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

Product name:
LOCTITE SI 598 390GR

Other means of identification:
LOCTITE SI 598 390GR

Product code:
IDH284470

Recommended use of the chemical and restrictions on use

Intended use:
Silicone sealant

Manufacturer/Importer/Distributor Representative Company

Henkel Thailand Ltd. The Offices at Centralworld,
35th Floor, 999/9 Rama 1 Rd.,
Kwang Patumwan, Khet Patumwan,
10330 Bangkok

Thailand

Phone: +66 (2209) 8000
Fax-no.: +66 (2209) 8008

E-mail address of person responsible for Safety Data Sheet:
ap-ua-psra.sea@henkel.com

Emergency Telephone for Chemical Accidents:
FOR EMERGENCIES ONLY (Spill, major leak, Fire, Exposure, or Accident). Call: +662 209 8008

Section 2. Hazards identification

GHS Classification:

Hazard Class	Hazard Category	Target organ
Serious eye damage/eye irritation	Category 1	
Skin sensitizer	Category 1	
Carcinogenicity	Category 1B	
Specific target organ toxicity - single exposure	Category 2	Upper respiratory tract

GHS label elements:

Hazard pictogram:



Signal word:
Danger

Hazard statement:
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H350 May cause cancer.
H371 May cause damage to the following organs:

Precaution:

Prevention:
P201 Obtain special instructions before use.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
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.
P308+P311 If exposed or concerned: Call a POISON CENTER/doctor/…
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.

Section 3. Composition / information on ingredients

Substance or Mixture:
Mixture

Declaration of hazardous chemical:

Hazard component CAS-No.	Content	GHS Classification
Limestone 1317-65-3	30- 60 %	
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	1- 10 %	
Butan-2-one O,O',O''-(vinylsilylidyne)trioxime 2224-33-1	1- 10 %	Flammable liquids 4 H227 Acute toxicity 5; Oral H303 Serious eye damage/eye irritation 1 H318 Skin sensitizer 1 H317 Carcinogenicity 2 H351 Specific target organ toxicity - repeated exposure 2 H373 Acute hazards to the aquatic environment 3 H402
2-butanone oxime 96-29-7	1- 10 %	Flammable liquids 4 H227 Acute toxicity 3; Oral H301 Acute toxicity 4; Dermal H312 Skin corrosion/irritation 2 H315 Serious eye damage/eye irritation 1 H318 Skin sensitizer 1 H317 Carcinogenicity 1B; Inhalation H350 Specific target organ toxicity - single exposure 1 H370 Specific target organ toxicity - single exposure 3 H336 Specific target organ toxicity - repeated exposure 2 H373 Acute hazards to the aquatic environment 3 H402
Carbon black - Nano 1333-86-4	0.1- 1 %	
Octamethylcyclotetrasiloxane 556-67-2	< 0.1 %	Flammable liquids 3 H226 Toxic to reproduction 2 H361 Chronic hazards to the aquatic environment 1 H410

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.

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

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

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
Particles (insoluble or poorly soluble) not otherwise specified, inhalable particles 1317-65-3	**Value type**	Time Weighted Average (TWA):
	mg/m³	10
	Remarks	ACGIH
Particles (insoluble or poorly soluble) not otherwise specified, respirable particles 1317-65-3	**Value type**	Time Weighted Average (TWA):
	mg/m³	3
	Remarks	ACGIH
Limestone 1317-65-3	**Value type**	Time Weighted Average (TWA):
	mg/m³	10
CALCIUM CARBONATE, INHALABLE DUST 1317-65-3	**Value type**	Time Weighted Average (TWA):
	mg/m³	15
	Remarks	TH OEL
Particles (insoluble or poorly soluble) not otherwise specified, respirable particles 68611-44-9	**Value type**	Time Weighted Average (TWA):
	mg/m³	3
	Remarks	ACGIH
Particles (insoluble or poorly soluble) not otherwise specified, inhalable particles 68611-44-9	**Value type**	Time Weighted Average (TWA):
	mg/m³	10
	Remarks	ACGIH
CARBON BLACK, INHALABLE FRACTION 1333-86-4	**Value type**	Time Weighted Average (TWA):
	mg/m³	3
	Remarks	ACGIH

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 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.

General protection and hygiene measures:
The workplace should be equipped with an emergency shower and eye-rinsing facility.

Hygienic measures:
Wash hands before work breaks and after finishing work.
Do not eat, drink or smoke while working.
Take off contaminated clothing and wash before reuse.

Section 9. Physical and chemical properties

Appearance:	Black paste
Odor:	Mild
Odor threshold (CA):	No data available.
pH:	Not applicable, Product is non-soluble (in water).
Melting point / freezing point:	Not applicable, Determination technically not possible
Specific gravity:	1.3
Boiling point:	No data available.
Flash point: (Tagliabue closed cup)	> 93 °C (> 199.4 °F)
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Lower explosive limit:	No data available.
Upper explosive limit:	No data available.
Vapor pressure: (; 20 °C (68 °F))	< 5 mm hg
Vapor density:	Heavier than air.
Density:	1.05 g/cm3
Solubility:	Insoluble (20 °C)
Partition coefficient: n-octanol/water:	No data available.
Auto ignition:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available. (; Method: no method / method unknown)
VOC content: (2010/75/EC)	< 5.00 %

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

Oral toxicity: Acute toxicity estimate (ATE) : > 2,000 mg/kg
Method: Calculation method

Dermal toxicity: Acute toxicity estimate (ATE) : > 2,000 mg/kg
Method: Calculation method

Symptoms of Overexposure**:** None known.

Acute oral toxicity:

Limestone 1317-65-3	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 420 (Acute Oral Toxicity)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
Butan-2-one O,O',O''-(vinylsilylidyne)trioxime 2224-33-1	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
Butan-2-one O,O',O''-(vinylsilylidyne)trioxime 2224-33-1	Value type	Acute toxicity estimate (ATE)
	Value	2,500 mg/kg
	Species	
	Method	Expert judgement
2-butanone oxime 96-29-7	Value type	Acute toxicity estimate (ATE)
	Value	100 mg/kg
	Species	
	Method	Expert judgement
Carbon black - Nano 1333-86-4	Value type	LD50
	Value	> 8,000 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
Octamethylcyclotetrasiloxane 556-67-2	Value type	LD50
	Value	> 4,800 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)

Acute inhalative toxicity:

Limestone 1317-65-3	Value type	LC50
	Value	> 3 mg/l
	Exposure time	4 h
	Species	rat
	Method	OECD Guideline 403 (Acute Inhalation Toxicity)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Value type	LC50
	Value	> 5.01 mg/l
	Exposure time	4 h
	Species	rat
	Method	OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class (ATC) Method)
2-butanone oxime 96-29-7	Value type	LC50
	Value	> 20 mg/l
	Exposure time	4 h
	Species	not specified
	Method	not specified
Carbon black - Nano 1333-86-4	Value type	LC50
	Value	> 0.0046 mg/l
	Exposure time	4 h
	Species	rat
	Method	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
Octamethylcyclotetrasiloxane 556-67-2	Value type	LC50
	Value	36 mg/l
	Exposure time	4 h
	Species	rat
	Method	OECD Guideline 403 (Acute Inhalation Toxicity)

Acute dermal toxicity:

Limestone 1317-65-3	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
Butan-2-one O,O',O"-(vinylsilylidyne)trioxime 2224-33-1	Value type	LD50
	Value	> 2,009 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
2-butanone oxime 96-29-7	Value type	Acute toxicity estimate (ATE)
	Value	1,100 mg/kg
	Species	
	Method	Expert judgement
Octamethylcyclotetrasiloxane 556-67-2	Value type	LD50
	Value	> 2,375 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

Limestone 1317-65-3	Result	not irritating
	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Result	not irritating
	Exposure time	4 h
	Species	rabbit
	Method	not specified
Butan-2-one O,O',O"-(vinylsilylidyne)trioxime 2224-33-1	Result	not irritating
	Exposure time	4 h
	Species	rabbit

	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Carbon black - Nano 1333-86-4	Result	not irritating
	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Octamethylcyclotetrasiloxane 556-67-2	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Limestone 1317-65-3	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	not specified
Butan-2-one O,O',O"-(vinylsilylidyne)trioxime 2224-33-1	Result	irritating or corrosive
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
2-butanone oxime 96-29-7	Result	Category 1 (irreversible effects on the eye)
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Carbon black - Nano 1333-86-4	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Octamethylcyclotetrasiloxane 556-67-2	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Limestone 1317-65-3	Result	not sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Result	not sensitising
	Test type	Patch-Test
	Species	human
	Method	human repeat insult patch test
Butan-2-one O,O',O"-(vinylsilylidyne)trioxime 2224-33-1	Result	sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
2-butanone oxime 96-29-7	Result	sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
Carbon black - Nano 1333-86-4	Result	not sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Octamethylcyclotetrasiloxane 556-67-2	Result	not sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Limestone 1317-65-3	Result	negative
	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)
Limestone 1317-65-3	Result	negative
	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 1317-65-3	Result	negative
	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)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	Ames Test
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Result	negative
	Type of study / Route of administration	in vitro mammalian chromosome aberration test
	Metabolic activation / Exposure time	with and without
	Method	Chromosome Aberration Test
Butan-2-one O,O',O"-(vinylsilylidyne)trioxime 2224-33-1	Result	negative
	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)
Butan-2-one O,O',O"-(vinylsilylidyne)trioxime 2224-33-1	Result	negative
	Type of study / Route of administration	intraperitoneal
	Metabolic activation / Exposure time	
	Species	mouse
	Method	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
2-butanone oxime 96-29-7	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	EPA OPPTS 870.5265 (The Salmonella typhimurium Bacterial Reverse Mutation Test)
2-butanone oxime 96-29-7	Result	negative
	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with
	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
2-butanone oxime 96-29-7	Result	negative
	Type of study / Route of administration	DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro
	Metabolic activation / Exposure time	
	Method	OECD Guideline 482 (Genetic Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells In Vitro)
2-butanone oxime 96-29-7	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	rat
	Method	EPA OPPTS 870.5385 (In Vivo Mammalian Cytogenetic Tests: Bone Marrow Chromosomal Analysis)
2-butanone oxime 96-29-7	Result	negative
	Type of study / Route of administration	oral: feed
	Metabolic activation / Exposure time	
	Species	Drosophila melanogaster
	Method	EPA OPPTS 870.5385 (In Vivo Mammalian Cytogenetic Tests: Bone Marrow Chromosomal Analysis)
Carbon black - Nano 1333-86-4	Result	negative
	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 1333-86-4	Result	negative
	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 1333-86-4	Result	negative
	Type of study / Route of administration	sister chromatid exchange assay in mammalian cells
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells)
Carbon black - Nano 1333-86-4	Result	negative
	Type of study / Route of administration	in vitro mammalian cell micronucleus test
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
Carbon black - Nano 1333-86-4	Result	negative
	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 490 (In Vitro Mammalian Cell Gene Mutation Tests Using the Thymidine Kinase Gene)
Carbon black - Nano 1333-86-4	Result	negative
	Type of study / Route of administration	inhalation
	Metabolic activation / Exposure time	
	Species	rat
	Method	OECD Guideline 489 (In Vivo Mammalian Alkaline Comet Assay)
Octamethylcyclotetrasiloxane 556-67-2	Result	negative
	Type of study / Route of administration	bacterial gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Octamethylcyclotetrasiloxane 556-67-2	Result	negative
	Type of study / Route of administration	in vitro mammalian chromosome aberration test
	Metabolic activation / Exposure time	with and without
	Method	equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Octamethylcyclotetrasiloxane 556-67-2	Result	negative
	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Octamethylcyclotetrasiloxane 556-67-2	Result	negative
	Type of study / Route of administration	inhalation
	Metabolic activation / Exposure time	
	Species	rat
	Method	equivalent or similar to OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)
Octamethylcyclotetrasiloxane 556-67-2	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
	Species	rat
	Method	equivalent or similar to OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)

Repeated dose toxicity:

Limestone 1317-65-3	Result	NOAEL=1,000 mg/kg
	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)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Result	NOAEL=500 mg/kg
	Route of application	oral: feed
	Exposure time / Frequency of treatment	5-8 wdaily
	Species	rat
	Method	not specified
Butan-2-one O,O',O''-(vinylsilylidyne)trioxime 2224-33-1	Result	LOAEL=25 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	13 w5 d/week
	Species	rat
	Method	equivalent or similar to OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
2-butanone oxime 96-29-7	Result	LOAEL=25 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	13 w5 d/week
	Species	rat
	Method	equivalent or similar to OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Carbon black - Nano 1333-86-4	Result	NOAEL=> 1,000 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	90 ddaily
	Species	rat
	Method	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Carbon black - Nano 1333-86-4	Result	NOAEL=1 mg/m3
	Route of application	inhalation
	Exposure time / Frequency of treatment	13 w6 h/d, 5 d/w
	Species	rat
	Method	not specified
Octamethylcyclotetrasiloxane 556-67-2	Result	LOAEL=35 ppm
	Route of application	inhalation
	Exposure time / Frequency of treatment	6 h nose only inhalation5 days/week for 13 weeks
	Species	rat
	Method	OECD Guideline 412 (Repeated Dose Inhalation Toxicity: 28/14-Day)
Octamethylcyclotetrasiloxane 556-67-2	Result	NOAEL=960 mg/kg
	Route of application	dermal
	Exposure time / Frequency of treatment	3 w5 d/w
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Section 12. Ecological information

General ecological information: Do not empty into drains / surface water / ground water.

Ecotoxicity:

Chronic aquatic toxicity: This product has no known eco-toxicological effects.

Toxicity:

Limestone 1317-65-3	Value type	EC50
	Value	> 1,000 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	activated sludge of a predominantly domestic sewage
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Value type	LC50
	Value	> 10,000 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Brachydanio rerio (new name: Danio rerio)
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Value type	EL50
	Value	> 10,000 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	24 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Value type	EC50
	Value	> 173 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Desmodesmus subspicatus
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Value type	EC50
	Value	> 2,500 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	activated sludge of a predominantly domestic sewage
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Butan-2-one O,O',O''-(vinylsilylidyne)trioxime 2224-33-1	Value type	LC50
	Value	> 560 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Brachydanio rerio (new name: Danio rerio)
	Method	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''-(vinylsilylidyne)trioxime 2224-33-1	Value type	EC50
	Value	201 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Butan-2-one O,O',O''-(vinylsilylidyne)trioxime 2224-33-1	Value type	EC50
	Value	94 mg/l
	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	30 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-butanone oxime 96-29-7	Value type	LC50
	Value	320 - 1,000 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Leuciscus idus
	Method	DIN 38412-15
	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)
2-butanone oxime 96-29-7	Value type	EC50
	Value	> 500 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	EU Method C.2 (Acute Toxicity for Daphnia)
2-butanone oxime 96-29-7	Value type	EC50
	Value	11.8 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Scenedesmus capricornutum
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	2.56 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Scenedesmus capricornutum
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-butanone oxime 96-29-7	Value type	EC10
	Value	177 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	17 h
	Species	
	Method	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test)
Octamethylcyclotetrasiloxane 556-67-2	Value type	NOEC
	Value	0.0044 mg/l
	Acute Toxicity Study	Fish
	Exposure time	93 d
	Species	Salmo gairdneri (new name: Oncorhynchus mykiss)
	Method	EPA OPPTS 797.1600 (Fish Early Life Stage Toxicity Test)
Octamethylcyclotetrasiloxane 556-67-2	Value type	EC10
	Value	0.022 mg/l
	Acute Toxicity Study	Algae
	Exposure time	96 h
	Species	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)
	Method	EPA OTS 797.1050 (Algal Toxicity, Tiers I and II)

Persistence and degradability:

Butan-2-one O,O',O''-(vinylsilylidyne)trioxime 2224-33-1	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	26 %
	Method	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
2-butanone oxime 96-29-7	Result	inherently biodegradable
	Route of application	aerobic
	Degradability	70 %
	Method	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	14.5 - 27 %
	Method	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
Octamethylcyclotetrasiloxane 556-67-2	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	3.7 %
	Method	OECD Guideline 310 (Ready BiodegradabilityCO2 in Sealed Vessels (Headspace Test)

Bioaccumulative potential / Mobility in soil:

Butan-2-one O,O',O''-(vinylsilylidyne)trioxime 2224-33-1	Bioconcentration factor (BCF)	> 0.5 - 5.8
	Exposure time	6 Weeks
	Species	Cyprinus carpio
	Temperature	
	Method	other guideline:
2-butanone oxime 96-29-7	Bioconcentration factor (BCF)	0.5 - 0.6
	Exposure time	42 d

	Species	Oryzias latipes
	Temperature	25 °C
	Method	OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish)
2-butanone oxime 96-29-7	LogPow	0.65
	Temperature	25 °C
	Method	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Octamethylcyclotetrasiloxane 556-67-2	Bioconcentration factor (BCF)	12,400
	Exposure time	28 d
	Species	Pimephales promelas
	Temperature	
	Method	EPA OTS 797.1520 (Fish Bioconcentration Test-Rainbow Trout)
Octamethylcyclotetrasiloxane 556-67-2	LogPow	6.98
	Temperature	21.7 °C
	Method	other guideline:

Section 13. Disposal considerations

Product

Method of disposal:
Dispose of in accordance with local and national regulations.

Packaging

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

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
TCSI	yes
TSCA	yes
DSL	yes
ISHL (JP)	yes
KECI (KR)	yes
PICCS (PH)	yes
IECSC	yes
NZIOC	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.
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