentyl)silane, CAS-No.: 35435-21-3

LD50/oral/rat: > 2000 mg/kg (OECD 423, Rat)

LD50/dermal/rat: > 2000 mg/kg (OECD 402, Rat)

Irritation and corrosivity

Skin irritation (rabbit): Non-irritant (OECD 404) Eye: Non-irritant (OECD 405, Rabbit) After ingestion:

Sensitizing effects

Non-sensitizing (Magnusson-Kligmann Test, OECD 406, Guinea pig)

Carcinogenic/mutagenic/toxic effects for reproduction void

Carcinogenicity (NTP): Not listed

Carcinogenicity (IARC): Not listed

Carcinogenicity (OSHA): Not listed

Practical experience

Other observations

If appropriately handled and if in accordance with the general hygienic rules, no damages to health are known.

12. Ecological information

Ecotoxicity

Triethoxy(2,4,4-trimethylpentyl)silane, CAS-No.: 35435-21-3

EC50/3 > 100 mg/l ()

NOEC (21 days), 32 mg/l (Daphnia, reproduction)

Persistence and degradability Not readily biodegradable.

Bioaccumulative potential

Product(s) of hydrolysis: Log Pow: <= 3,0

Mobility in soil

No data available.

Product does not contain any organic bound halogens which could lead to AOX-values.

The product does not consist of any heavy metals or substances according to EU-directives 76/464/EWG.

Other adverse effects No data available.

13. Disposal considerations

Waste treatment methods

Advice on disposal

Disposal in accordance with local regulations.



Should not be disposed of with household waste.
Do not empty into drains.

Contaminated packaging

Disposal in accordance with local regulations.

14. Transport information

US DOT 49 CFR 172.101

Proper shipping name: Not regulated.

Marine transport (IMDG)

Marine pollutant: no

Other applicable information

Nonhazardous material as defined by the transport regulations.

Air transport (ICAO)

Other applicable information

Nonhazardous material as defined by the transport regulations.

Other applicable information

Not sustaining combustion

15. Regulatory information

U.S. Regulations

National Inventory TSCA

All of the components are listed on the TSCA inventory.

State Regulations

Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)

This product contains no chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other information

Hazardous Materials Information Label (HMIS)

Health: 0
Flammability: 2
Physical Hazard: 0

NFPA Hazard Ratings

Health: 0
Flammability: 2
Reactivity: 0
Unique Hazard:

Revision date: 08.02.2016

Revision No: 10,0

Abbreviations and acronyms

RID: Regulation Concerning the International Transport of Dangerous Goods by Rail

ICAO: International Civil Aviation Organization

ADR: Agreement concerning the international carriage of Dangerous goods by Road

IMDG-Code: International Maritime Code for Dangerous Goods

ICAO: International Civil Aviation Organization (IATA: The International Air Transport Association)

GHS: Globally Harmonized System of Classification, Labelling and Packaging of Chemicals

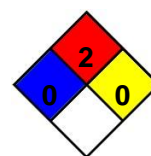
CAS-Nr.: Chemical Abstracts Service

Abbreviations and acronyms

IMDG = International Maritime Code for Dangerous Goods

IATA/ICAO = International Air Transport Association / International Civil Aviation Organization

MARPOL = International Convention for the Prevention of Pollution from Ships





DOT = Department of Transportation

TDG = Transport of Dangerous Goods

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

CAS = Chemical Abstract Service

ISO = International Organization for Standardization

LD = Lethal dose

LC = Lethal concentration

EC = Effect concentration

IC = Median immobilization concentration or median inhibitory concentration

Other data

The information in this document is based on the present state of knowledge and is applicable to the product with regard to appropriate safety precautions. The information describes exclusively the safety requirements for the product (s) and is based on the present level of our knowledge. The delivery specifications are contained in the corresponding product sheet. This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

(n.a. = not applicable; n.d. = not determined)