

Safety Data Sheet

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LOCTITE SI 598 RTV SILICONE, BLACK known as Loctite® 598 Flange Sealant

SDS No.: 152851 V001.14

Revision: 21.12.2020 printing date: 31.05.2021

Section 1. Identification of the substance/preparation and of the company/undertaking

Product name:

LOCTITE SI 598 RTV SILICONE, BLACK known as Loctite® 598 Flange Sealant

Other means of identification:

LOCTITE SI 598 PA49LBEN

Product code:

IDH135509

Recommended use of the chemical and restrictions on use

Intended use:

Silicone sealant

Identification of manufacturer, importer or distributor

Manufacturer: Henkel Corporation, Cleveland, 18731 Cranwood Parkway, Cleveland, OH 44128, United States.

Phone: 001 216 475 3600 Fax: 001 216

Importer: Henkel Thailand Ltd The Offices at Centralworld, 35th Floor, 999/9 Rama 1 Rd, Kwang Patumwan, Khet

Patumwan, Bangkok 10330, Thailand. Phone: + 6622098000 Fax: +6622098008

E-mail address of person responsible for Safety Data Sheet:

ap-ua-psra.sea@henkel.com

Emergency information:

FOR EMERGENCIES ONLY (Spill, major leak, Fire, Exposure, or Accident). Call CHEMTREC: +1 703-741-5970

Section 2. Hazards identification

GHS Classification:

Hazard Class Hazard Category

environment

GHS label elements:

Hazard pictogram:



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Signal word:

Danger

Hazard statement:

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H412 Harmful to aquatic life with long lasting effects.

Precaution:

Prevention:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P302+P352 IF ON SKIN: Wash with plenty of water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

Disposal:

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

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Section 3. Composition / information on ingredients

Substance or Mixture:

Mixture

Declaration of hazardous chemical:

Hazard component CAS-No.	Content	GHS Classification
Dimethyl siloxane, hydroxyterminated	39 %	
70131-67-8		
Limestone	32 %	
1317-65-3		
Siloxanes and Silicones, di-Me	16 %	
63148-62-9		
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	5.3 %	
Butan-2-one O,O',O"-(vinylsilylidyne)trioxime	4.1 %	Serious eye damage/eye irritation 1
2224-33-1		H318
		Skin sensitizer 1
		H317
		Specific target organ toxicity - repeated exposure 2
		H373
		Acute hazards to the aquatic environment 3 H402
Carbon black - Nano	1 %	Π402
1333-86-4	1 %	
aluminium powder (stabilised)	0.8 %	Flammable solids 1
7429-90-5	0.0 /0	H228
		Substances and mixtures, which on contact with water,
		emit flammable gases 2
		H261
Octadecanoic acid	0.7 %	
57-11-4		
[3-(Trimethoxysilyl)propyl]urea	0.5 %	
23843-64-3		
Butan-2-one O,O',O",O"-silanetetrayltetraoxime	0.4 %	Flammable solids 1
34206-40-1		H228
		Acute toxicity 5; Oral H303
		Serious eye damage/eye irritation 2A
		H319
		Skin sensitizer 1
		H317
		Specific target organ toxicity - repeated exposure 2
		H373
		Acute hazards to the aquatic environment 3 H402
White mineral oil (petroleum), highly refined 8042-47-5	0.2 %	

Section 4. First aid measures

Inhalation:

Move to fresh air. If symptoms persist, seek medical advice.

Skin contact:

Rinse with running water and soap.

Obtain medical attention if irritation persists.

Eye contact:

Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

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Ingestion:

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

Indication of immediate medical attention and special treatment needed:

See section: Description of first aid measures

Section 5. Fire fighting measures

Suitable extinguishing media:

Carbon dioxide, foam, powder

Specific hazards arising from the chemical:

Do not expose to direct heat.

Special protection equipment and precautions for firefighters:

Wear self-contained breathing apparatus.

In case of fire, keep containers cool with water spray.

Section 6. Accidental release measures

Personal precautions:

Avoid contact with skin and eyes. Wear protective equipment. Ensure adequate ventilation. See advice in section 8

Environmental precautions:

Do not empty into drains / surface water / ground water.

Clean-up methods:

Scrape up as much material as possible.

Ensure adequate ventilation.

Store in a partly filled, closed container until disposal.

Dispose of contaminated material as waste according to Section 13.

Section 7. Handling and storage

Handling:

Use only in well-ventilated areas. Vapours should be extracted to avoid inhalation. Avoid skin and eye contact. See advice in section 8

Storage:

Store in a cool, well-ventilated place.

Never allow product to get in contact with water during storage

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Section 8. Exposure controls / personal protection

Components with specific control parameters for workplace:

CALCIUM CARBONATE, RESPIRABLE DUST 1317-65-3	Value type	Time Weighted Average (TWA):
	mg/m³	5
	Remarks	TH OEL
Limestone 1317-65-3	Value type	Time Weighted Average (TWA):
	mg/m ³	10
CALCIUM CARBONATE, INHALABLE DUST 1317-65-3	Value type	Time Weighted Average (TWA):
	mg/m ³	15
	Remarks	TH OEL
CARBON BLACK, INHALABLE FRACTION 1333-86-4	Value type	Time Weighted Average (TWA):
	mg/m ³	3
	Remarks	ACGIH
ALUMINUM METAL AND INSOLUBLE COMPOUNDS, RESPIRABLE FRACTION 7429-90-5	Value type	Time Weighted Average (TWA):
	mg/m ³	1
	Remarks	ACGIH
ALUMINIUM METAL, AS AL, INHALABLE DUST 7429-90-5	Value type	Time Weighted Average (TWA):
	mg/m ³	15
	Remarks	TH OEL
ALUMINIUM METAL, AS AL, RESPIRABLE DUST 7429-90-5	Value type	Time Weighted Average (TWA):
	mg/m ³	5
	Remarks	TH OEL
STEARATES (EXCEPT STEARATES OF TOXIC METALS), INHALABLE FRACTION 57-11-4	Value type	Time Weighted Average (TWA):
	mg/m ³	10
	Remarks	ACGIH
STEARATES (EXCEPT STEARATES OF TOXIC METALS), RESPIRABLE FRACTION 57-11-4	Value type	Time Weighted Average (TWA):
	mg/m ³	3
	Remarks	ACGIH
MINERAL OIL, EXCLUDING METAL WORKING FLUIDS, PURE, HIGHLY AND SEVERELY REFINED, INHALABLE FRACTION 8042-47-5	Value type	Time Weighted Average (TWA):
	, 1	E
	mg/m ³	5

Respiratory protection:

Ensure adequate ventilation.

An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area

Filter type: A (EN 14387)

Hand protection:

Chemical-resistant protective gloves (EN 374).

Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):

nitrile rubber (NBR; >= 0.4 mm thickness)

Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time

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as per EN 374):

nitrile rubber (NBR; >= 0.4 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing. Protective eye equipment should conform to EN166.

Body protection:

Wear suitable protective clothing.

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Engineering controls:

Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

Hygienic measures:

Take off contaminated clothing and wash before reuse.

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

Section 9. Physical and chemical properties

Appearance: black paste
Odor: mild

Odor threshold (CA):
pH:
Not applicable
Melting point / freezing point:
Not available.

Specific gravity: 1.3

Boiling point: No data available. **Flash point:** > 93 °C (> 199.4 °F)

(Tagliabue closed cup)

Evaporation rate:

Flammability (solid, gas):

Lower explosive limit:

Upper explosive limit:

Vapor pressure:

No data available.

No data available.

No data available.

No data available.

(; 20 °C (68 °F))

Vapor density: No data available. **Density:** 1.05 g/cm3

Solubility: Polymerises in presence of water.

Partition coefficient: n- No data available.

octanol/water:

Auto ignition:No data available.Decomposition temperature:No data available.Viscosity:No data available.

VOC content: < 5.00 %

(2010/75/EC)

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Section 10. Stability and reactivity

Reactivity/Incompatible materials:

Polymerises in presence of water.

Reaction with acids: production of heat and carbon dioxide.

Chemical stability:

Stable under recommended storage conditions.

Conditions to avoid:

Exposure to air or moisture over prolonged periods.

Hazardous decomposition products:

Methyl ethyl ketoxime formed during cure.

Methanol is liberated slowly upon exposure to moisture.

Section 11. Toxicological information

Symptoms of Overexposure: SKIN: Rash, Urticaria.

After eye contact: Corrosive, may cause permanent damage to eyes (impairment of vision).

Acute oral toxicity:

Dimethyl siloxane,	Value type	LD50
hydroxyterminated	Value	> 2,000 mg/kg
70131-67-8	Species	rat
	Method	not specified
Limestone	Value type	LD50
1317-65-3	Value	> 5,000 mg/kg
1317 03 3	Species	rat
	Method	not specified
Siloxanes and Silicones, di-Me	Value type	LD50
63148-62-9	Value	> 17,000 mg/kg
	Species	rat
	Method	not specified
Silane, dichlorodimethyl-, reaction	Value type	LD50
products with silica	Value	> 5,000 mg/kg
68611-44-9	Species	rat
	Method	not specified
Butan-2-one O,O',O"-	Value type	LD50
(vinylsilylidyne)trioxime	Value	> 2,000 mg/kg
2224-33-1	Species	rat
	Method	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down
		Procedure)
Carbon black - Nano	Value type	LD50
1333-86-4	Value	> 8,000 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
aluminium powder (stabilised)	Value type	LD50
7429-90-5	Value	> 15,900 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
Octadecanoic acid	Value type	LD50
57-11-4	Value	> 5,000 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
[3-(Trimethoxysilyl)propyl]urea	Value type	LD50
23843-64-3	Value	> 5,000 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
Butan-2-one O,O',O",O"'-	Value type	LD50
silanetetrayltetraoxime	Value	2,463 mg/kg
34206-40-1	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
White mineral oil (petroleum),	Value type LD50	
highly refined	Value	> 5,000 mg/kg
8042-47-5	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)

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Acute inhalative toxicity:

aluminium powder (stabilised)	Value type	LC50
7429-90-5	Value	> 5 mg/l
	Exposure time	4 h
	Species	rat
	Method	not specified
White mineral oil (petroleum),	Value type	LC50
highly refined	Value	> 5 mg/l
8042-47-5	Exposure time	4 h
	Species	rat
	Method	OECD Guideline 403 (Acute Inhalation Toxicity)

Acute dermal toxicity:

Dimethyl siloxane,	Value type	LD50
hydroxyterminated	Value	> 2,000 mg/kg
70131-67-8	Species	rat
	Method	not specified
Limestone	Value type	LD50
1317-65-3	Value	> 5,000 mg/kg
	Species	rat
	Method	not specified
Siloxanes and Silicones, di-Me	Value type	LD50
63148-62-9	Value	> 2,000 mg/kg
	Species	rabbit
	Method	not specified
Silane, dichlorodimethyl-, reaction	Value type	LD50
products with silica	Value	> 2,000 mg/kg
68611-44-9	Species	rat
	Method	not specified
Butan-2-one O,O',O"-	Value type	LD50
(vinylsilylidyne)trioxime	Value	> 2,009 mg/kg
2224-33-1	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
Octadecanoic acid	Value type	LD50
57-11-4	Value	> 2,000 mg/kg
	Species	rabbit
	Method	OECD Guideline 434 (Acute Dermal Toxicity)
[3-(Trimethoxysilyl)propyl]urea	Value type	LD50
23843-64-3	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
Butan-2-one O,O',O",O"'-	Value type	LD50
silanetetrayltetraoxime	Value	> 2,000 mg/kg
34206-40-1	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
White mineral oil (petroleum),	Value type	LD50
highly refined	Value	> 2,000 mg/kg
8042-47-5	Species	rabbit
	Method	OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

Dimethyl siloxane, hydroxyterminated	Result	not irritating
70131-67-8	Exposure time	24 h
	Species	rabbit
	Method	not specified
Limestone	Result	not irritating
1317-65-3	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Siloxanes and Silicones, di-Me	Result	not irritating
63148-62-9	Exposure time	
	Species	rabbit
	Method	not specified
Silane, dichlorodimethyl-, reaction	Result	not irritating

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products with silica	Exposure time	4 h
68611-44-9	Species	rabbit
	Method	not specified
Carbon black - Nano	Result	not irritating
1333-86-4	Exposure time	24 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
aluminium powder (stabilised)	Result	not irritating
7429-90-5	Exposure time	24 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Octadecanoic acid	Result	not irritating
57-11-4	Exposure time	
	Species	rabbit
	Method	Patch Test
White mineral oil (petroleum), highly	Result	not irritating
refined	Exposure time	
8042-47-5	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Dimethyl siloxane, hydroxyterminated	Result	slightly irritating
70131-67-8	Exposure time	
	Species	rabbit
	Method	not specified
Limestone	Result	not irritating
1317-65-3	Exposure time	•
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Siloxanes and Silicones, di-Me	Result	slightly irritating
63148-62-9	Exposure time	
	Species	rabbit
	Method	not specified
Silane, dichlorodimethyl-, reaction	Result	not irritating
products with silica	Exposure time	•
68611-44-9	Species	rabbit
	Method	not specified
Carbon black - Nano	Result	not irritating
1333-86-4	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
aluminium powder (stabilised)	Result	not irritating
7429-90-5	Exposure time	
	Species	rabbit
	Method	FDA Guideline
Octadecanoic acid	Result	not irritating
57-11-4	Exposure time	
	Species	rabbit
	Method	Draize Test
Butan-2-one O,O',O",O"'-	Result	irritating
silanetetrayltetraoxime	Exposure time	1 h
34206-40-1	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
White mineral oil (petroleum), highly	Result	not irritating
refined	Exposure time	
8042-47-5	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

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Respiratory or skin sensitization:

Limestone	Result	not sensitising
1317-65-3	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Siloxanes and Silicones, di-Me	Result	not sensitising
63148-62-9	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	not specified
Silane, dichlorodimethyl-, reaction	Result	not sensitising
products with silica	Test type	Patch-Test
68611-44-9	Species	human
	Method	human repeat insult patch test
Butan-2-one O,O',O"-	Result	Sensitizing
(vinylsilylidyne)trioxime	Test type	Guinea pig maximisation test
2224-33-1	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
Carbon black - Nano	Result	not sensitising
1333-86-4	Test type	Buehler test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
aluminium powder (stabilised)	Result	not sensitising
7429-90-5	Test type	Draize Test
	Species	guinea pig
	Method	Draize Test
Octadecanoic acid	Result	not sensitising
57-11-4	Test type	Guinea pig maximisation test
	Species	
	Method	Magnusson and Kligman Method
Butan-2-one O,O',O",O"'-	Result	sensitising
silanetetrayltetraoxime	Test type	Guinea pig maximisation test
34206-40-1	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
White mineral oil (petroleum),	Result	not sensitising
highly refined	Test type	Buehler test
8042-47-5	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)

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Germ cell mutagenicity:

Limestone	Result	negative
1317-65-3	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
1317-03-3	Metabolic activation / Exposure time	with and without
		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
••	Method	•
Limestone	Result	negative
1317-65-3	Type of study / Route of administration	in vitro mammalian chromosome aberration test
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 473 (In vitro Mammalian Chromosome
		Aberration Test)
Limestone	Result	negative
1317-65-3	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene
		Mutation Test)
Siloxanes and Silicones, di-Me	Result	negative
63148-62-9	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	not specified
Silane, dichlorodimethyl-,	Result	negative
reaction products with silica	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
68611-44-9	Metabolic activation / Exposure time	with and without
00011	Method	Ames Test
Silane, dichlorodimethyl-,	Result	
reaction products with silica		negative in vitro mammalian chromosome aberration test
68611-44-9	Type of study / Route of administration	
08011-44-9	Metabolic activation / Exposure time	with and without
	Method	Chromosome Aberration Test
Butan-2-one O,O',O"-	Result	negative
(vinylsilylidyne)trioxime	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
2224-33-1	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Butan-2-one O,O',O"-	Result	negative
(vinylsilylidyne)trioxime	Type of study / Route of administration	intraperitoneal
2224-33-1	Metabolic activation / Exposure time	
	Species	mouse
	Method	OECD Guideline 474 (Mammalian Erythrocyte
		Micronucleus Test)
Carbon black - Nano	Result	negative
1333-86-4	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Carbon black - Nano	Result	negative
1333-86-4		- 9
1333-60-4	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene
		Mutation Test)
Carbon black - Nano	Result	
1333-86-4		negative
	Type of study / Route of administration	sister chromatid exchange assay in mammalian cells
	Type of study / Route of administration Metabolic activation / Exposure time	sister chromatid exchange assay in mammalian cells with and without
	Type of study / Route of administration	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister
	Type of study / Route of administration Metabolic activation / Exposure time	sister chromatid exchange assay in mammalian cells with and without
Carbon black - Nano	Type of study / Route of administration Metabolic activation / Exposure time	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister
Carbon black - Nano 1333-86-4	Type of study / Route of administration Metabolic activation / Exposure time Method	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells)
	Type of study / Route of administration Metabolic activation / Exposure time Method Result	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) negative
	Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) negative oral: feed
	Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Species	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) negative oral: feed Drosophila melanogaster
	Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) negative oral: feed Drosophila melanogaster OECD Guideline 477 (Genetic Toxicology: Sex-linked
1333-86-4	Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) negative oral: feed Drosophila melanogaster OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster)
1333-86-4 aluminium powder (stabilised)	Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) negative oral: feed Drosophila melanogaster OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster) positive
1333-86-4	Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) negative oral: feed Drosophila melanogaster OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster) positive in vitro mammalian cell micronucleus test
1333-86-4 aluminium powder (stabilised)	Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) negative oral: feed Drosophila melanogaster OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster) positive in vitro mammalian cell micronucleus test without
1333-86-4 aluminium powder (stabilised)	Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) negative oral: feed Drosophila melanogaster OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster) positive in vitro mammalian cell micronucleus test without OECD Guideline 487 (In vitro Mammalian Cell
aluminium powder (stabilised) 7429-90-5	Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Metabolic activation / Exposure time Method	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) negative oral: feed Drosophila melanogaster OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster) positive in vitro mammalian cell micronucleus test without OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
aluminium powder (stabilised) 7429-90-5 aluminium powder (stabilised)	Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Method Result	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) negative oral: feed Drosophila melanogaster OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster) positive in vitro mammalian cell micronucleus test without OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test) positive
aluminium powder (stabilised) 7429-90-5	Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) negative oral: feed Drosophila melanogaster OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster) positive in vitro mammalian cell micronucleus test without OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test) positive in vitro mammalian chromosome aberration test
aluminium powder (stabilised) 7429-90-5 aluminium powder (stabilised)	Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) negative oral: feed Drosophila melanogaster OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster) positive in vitro mammalian cell micronucleus test without OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test) positive in vitro mammalian chromosome aberration test without
aluminium powder (stabilised) 7429-90-5 aluminium powder (stabilised)	Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) negative oral: feed Drosophila melanogaster OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster) positive in vitro mammalian cell micronucleus test without OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test) positive in vitro mammalian chromosome aberration test without OECD Guideline 473 (In vitro Mammalian Chromosome
aluminium powder (stabilised) 7429-90-5 aluminium powder (stabilised)	Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) negative oral: feed Drosophila melanogaster OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster) positive in vitro mammalian cell micronucleus test without OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test) positive in vitro mammalian chromosome aberration test without
aluminium powder (stabilised) 7429-90-5 aluminium powder (stabilised)	Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Species Method Result Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time Method Result Type of study / Route of administration Metabolic activation / Exposure time	sister chromatid exchange assay in mammalian cells with and without OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) negative oral: feed Drosophila melanogaster OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster) positive in vitro mammalian cell micronucleus test without OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test) positive in vitro mammalian chromosome aberration test without OECD Guideline 473 (In vitro Mammalian Chromosome

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	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene
	Welliod	Mutation Test)
aluminium powder (stabilised)	Result	negative
7429-90-5	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	rat
	Method	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
aluminium powder (stabilised)	Result	ambiguous
7429-90-5	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	rat
	Method	OECD Guideline 475 (Mammalian Bone Marrow
		Chromosome Aberration Test)
Octadecanoic acid	Result	negative
57-11-4	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	not specified
Octadecanoic acid	Result	negative
57-11-4	Type of study / Route of administration	in vitro mammalian chromosome aberration test
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Octadecanoic acid	Result	negative
57-11-4	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
White mineral oil (petroleum),	Result	negative
highly refined	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
8042-47-5	Metabolic activation / Exposure time	with
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
White mineral oil (petroleum),	Result	negative
highly refined	Type of study / Route of administration	mammalian cell gene mutation assay
8042-47-5	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene
		Mutation Test)
White mineral oil (petroleum),	Result	negative
highly refined	Type of study / Route of administration	intraperitoneal
8042-47-5	Metabolic activation / Exposure time	
	Species	mouse
	Method	OECD Guideline 474 (Mammalian Erythrocyte
		Micronucleus Test)

LOCTITE SI 598 RTV SILICONE, BLACK known as

Loctite® 598 Flange Sealant

Repeated dose toxicity:

Limestone	Result	NOAEL=1,000 mg/kg
1317-65-3	Route of application	oral: gavage
	Exposure time / Frequency of treatment	48 ddaily
	Species	rat
	Method	OECD Guideline 422 (Combined Repeated Dose Toxicity
		Study with the Reproduction / Developmental Toxicity
		Screening Test)
Siloxanes and Silicones, di-Me	Result	NOAEL=> 100000 ppm
63148-62-9	Route of application	oral: feed
	Exposure time / Frequency of treatment	28 d
	Species	rat
	Method	not specified
Siloxanes and Silicones, di-Me	Result	NOAEL=> 1,000 mg/kg
63148-62-9	Route of application	dermal
	Exposure time / Frequency of treatment	29 d
	Species	rabbit
	Method	not specified
Silane, dichlorodimethyl-,	Result	NOAEL=500 mg/kg
reaction products with silica	Route of application	oral: feed
68611-44-9	Exposure time / Frequency of treatment	5-8 wdaily
	Species	rat
	Method	not specified
Butan-2-one O,O',O"-	Result	NOAEL=10 mg/kg
(vinylsilylidyne)trioxime	Route of application	oral: gavage
2224-33-1	Exposure time / Frequency of treatment	
	Species	rat
	Method	OECD Guideline 422 (Combined Repeated Dose Toxicity
		Study with the Reproduction / Developmental Toxicity
		Screening Test)
Octadecanoic acid	Result	NOAEL=1,000 mg/kg
57-11-4	Route of application	oral: gavage
	Exposure time / Frequency of treatment	42 ddaily
	Species	rat
	Method	OECD Guideline 422 (Combined Repeated Dose Toxicity
		Study with the Reproduction / Developmental Toxicity
		Screening Test)
Butan-2-one O,O',O",O"'-	Result	NOAEL=25 mg/kg
silanetetrayltetraoxime	Route of application	oral: drinking water
34206-40-1	Exposure time / Frequency of treatment	90 ddaily: ad libitum
	Species	rat
	Method	OECD Guideline 408 (Repeated Dose 90-Day Oral
		Toxicity in Rodents)
White mineral oil (petroleum),	Result	NOAEL=>= 1,600 mg/kg
highly refined	Route of application	oral: feed
8042-47-5	Exposure time / Frequency of treatment	90 ddaily
	Species	rat
	Method	OECD Guideline 408 (Repeated Dose 90-Day Oral
	Í	Toxicity in Rodents)

Section 12. Ecological information

General ecological information: Cured Loctite products are typical polymers and do not pose any immediate

environmental hazards., Precautions required with respect to Environmental Hazards of articles in which this product is used should be considered., Do not

empty into drains / surface water / ground water.

Ecotoxicity: Harmful to aquatic life with long lasting effects.

Toxicity:

Dimethyl siloxane,	Value type	LC50
hydroxyterminated	Value	> 100 mg/l
70131-67-8	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	not specified
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)

Dimathyl sileyana	Valua type	EC50
Dimethyl siloxane,	Value type	EC50
hydroxyterminated 70131-67-8	Value	> 100 mg/l
	Acute Toxicity Study	Daphnia 48 h
	Exposure time	
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Dimethyl siloxane,	Value type	EC50
hydroxyterminated	Value	> 100 mg/l
70131-67-8	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Limestone	Value type	LC50
1317-65-3	Value	> 10,000 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	not specified
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Limestone	Value type	EC50
1317-65-3	Value	> 1,000 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Limestone	Value type	EC50
1317-65-3	Value	> 200 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	not specified
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Limestone	Value type	EC50
1317-65-3	Value	> 1,000 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	activated studge of a predominantly domestic sewage
	Species Method	activated sludge of a predominantly domestic sewage OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Siloyanes and Silicones di-Me	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Siloxanes and Silicones, di-Me	Method Value type	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50
Siloxanes and Silicones, di-Me 63148-62-9	Method Value type Value	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility
	Method Value type Value Acute Toxicity Study	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish
	Method Value type Value Acute Toxicity Study Exposure time	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h
	Method Value type Value Acute Toxicity Study Exposure time Species	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus
63148-62-9	Method Value type Value Acute Toxicity Study Exposure time Species Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test)
63148-62-9 Siloxanes and Silicones, di-Me	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50
63148-62-9	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility
63148-62-9 Siloxanes and Silicones, di-Me	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility Daphnia
63148-62-9 Siloxanes and Silicones, di-Me	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility Daphnia 48 h
63148-62-9 Siloxanes and Silicones, di-Me	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility Daphnia 48 h Daphnia magna
63148-62-9 Siloxanes and Silicones, di-Me 63148-62-9	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Method Exposure time Species Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility Daphnia 48 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
63148-62-9 Siloxanes and Silicones, di-Me 63148-62-9 Silane, dichlorodimethyl-, reaction	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility Daphnia 48 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) LC50
63148-62-9 Siloxanes and Silicones, di-Me 63148-62-9 Silane, dichlorodimethyl-, reaction products with silica	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility Daphnia 48 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) LC50 > 10,000 mg/l
63148-62-9 Siloxanes and Silicones, di-Me 63148-62-9 Silane, dichlorodimethyl-, reaction	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility Daphnia 48 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) LC50 > 10,000 mg/l Fish
63148-62-9 Siloxanes and Silicones, di-Me 63148-62-9 Silane, dichlorodimethyl-, reaction products with silica	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility Daphnia 48 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) LC50 > 10,000 mg/l Fish 96 h
63148-62-9 Siloxanes and Silicones, di-Me 63148-62-9 Silane, dichlorodimethyl-, reaction products with silica	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility Daphnia 48 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) LC50 > 10,000 mg/l Fish 96 h Brachydanio rerio (new name: Danio rerio)
Siloxanes and Silicones, di-Me 63148-62-9 Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Exposure time Species Method Species Method Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility Daphnia 48 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) LC50 > 10,000 mg/l Fish 96 h Brachydanio rerio (new name: Danio rerio) OECD Guideline 203 (Fish, Acute Toxicity Test)
Siloxanes and Silicones, di-Me 63148-62-9 Silane, dichlorodimethyl-, reaction products with silica 68611-44-9 Silane, dichlorodimethyl-, reaction	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility Daphnia 48 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) LC50 > 10,000 mg/l Fish 96 h Brachydanio rerio (new name: Danio rerio) OECD Guideline 203 (Fish, Acute Toxicity Test) EC50
Silane, dichlorodimethyl-, reaction products with silica Silane, dichlorodimethyl-, reaction products with silica	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Value Value Value Value Value type Value Value type Value	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility Daphnia 48 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) LC50 > 10,000 mg/l Fish 96 h Brachydanio rerio (new name: Danio rerio) OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 > 10,000 mg/l
Siloxanes and Silicones, di-Me 63148-62-9 Silane, dichlorodimethyl-, reaction products with silica 68611-44-9 Silane, dichlorodimethyl-, reaction	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility Daphnia 48 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) LC50 > 10,000 mg/l Fish 96 h Brachydanio rerio (new name: Danio rerio) OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 > 10,000 mg/l Daphnia
Silane, dichlorodimethyl-, reaction products with silica Silane, dichlorodimethyl-, reaction products with silica	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility Daphnia 48 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) LC50 > 10,000 mg/l Fish 96 h Brachydanio rerio (new name: Danio rerio) OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 > 10,000 mg/l Daphnia 24 h
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Siloxanes and Silicones, di-Me 63148-62-9 Silane, dichlorodimethyl-, reaction products with silica 68611-44-9 Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Exposure time Species Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility Daphnia 48 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) LC50 > 10,000 mg/l Fish 96 h Brachydanio rerio (new name: Danio rerio) OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 > 10,000 mg/l Daphnia 24 h Daphnia 24 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
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Silane, dichlorodimethyl-, reaction products with silica 68611-44-9 Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Value type Value Value type Value	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility Daphnia 48 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) LC50 > 10,000 mg/l Fish 96 h Brachydanio rerio (new name: Danio rerio) OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 > 10,000 mg/l Daphnia 24 h Daphnia 24 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9 Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility Daphnia 48 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) LC50 > 10,000 mg/l Fish 96 h Brachydanio rerio (new name: Danio rerio) OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 > 10,000 mg/l Daphnia 24 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
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Silane, dichlorodimethyl-, reaction products with silica 68611-44-9 Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species Method Value type Value Acute Toxicity Study Exposure time Species	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) LC50 Toxicity > Water solubility Fish 96 h Lepomis macrochirus OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 Toxicity > Water solubility Daphnia 48 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) LC50 > 10,000 mg/l Fish 96 h Brachydanio rerio (new name: Danio rerio) OECD Guideline 203 (Fish, Acute Toxicity Test) EC50 > 10,000 mg/l Daphnia 24 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) EC50 > 10,000 mg/l Daphnia 24 h Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) EC50 > 10,000 mg/l
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Method OECD Guideline 203 (Fish, Acure Toxicity Test)		Species	Brachydanio rerio (new name: Danio rerio)
Value			,
Value			
Exposure time Species Oryzina Inlipes			50 mg/l
Species Oryzins lalipos		Acute Toxicity Study	Fish
Method OFCD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)		Exposure time	
Walter type		Species	Oryzias latipes
Value 201 mg 2224-33-1 Exposure time 248 h Exposure time 2224-33-1 Exposure time 72 h		Method	OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)
Acute Toxicity Study	Butan-2-one O,O',O"-	Value type	
Exposure time		Value	201 mg/l
Species Daphnia magna Method OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)	2224-33-1	Acute Toxicity Study	
Method OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)			48 h
State Part			
(vinylsi)ylidyneptrioxime Value 94 mg/J 2224-33-1 Acute Toxicity Study Algae Exposure time 72 h Species Species Selenastrum capricormatum (new name: Pseudokirchneriella subcapita Method OFCD Guideline 201 (Alga, Growth Inhibition Test) Value type NOEC Value type 2. h Species Selenastrum capricormatum (new name: Pseudokirchneriella subcapita Method OECD Guideline 201 (Alga, Growth Inhibition Test) Carbon black - Nano Value type LC30 Value type LC30 Value type Inoxicity Study Value type Inoxicity Study Acute Toxicity Study Daphnia Acute Toxicity Study Algae Exposure time 24 h Acute Toxicity Study Algae Exposure time 72 h Acute Toxicity Study Algae <td></td> <td>Method</td> <td></td>		Method	
Acute Toxicity Study	Butan-2-one O,O',O"-	Value type	
Exposure time			94 mg/l
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Value			(8 /
Acute Toxicity Study			
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Species			
Method			
Carbon black - Nano Value (Protective) LCSD 133-86-4 Value (Protective) Toxicity > Water solubility Acute Toxicity Study Fish Exposure time 96 h Species Danio rerio Method OECD Guideline 203 (Fish, Acute Toxicity Test) Carbon black - Nano Value type Carbon black - Nano Daphnia Carbon black - Nano Value type Carbon black - Nano Value type Carbon black - Nano Value type Value type EC50 Value type Desmodesmus subspicatus Method OECD Guideline 201 (Alga, Growth Inhibition Test) Value type EC10 Value type EC10 Value type EC0 Value type EC0 Value type EC0 Value type </td <td></td> <td></td> <td></td>			
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Acute Toxicity Study		31	
Exposure time	1333-86-4		
Species		· ·	
Method		_	
Carbon black - Nano Value value Toxicity > Water solubility Acute Toxicity Study Daphnia Species Daphnia magna Method OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) Carbon black - Nano Value type EC50 Carbon black - Nano Value type EC50 Acute Toxicity Study Algae Exposure time 72 h Species Desmodesmus subspicatus Method OECD Guideline 201 (Alga, Growth Inhibition Test) Value type EC10 Value type EC10 Value type EC10 Value type EC10 Value type EC0 Value type EC50 Value type LC50			
Value			
Acute Toxicity Study			
Exposure time	1333-86-4		Toxicity > Water solubility
Species			
Method OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)			
Carbon black - Nano Value (VP) EC50 1333-86-4 Value (Toxicity Study) Algae Exposure time 72 h Species Desmodesmus subspicatus Method OECD Guideline 201 (Alga, Growth Inhibition Test) Current Value Toxicity > Water solubility Acute Toxicity Study Algae Exposure time 72 h Species Desmodesmus subspicatus Method OECD Guideline 201 (Alga, Growth Inhibition Test) Carbon black - Nano Value type Exposure time 72 h Species Desmodesmus subspicatus Method OECD Guideline 201 (Alga, Growth Inhibition Test) Carbon black - Nano Value type ECO Value Toxicity > Water solubility Acute Toxicity Study Bacteria Exposure time 3 h Species activated sludge, domestic Value type LC50 Value type LC50 Value type Exposure time As h Exposure time Wethod DI			
Value	Carlana blanta Nana		
Acute Toxicity Study			
Exposure time 72 h Species Desmodesmus subspicatus Method OECD Guideline 201 (Alga, Growth Inhibition Test) Value type EC10 Value Toxicity > Water solubility Acute Toxicity Study Algae Exposure time 72 h Species Desmodesmus subspicatus Method OECD Guideline 201 (Alga, Growth Inhibition Test) Exposure time 72 h Species Desmodesmus subspicatus Method OECD Guideline 201 (Alga, Growth Inhibition Test) Carbon black - Nano 1333-86-4 Value type EC0 Value Toxicity > Water solubility Acute Toxicity Study Bacteria Exposure time 3 h Species activated sludge, domestic Method other guideline: Octadecanoic acid Value type LC50 Acute Toxicity Study Fish Exposure time 48 h Species Leuciscus idus Method DIN 38412-15 Octadecanoic acid Value type IC50 Octadecanoic acid Value type IC50 Octadecanoic acid Value type IC50 Acute Toxicity Study Algae Exposure time Algae Acute Toxicity Study Algae Exposure time Pocitity Study Algae Octadecanoic acid Value type IC50 Acute Toxicity Study Algae Exposure time Pocitity Study Algae Exposure time Pocitity Study Algae Exposure time Pocitity Study Acute Toxicity Study Pocitity Study Acute Toxicity	1333-80-4		
Species Desmodesmus subspicatus			1 6
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57-11-4 Value Toxicity > Water solubility Acute Toxicity Study Algae Exposure time 96 h Species Selenastrum capricornutum (new name: Pseudokirchneriella subcapita Method other guideline: Octadecanoic acid Value type EC10		Method	DIN 38412-15
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Species Selenastrum capricornutum (new name: Pseudokirchneriella subcapita Method other guideline: Octadecanoic acid Value type EC10		Acute Toxicity Study	
Method other guideline: Octadecanoic acid Value type EC10			96 h
Octadecanoic acid Value type EC10			Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)
			other guideline:
57-11-4 Value Toxicity > Water solubility	0-4-4	Value type	EC10
, ,			

	Acute Toxicity Study	Bacteria
	Exposure time	16 h
	Species	Pseudomonas putida
	Method	ISO 10712: Determination of the inhibitory effect of water constituents on bacteria (Pseudomonas cell inhibition test)
[3-(Trimethoxysilyl)propyl]urea	Value type	LC50
23843-64-3	Value	> 100 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Cyprinus carpio
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
[3-(Trimethoxysilyl)propyl]urea 23843-64-3	Value type	EC50
	Value	> 100 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time Species	48 h Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
[3-(Trimethoxysilyl)propyl]urea	Value type	EC50
23843-64-3	Value	> 220 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Butan-2-one O,O',O",O"-	Value type	LC50
silanetetrayltetraoxime	Value	843 mg/l
34206-40-1	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species Method	Pimephales promelas OECD Guideline 203 (Fish, Acute Toxicity Test)
	Value type	NOEC
	Value	50 mg/l
	Acute Toxicity Study	Fish
	Exposure time	14 d
	Species	Oryzias latipes
	Method	OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)
Butan-2-one O,O',O",O"'-	Value type	EC50
silanetetrayltetraoxime	Value	201 mg/l
34206-40-1	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species Method	Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Butan-2-one O,O',O",O"'-	Value type	EC50
silanetetrayltetraoxime	Value	16 mg/l
34206-40-1	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	2.6 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species Method	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) OECD Guideline 201 (Alga, Growth Inhibition Test)
White mineral oil (petroleum),	Value type	LL50
highly refined	Value	> 100 mg/l
8042-47-5	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Oncorhynchus mykiss
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
White mineral oil (petroleum),	Value type	EL50
highly refined	Value	> 100 mg/l
8042-47-5	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species Method	Daphnia magna OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
White mineral oil (petroleum),	Value type	NOELR NOELR
highly refined	Value	100 mg/l
8042-47-5	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)

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White mineral oil (petroleum),	Value type	IC50
highly refined	Value	> 100 mg/l
8042-47-5	Acute Toxicity Study	Bacteria
	Exposure time	93 d
	Species	other:
	Method	other guideline:

Persistence and degradability:

Siloxanes and Silicones, di-Me	Result	not readily biodegradable.
63148-62-9	Route of application	aerobic
	Degradability	0 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Silane, dichlorodimethyl-,	Result	not readily biodegradable.
reaction products with silica	Route of application	not specified
68611-44-9	Degradability	> 0 - < 60 %
	Method	OECD 301 A - F
Butan-2-one O,O',O"-	Result	not readily biodegradable.
(vinylsilylidyne)trioxime	Route of application	aerobic
2224-33-1	Degradability	26 %
	Method	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
Octadecanoic acid	Result	readily biodegradable
57-11-4	Route of application	aerobic
	Degradability	95 %
	Method	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Butan-2-one O,O',O",O"'-	Result	not readily biodegradable.
silanetetrayltetraoxime	Route of application	aerobic
34206-40-1	Degradability	28 %
	Method	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
White mineral oil (petroleum),	Result	not readily biodegradable.
highly refined	Route of application	aerobic
8042-47-5	Degradability	31.3 %
	Method	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry
		Test)

Bioaccumulative potential / Mobility in soil:

Octadecanoic acid	Bioconcentration factor (BCF)	> 234 - 288
57-11-4	Exposure time	
	Species	Danio rerio
	Temperature	
	Method	OECD Guideline 305 E (Bioaccumulation: Flow-through Fish Test)
Octadecanoic acid	LogPow	8.23
57-11-4	Temperature	
	Method	EU Method A.8 (Partition Coefficient)
White mineral oil (petroleum),	LogPow	>4
highly refined	Temperature	
8042-47-5	Method	EU Method A.8 (Partition Coefficient)

Section 13. Disposal considerations

Product

Method of disposal:

Dispose of in accordance with local and national regulations.

Collection and delivery to recycling enterprise or other registered elimination institution.

Packaging

Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Packaging that cannot be cleaned are to be disposed of in the same manner as the product.

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Section 14. Transport information

Road transport ADR:

Not dangerous goods

Railroad transport RID:

Not dangerous goods

Inland water transport ADN:

Not dangerous goods

Marine transport IMDG:

Not dangerous goods

Air transport IATA:

Not dangerous goods

Section 15. Regulatory information

Regulatory Information:

Ministry of Industry Notice. The system to classify and communicate the hazard of hazardous material, BE. 2555

Global inventory status:

Regulatory list Notification **TSCA** yes DSL yes KECI (KR) yes **IECSC** yes **AICS** yes **TCSI** yes PICCS (PH) yes CH INV yes **EINECS** yes

Section 16. Other information

Disclaimer:

This Safety Data Sheet has been generated based on Ministry of Industry Notice. The system to classify and communicate the hazard of hazardous material, BE. 2555 only. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance. This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

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