

SECTION 1: Identification

1.1. Identification

Product form : Mixture calcined Kaolin coated with Octylsilane
 Trade name : DORVALIT® SHO

1.2. Recommended use and restrictions on use

Recommended use : Main applications - non exhaustive list:
 Paints and varnishes
 Restrictions on use : No information available

1.3. Supplier

Gebr. Dorfner GmbH & Co. Kaolin- und Kristallquarzsand-Werke KG
 Scharhof 1
 D-92242 Hirschau
 T +49 9622 82-0 – F +49 9622 82-206
 SDBKaolin@dorfner.com

1.4. Emergency telephone number

Emergency number : +49 9622 820 (not available outside office hours)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS-US labelling

No labelling applicable

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : This product should be handled with care to avoid dust generation.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Kaolin, calcined	(CAS-No.) 92704-41-1	> 99
Silane, triethoxyoctyl-	(CAS-No.) 2943-75-1	<1

Kaolin is a UVCB substance sub-type 4.

This product contains less than 1% fine fraction of crystalline silica, which is classified as STOT RE 1.

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : If symptoms persist, call a physician.
 First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Obtain medical attention.
 First-aid measures after skin contact : Wash skin with plenty of water.
 First-aid measures after eye contact : Rinse eyes with water as a precaution. Seek medical attention immediately.
 First-aid measures after ingestion : Rinse mouth out with water. Call a poison center or a doctor if you feel unwell.

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4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : The acute symptoms would give pain in the eyes because of dust entry. No delayed effects are anticipated if first aid treatment is applied and is effective.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide (CO₂).
Unsuitable extinguishing media : No information available.

5.2. Specific hazards arising from the chemical

Fire hazard : None. The material is not flammable and it does not lead to hazardous thermal decomposition products.
Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Avoid generation of dust. Use breathing apparatus. Product on floor when wetted will become slippery and may present a hazard; wear anti-slip boots. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Keep dust levels to a minimum.
Avoid creating or spreading dust. Avoid contact with skin, eyes and clothing. Avoid inhalation of dust – ensure that sufficient ventilation or suitable respiratory protective equipment is used, wear suitable protective equipment (see section 8).
Take care of wet product on floor, which presents a slip hazard.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Avoid dry sweeping and use water spraying or vacuum cleaning systems to prevent airborne dust generation.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid airborne dust generation. Provide appropriate exhaust ventilation at places where airborne dust is generated. In case of insufficient ventilation, wear suitable respiratory protective equipment. Handle packaged products carefully to prevent accidental bursting.
Do not to eat, drink and smoke in work areas; wash hands after use; remove contaminated clothing and protective equipment before entering eating areas.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Minimise airborne dust generation and prevent wind dispersal during loading and unloading. Keep containers closed and store packaged products so as to prevent accidental bursting. Pneumatic conveying through plastic lines may result in static charge buildup. Convey through metal lines.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Control parameters	: Follow workplace regulatory exposure limits for all types of airborne dust (e.g. total dust, respirable dust, respirable crystalline silica dust). The OEL (Occupational Exposure Limit) for respirable crystalline silica dust find attached for all countries of the EU. For the equivalent limits in other countries, please consult a competent occupational hygienist or the local regulatory authority.
Occupational exposure limit	: Respirable crystalline silica dust: 0,1 mg/m ³ 8 hours TWA

Kaolin, calcined (92704-41-1)

Not applicable

Silane, triethoxyoctyl- (2943-75-1)

Not applicable

8.2. Appropriate engineering controls

Appropriate engineering controls	: Minimise airborne dust generation. Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below specified exposure limits. If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne particles below the exposure limit. Apply organisational measures, e.g. by isolating personnel from dusty areas. Remove and wash soiled clothing.
Environmental exposure controls	: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Appropriate protection is recommended for workers who suffer from dermatitis or sensitive skin. Wash hands at the end of each work session.

Eye protection:

In case of considerably dust generation, tight fitting goggles with side shields, or wide vision full goggles.

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Local ventilation to keep levels below established threshold values is recommended. In case of prolonged exposure to airborne dust concentrations, a suitable particle filter mask type FFP2 or FFP3 (European Norm 143) or that complies with the requirements of national legislation is recommended.

Environmental exposure controls:

All ventilation systems should be filtered before discharge to atmosphere. Avoid releasing to the environment. Contain the spillage.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid (white powder)
Colour	: White
Odour	: Odourless
Odour threshold	: Not applicable as the substance is odourless
pH	: approx. 5 - 7 (100 g/l water at 20°C)
pH solution	: No data available
Melting point	: > 450 °C
Freezing point	: No data available
Boiling point	: not applicable (solid with a melting point > 450 °C)
Critical temperature	: No data available
Critical pressure	: No data available
Flash point	: Not applicable (solid with a melting point > 450 °C)
Relative evaporation rate (butylacetate=1)	: Not applicable (solid with a melting point > 450 °C)

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Relative evaporation rate (ether=1)	: Not applicable (solid with a melting point > 450 °C)
Flammability (solid, gas)	: Non flammable
Vapour pressure	: Not applicable (solid with a melting point > 450 °C)
Relative vapour density at 20 °C	: Not applicable (solid with a melting point > 450 °C)
Relative density	: 2.75
Relative density of saturated gas/air mixture	: No data available
Density	: 2.75 g/cm ³
Relative gas density	: No data available
Solubility	: Water: 1.5 mg/l (20°C)
Log Pow	: Not applicable (inorganic substance)
Auto-ignition temperature	: No relative self-ignition temperature below 400 °c
Decomposition temperature	: Not applicable (solid with a melting point > 450 °C)
Viscosity, kinematic	: Not applicable (solid with a melting point > 450 °C)
Viscosity, dynamic	: Not applicable (solid with a melting point > 450 °C)
Explosive limits	: Non explosive (void of any chemical structures commonly associated with explosive properties)
Explosive properties	: No chemical groups within the structure of the substance that would imply explosive properties
Oxidising properties	: No oxidising properties (Based on the chemical structure, the substance does not contain a surplus of oxygen or any structural groups known to be correlated with a tendency to react exothermally with combustible material)

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Data results from Read-across with the basis material "kaolin calcined". The information on the coating material does not show a higher toxicological hazard and is therefore neglected.

Oral LD₅₀ : > 5000 mg/kg (40 CFR Part 160, rat)

Dermal LD₅₀ : > 5000 mg/kg (40 CFR Part 160, rat)

Inhalation LC₅₀ : > 2,19 mg/Liter Luft (Methode OECD 403, rat)

Kaolin, calcined (92704-41-1)	
LD50 oral rat	> 2000 mg/kg
Silane, triethoxyoctyl- (2943-75-1)	
LD50 oral rat	10060 µl/kg

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Skin corrosion/irritation	: Not classified pH: 5 – 7 Not irritating to skin (OECD 404, rabbit).
Serious eye damage/irritation	: Not classified pH: 5 – 7 Kaolin calcined is not irritating to eye (OECD 405, rabbit). Kaolin is regarded as a mild irritant to eyes (according to the modified Kay & Calandra criteria).
Respiratory or skin sensitisation	: Not classified Kaolin calcined is not a skin sensitiser in accordance with the local lymph node assay (OECD 429, mouse)
Germ cell mutagenicity	: Not classified Kaolin calcined is not genotoxic (in vitro study results OECD 471)
Carcinogenicity	: Not classified Read-across with the substance kaolin In studies where kaolin has been administered via intratracheal installation, kaolin behaves as a poorly soluble particulate of low toxicity with inflammatory responses of lung tissue. Epidemiological studies covering a large number of workers did not reveal an explicit association between kaolin exposure and tumour formation. In summary, no concern on carcinogenicity is triggered by animal studies or by epidemiological findings.
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified No organ toxicity observed in acute tests.
STOT-repeated exposure	: Not classified Read-across with the substance kaolin Based on the results from animal studies (mainly via intratracheal administration) it seems that the severity of effects seen in the lungs may be related to the level of respirable crystalline silica (RCS) in the material. Epidemiological studies show that exposure to high levels of kaolin dust may lead to pneumoconiosis. Results indicate that the effects from kaolin exposure are typical of those seen with poorly soluble particles under conditions of lung overload i.e. the lungs clearance capacity has been exceeded. It is likely that the severity of any effects are related to the level of respirable crystalline silica present in the material.
Aspiration hazard	: Not classified
Symptoms/effects	: No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecology – general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Data results from Read-across with the basis material "kaolin calcined". The information on the coating material does not show a higher toxicological hazard and is therefore neglected.

Acute/Prolonged toxicity to fish : LC50 (96h) for freshwater fish (rainbow trout *Oncorhynchus mykiss*):
>1000 mg/L (Method OECD 203)

Acute/Prolonged toxicity to aquatic invertebrates : EC50 (48h) for aquatic invertebrates (*Daphnia magna*):
>707.9 mg/L (Method OECD 202)

Acute/Prolonged toxicity to aquatic plants : EC50 (72h) for freshwater algae (*Raphidocelis Subcapitata*):
> 1000 mg/L (Method OECD 201)

Kaolin, calcined (92704-41-1)

LC50 fish 1	> 100 mg/l (Exposure time: 96 h - Species: <i>Oncorhynchus mykiss</i> [semi-static])
EC50 <i>Daphnia</i> 1	> 1 mg/l (Exposure time: 48 h - Species: <i>Daphnia magna</i>)

12.2. Persistence and degradability

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Abiotic Degradation	The substance is inorganic and therefore will not undergo abiotic degradation.
Biodegradation	The substance is inorganic and therefore will not undergo biodegradation.

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12.3. Bioaccumulative potential

DORVALIT® SHO	
Log Pow	No data available
Log Kow	No data available
Bioaccumulative potential	Not relevant for inorganic substances. Bioaccumulation is not expected.

12.4. Mobility in soil

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Ecology - soil	Kaolin calcined is almost insoluble and thus presents a low mobility in most soils.

12.5. Other adverse effects

Effect on global warming No information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions. Where possible, recycling is preferable to disposal.

Packaging : Dust formation from residues in packaging should be avoided and suitable worker protection assured.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not applicable

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Kaolin, calcined (92704-41-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Silane, triethoxyoctyl- (2943-75-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Kaolin, calcined (92704-41-1)
Listed on the Canadian DSL (Domestic Substances List)
Silane, triethoxyoctyl- (2943-75-1)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

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Kaolin, calcined (92704-41-1)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Silane, triethoxyoctyl- (2943-75-1)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Kaolin, calcined (92704-41-1)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on Turkish inventory of chemical
Listed on the TCSI (Taiwan Chemical Substance Inventory)

Silane, triethoxyoctyl- (2943-75-1)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on Turkish inventory of chemical
Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

No additional information available

SECTION 16: Other information

SDS US (GHS HazCom 2012) 20170728

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product