DIRKO™ HT Grey

Safety Data Sheet

according to Federal Register / Vol. 89, No. 98 / Monday, May 20, 2024 / Rules and Regulations

Date of issue: 09/05/2019 Revision date: 08/01/2024 Version/Replaced version: 6.0/5.0

SECTION 1: Identification

1.1. Product identifier

Product form : Mixture

Product name : DIRKO™ HT Grey

Product code : 510.031 (70 ml), 074.723 (310 ml)

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Sealants

1.3. Details of the supplier of the safety data sheet

Manufacturer (Germany)
ElringKlinger AG
Max-Eyth-Straße 2
72581 Dettingen/Erms - Germany
Fon +49 (0)7123 724 799
det.iam.sdb@elringklinger.com

Supplier

Manufacturer (USA)
ElringKlinger Texas, LLC.
Ridgeview 35
4210 IH-35
San Antonio, TX 78218 - USA
Fon +1 210 253 8182
Info.us@elringklinger.com

Safety Data Sheet: DLAC Dienstleistungsagentur Chemie GmbH, E-mail: sds@dlac-gmbh.de

1.4. Emergency telephone number

24-hour emergency contact number : +1 872 5888271 (EKA)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

GHS-US classification in accordance with paragraph (d) of § 1910.1200

Carcinogenicity, Category 1A	H350
Specific target organ toxicity - Repeated exposure, Category 1	H372
Sensitization - Skin, Category 1	H317

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labelling in accordance with paragraph (f) of § 1910.1200

Hazard pictograms (GHS-US) :

GHS07 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) :
H317 - May cause an allergic skin reaction.
H350 - May cause cancer.
H372 - Causes damage to organs through prolonged or repeated exposure.

Precautionary statements (GHS-US) :
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe dust, vapors, spray.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P280 - Wear protective gloves, protective clothing, eye protection.
P302+P352 - IF ON SKIN: Wash with plenty of water and soap.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P314 - Get medical advice/attention if you feel unwell.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P363 - Wash contaminated clothing before reuse.
P405 - Store locked up.
P501 - Dispose of contents/container to an authorized waste collection point.

2.3. Other hazards

Substances formed under the conditions of use:

Name	Product identifier	%	GHS-US Classification in accordance with paragraph (d) of § 1910.1200
2-Pentanone, oxime	(CAS No) 623-40-5	≤ 5	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 STOT RE 2, H373 Aquatic Chronic 3, H412
Ethanol, ethyl alcohol	(CAS No) 64-17-5	≤ 1	Flam. Liq. 2, H225 Eye Irrit. 2, H319

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	%	GHS-US Classification in accordance with paragraph (d) of § 1910.1200
Quartz	(CAS No) 14808-60-7	15 - 40	Carc. 1A, H350 STOT RE 1, H372
Silica	(CAS No) 112945-52-5	5 - 10	Not classified
2-Pentanone, O,O',O''-(ethenylsilylidyne)trioxime	(CAS No) 58190-62-8	1 - 5	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319
2-Pentanone, O,O',O''-(methylsilylidyne)trioxime	(CAS No) 37859-55-5	1 - 5	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319
Titanium dioxide	(CAS No) 13463-67-7	1 - 5	Carc. 2, H351
3-aminopropyltriethoxysilane	(CAS No) 919-30-2	0.1 - 1	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317
Octamethylcyclotetrasiloxane	(CAS No) 556-67-2	0.01 - < 0.079	Flam. Liq. 3, H226 Repr. 2, H361 Aquatic Chronic 1, H410 (M=10)

Trade secret claim in accordance with paragraph (i) of § 1910.1200: The exact percentage (concentration) of composition has been withheld as a trade secret.

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First aid measures general : If exposed or concerned: Get medical advice/attention. Get medical advice/attention if you feel unwell. If possible show him this sheet. Failing this, show him the packaging or label. Never give anything by mouth to an unconscious person. Place the affected person in the recovery position.

First aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

First aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

First aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

First aid measures after ingestion : Rinse mouth. Drink water as a precaution. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after skin contact : The product is not considered irritating to the skin. May cause an allergic skin reaction.

Symptoms/injuries : May cause cancer. Causes damage to organs through prolonged or repeated exposure.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing agents that suit the environment. Carbon dioxide. Extinguishing powder. Water spray. For a significant fire: Alcohol resistant foam.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Carbon dioxide. Carbon monoxide. Toxic gases and vapors. Silicon oxides.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Prevent fire-fighting water from entering environment.

Protection during firefighting : Use a self-contained breathing apparatus and also a protective suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Provide adequate ventilation. Do not breathe dust, vapors.

Emergency procedures : Evacuate unnecessary personnel.

Protective equipment : Use personal protective equipment as required. In case of inadequate ventilation wear respiratory protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Methods and materials for containment and cleaning up

Methods for cleaning up : Wipe up with absorbent material (for example cloth). Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

For containment : Keep in suitable, closed containers for disposal.

Other information : Dispose of in accordance with relevant local regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Do not breathe dust, vapors, spray. Avoid contact with skin and eyes. Wear personal protective equipment.

Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.

Storage conditions : Store in original container. Keep container tightly closed. Store in a dry, cool and well-ventilated place. Protect from heat and direct sunlight. Store locked up.

Prohibitions on mixed storage : Keep away from food, drink and animal feedingstuffs.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Titanium dioxide (13463-67-7)		
ACGIH	Local name	Titanium dioxide
ACGIH	TLV-TWA (mg/m³)	0.2 mg/m³ (respirable particles; nanoscale particles) 2.5 mg/m³ (respirable particles; fine-scale particles) 3 mg/m³ (respirable particles)
ACGIH	Remark (ACGIH)	A3
NIOSH	Local name	Titanium dioxide
NIOSH	Remark (NIOSH)	Ca, See Appendix A
OSHA	Local name	Titanium dioxide
OSHA	OSHA PEL (mg/m³)	15 mg/m³ (total dust)
Cal/OSHA	Local name	Particulates Not Otherwise Regulated
Cal/OSHA	Cal/OSHA PEL (TWA) (ppm)	10 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

Quartz (14808-60-7)		
ACGIH	Local name	SILICA, CRYSTALLINE - α-QUARTZ
ACGIH	TLV-TWA (mg/m³)	0.025 mg/m³ (respirable particulate matter)
ACGIH	Remark (ACGIH)	A2
NIOSH	Local name	Silica, crystalline ; Quartz
NIOSH	NIOSH REL (TWA) (mg/m³)	0.05 mg/m³ (respirable dust)
NIOSH	Remark (NIOSH)	Ca, See Appendix A
OSHA	Local name	Quartz (Respirable)

Quartz (14808-60-7)		
OSHA	OSHA PEL (mg/m³)	10 mg/m³ / (% SiO_2+2)
OSHA	OSHA PEL (mppcf)	250 mppcf / (% SiO_2+5)
Cal/OSHA	Local name	Quartz
Cal/OSHA	Cal/OSHA PEL (TWA) (mg/m³)	0.05 mg/m³

Ethanol (64-17-5)		
ACGIH	Local name	Ethanol
ACGIH	TLV-STEL (ppm)	1000 ppm
ACGIH	TLV-STEL (mg/m³)	1880 mg/m³
ACGIH	Remark (ACGIH)	A3
NIOSH	Local name	Ethyl alcohol
NIOSH	NIOSH REL (TWA) (mg/m³)	1900 mg/m³
NIOSH	NIOSH REL (TWA) (ppm)	1000 ppm
OSHA	Local name	Ethyl alcohol (Ethanol)
OSHA	OSHA PEL (TWA) (mg/m³)	1900 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
Cal/OSHA	Local name	Ethyl alcohol; ethanol
Cal/OSHA	Cal/OSHA PEL (TWA) (mg/m³)	1900 mg/m³
Cal/OSHA	Cal/OSHA PEL (TWA) (ppm)	1000 ppm

Silica (112945-52-5)		
NIOSH	Local name	Silica, amorphous (7631-86-9)
NIOSH	NIOSH REL (TWA) (mg/m³)	6 mg/m³
OSHA	Local name	Silica: Amorphous, including natural diatomaceous earth
OSHA	OSHA PEL (TWA) (mg/m³)	80 mg/m³ / (% SiO_2)
OSHA	OSHA PEL (TWA) (mppcf)	20 mppcf

8.2. Appropriate engineering controls

Appropriate engineering controls : Provide local exhaust or general room ventilation to minimize dust/vapor concentrations.

8.3. Individual protection measures, such as personal protective equipment

Hand protection : Wear suitable gloves. Short-term contact: nitrile/neoprene, ≥ 0.2 mm. Prolonged or repeated contact: nitrile, ≥ 1.25 mm. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid. Paste.

Color : Grey

Odor (includes odor threshold) : No data available

Melting point/freezing point : No data available

Boiling point (or initial boiling point or boiling range) : No data available

Flammability : No data available

Lower and upper explosion limit/flammability limit : No data available

Flash point : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

pH : Not applicable

Kinematic viscosity : Not applicable

Solubility : Water: practically insoluble
Acetone, Alcohol: slightly soluble
Aliphatic/aromatic hydrocarbons: dispersible
Chlorinated solvents: dispersible

Partition coefficient n-octanol/water (log value) : Not applicable

Vapor pressure (includes evaporation rate) : No data available

Density and/or relative density : ~ 1.25 kg/dm³ (20 °C)

Relative vapor density : Not applicable
Particle characteristics : No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Vulcanizes at room temperature and on contact with humidity.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use and storage.

10.3. Possibility of hazardous reactions

None under normal use.

10.4. Conditions to avoid

High temperature.

10.5. Incompatible materials

Oxidizing agents. Water.

10.6. Hazardous decomposition products

In case of fire: Carbon dioxide. Carbon monoxide. Toxic gases and vapors. Silicon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified
Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : May cause cancer.

Quartz (14808-60-7)	
IARC	Group 1: Carcinogenic to humans.

Titanium dioxide (13463-67-7)	
IARC	Group 2B: Possibly carcinogenic to humans.

Reproductive toxicity : Not classified
Specific target organ toxicity (single exposure) : Not classified
Specific target organ toxicity (repeated exposure) : Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard : Not classified

Symptoms/injuries after inhalation : No known effects from this product.
Symptoms/injuries after ingestion : No known effects from this product.
Symptoms/injuries after skin contact : May cause an allergic skin reaction.
Symptoms/injuries after eye contact : No known effects from this product.

2-Pentanone, O,O',O''-(ethenylsilylidyne)trioxime (58190-62-8)	
LD50 oral rat	1000 - 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg

2-Pentanone, O,O',O''-(methylsilylidyne)trioxime (37859-55-5)	
LD50 oral rat	1234 mg/kg
LD50 dermal rat	> 2000 mg/kg

3-aminopropyltriethoxysilane (919-30-2)	
LD50 oral rat	1490 mg/kg
LD50 dermal rabbit	4076 mg/kg
LC50 inhalation rat (Vapors)	> 145 mg/m³/6 h

Octamethylcyclotetrasiloxane (556-67-2)	
LD50 oral rat	> 4800 mg/kg
LD50 dermal rat	> 2375 mg/kg
LC50 inhalation rat (Dust/Mist)	36 mg/l/4 h

SECTION 12: Ecological information

12.1. Ecotoxicity

Ecology - general : To our knowledge, the product does not present any particular risk, under normal conditions of use.

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

The maximum concentration of octamethylcyclotetrasiloxane (556-67-2) that can leach from the product is below the established safety level (< 0.0079 mg/l) for aquatic organisms.

2-Pentanone, O,O',O''-(ethenylsilylidyne)trioxime (58190-62-8)	
LC50 fish	> 100 mg/l 96 h, Oncorhynchus mykiss
EC50 daphnia	> 100 mg/l 48 h, Daphnia magna
ErC50 algae	88 mg/l 72 h, Raphidocelis subcapitata
NOEC algae	32 mg/l 72 h, Raphidocelis subcapitata

2-Pentanone, O,O',O''-(methylsilylidyne)trioxime (37859-55-5)	
LC50 fish	> 100 mg/l 96 h, Oncorhynchus mykiss
EC50 daphnia	> 100 mg/l 48 h, Daphnia magna
ErC50 algae	88 mg/l 72 h, Raphidocelis subcapitata
NOEC algae	32 mg/l 72 h, Raphidocelis subcapitata

3-aminopropyltriethoxysilane (919-30-2)	
LC50 fish	> 934 mg/l 96 h, Danio rerio
EC50 daphnia	331 mg/l 48 h, Daphnia magna
EC50 algae	> 1000 mg/l 72 h, Desmodesmus subspicatus
NOEC daphnia	≥ 1 mg/l 21 d, Daphnia magna
NOEC algae	1.3 mg/l 72 h, Desmodesmus subspicatus

Octamethylcyclotetrasiloxane (556-67-2)	
LC50 fish	> 0.022 mg/l 96 h, Oncorhynchus mykiss
EC50 daphnia	> 0.015 mg/l 48 h, Daphnia magna
EC50 algae	> 0.022 mg/l 96 h, Raphidocelis subcapitata
NOEC fish	≥ 0.0044 mg/l 93 d, Oncorhynchus mykiss
NOEC daphnia	≥ 0.015 mg/l 21 d, Daphnia magna
NOEC algae	< 0.022 mg/l 96 h, Raphidocelis subcapitata

12.2. Persistence and degradability

2-Pentanone, O,O',O''-(ethenylsilylidyne)trioxime (58190-62-8)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	1 %, 28 d (OECD 301 B)

2-Pentanone, O,O',O''-(methylsilylidyne)trioxime (37859-55-5)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	1 %, 28 d (OECD 301 B)

3-aminopropyltriethoxysilane (919-30-2)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	67 %, 28 d (OECD 301 A)

Octamethylcyclotetrasiloxane (556-67-2)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	3.7 %, 29 d (OECD 310)

12.3. Bioaccumulative potential

2-Pentanone, O,O',O''-(ethenylsilylidyne)trioxime (58190-62-8)	
Bioconcentration factor (BCF)	69.21 l/kg

2-Pentanone, O,O',O''-(methylsilylidyne)trioxime (37859-55-5)	
Bioconcentration factor (BCF)	103.3 l/kg

3-aminopropyltriethoxysilane (919-30-2)	
Bioconcentration factor (BCF)	3.4 (OECD 305 C)

Octamethylcyclotetrasiloxane (556-67-2)	
Bioconcentration factor (BCF)	12400 l/kg (EPA OTS 797.1520)
Partition coefficient n-octanol/water (Log Pow)	6.98 (21.7 °C)

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on global warming : No known effects from this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Discharging into rivers and drains is forbidden. Dispose of in accordance with relevant local regulations.

Regional legislation (waste) : Dispose in a safe manner in accordance with local/national regulations.

Waste treatment methods : Dispose of this material and its container at hazardous or special waste collection point. Do not empty into drains.

Waste disposal recommendations : Empty the packaging completely prior to disposal. When totally empty, containers are recyclable like any other packing.

SECTION 14: Transport information

In accordance with DOT / ADR / IMDG / IATA

14.1. UN number

UN-No. (DOT) : Not regulated for transport

UN-No. (ADR) : Not regulated for transport

UN-No. (IMDG) : Not regulated for transport

UN-No. (IATA) : Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (DOT) : No additional information available

Proper Shipping Name (ADR) : No additional information available

Proper Shipping Name (IMDG) : No additional information available

Proper Shipping Name (IATA) : No additional information available

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : No additional information available

ADR

Transport hazard class(es) (ADR) : No additional information available

IMDG

Transport hazard class(es) (IMDG) : No additional information available

IATA

Transport hazard class(es) (IATA) : No additional information available

14.4. Packing group

Packing group (DOT) : No additional information available

Packing group (ADR) : No additional information available

Packing group (IMDG) : No additional information available

Packing group (IATA) : No additional information available

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions

DOT

Not applicable

ADR

Not applicable

IMDG

Not applicable

IATA

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All substances in this mixture are listed on the United States TSCA (Toxic Substances Control Act) inventory

Active Status: Active

15.2. International regulations

Canada

All substances in this mixture are listed on Canadian DSL (Domestic Sustances List)

EU-Regulations

All substances in this mixture are listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

15.3. US State regulations

California Proposition 65

This product contains substances known to the state of California to cause cancer: Silica, crystalline (airborne particles of respirable size), Titanium dioxide (airborne, unbound particles of respirable size).

This product does not contain any substance(s) known to the state of California to cause developmental toxicity.

This product does not contain any substance(s) known to the state of California to cause reproductive toxicity.

SECTION 16: Other information, including date of preparation or last revision

Date of Preparation : August 1, 2024

Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
DOT	Department of Transport, U.S. Department of Transportation Ground (49 CFR)
EC50	The effective concentration of substance that causes 50% of the maximum response (Median Effective Concentration)
IATA	International Air Transport Association
IMDG	“International Maritime Dangerous Goods Code” for the transport of dangerous goods by sea
LC50	Lethal Concentration to 50 % of a test population (Median Lethal Concentration)
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
NOEC/L	No Observed Effect Concentration/Level
OECD	Organisation for Economic Cooperation and Development
SDS	Safety Data Sheet

Full text of H-phrases:

Acute Tox. 4 (Oral)	Acute toxicity – Oral, Category 4
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Carc. 1A	Carcinogenicity, Category 1A
Carc. 2	Carcinogenicity, Category 2
Eye Dam. 1	Eye damage/irritation, Category 1
Eye Irrit. 2	Eye damage/irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Repr. 2	Toxic to reproduction, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Sens. 1	Sensitization – Skin, Category 1
STOT RE 1	Specific target organ toxicity (Repeated exposure), Category 1
STOT RE 2	Specific target organ toxicity (Repeated exposure), Category 2
H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H350	May cause cancer.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.

H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

SDS US (GHS HazCom 2024)

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.