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

Product name:
TEROSON MS 939NA BLACK 570ML

Other means of identification:
TEROSON MS 939NA BLACK 570ML

Product code:
IDH2069989
Recommended use of the chemical and restrictions on use

Intended use:
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
Serious eye damage/eye irritation	Category 2
Skin sensitizer	Category 1
Toxic to reproduction	Category 1B
Chronic hazards to the aquatic environment	Category 3

GHS label elements:

Hazard pictogram:



Signal word:
Danger

Hazard statement:
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H360 May damage fertility or the unborn child.
H412 Harmful to aquatic life with long lasting effects.

Precaution:

Prevention:
P201 Obtain special instructions before use.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
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.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: 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
Calcium carbonate 471-34-1	30- 60 %	
3-(Trimethoxysilyl)propylamine 13822-56-5	1- 10 %	Flammable liquids 4 H227 Acute toxicity 5; Oral H303 Skin corrosion/irritation 2 H315 Serious eye damage/eye irritation 1 H318
Trimethoxyvinylsilane 2768-02-7	1- 10 %	Flammable liquids 3 H226 Acute toxicity 4; Inhalation H332 Acute toxicity 5; Dermal H313 Skin sensitizer 1B H317
Carbon black - Nano 1333-86-4	1- 10 %	
Dibutoxydibutylstannane 3349-36-8	0.1- 1 %	Acute toxicity 5; Oral H303 Skin corrosion/irritation 2 H315 Serious eye damage/eye irritation 1 H318 Skin sensitizer 1 H317 Germ cell mutagenicity 2 H341 Toxic to reproduction 1B H360 Specific target organ toxicity - single exposure 1 H370 Specific target organ toxicity - repeated exposure 1 H372 Acute hazards to the aquatic environment 2 H401 Chronic hazards to the aquatic environment 2 H411
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	0.1- 1 %	Acute toxicity 5; Oral H303 Serious eye damage/eye irritation 1 H318 Toxic to reproduction 2 H361 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 2 H411
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate] 36443-68-2	< 0.1 %	Chronic hazards to the aquatic environment 1 H410

Section 4. First aid measures

Inhalation:
Move to an area free from risk of further exposure.
If symptoms develop and persist, get medical attention.

Skin contact:
Wipe off with paper towel or cloth.
Wash with soap and water.
If symptoms develop and persist, get medical attention.

Eye contact:
Flush eye(s) immediately with plenty of water.
If eye irritation persists, consult a specialist.

Ingestion:
Keep individual calm.
Do not induce vomiting.
Seek medical advice.

Section 5. Fire fighting measures

Suitable extinguishing media:
Water spray (fog), foam, dry chemical or carbon dioxide.

Specific hazards arising from the chemical:
In case of fire, keep containers cool with water spray.

Special protection equipment and precautions for firefighters:
Wear protective equipment.
Wear self-contained breathing apparatus.

Hazardous combustion products:
Oxides of carbon.
Oxides of nitrogen.
Aldehydes.
Irritating organic vapours.

Section 6. Accidental release measures

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

Environmental precautions:
Do not empty into drains / surface water / ground water.

Clean-up methods:
Rinse spill area with water.
Spilled material will solidify.
Sweep up spilled material and place in a closed container for disposal. Avoid creating dust.
Dispose of contaminated material as waste according to Section 13.

Section 7. Handling and storage

Handling:
Avoid contact with eyes, skin and clothing.
Avoid breathing vapors or mists of this product.
Wash thoroughly after handling.
Do not handle contact lenses until all sealant has been removed from hands. Residual sealant may transfer to lenses and cause eye irritation.

Storage:
Store in tightly closed containers. In a cool/well-ventilated area.

Section 8. Exposure controls / personal protection

Components with specific control parameters for workplace:

Calcium carbonate, respirable dust 471-34-1	**Value type**	Time Weighted Average (TWA):
	mg/m³	5
	Remarks	TH OEL
Particles (insoluble or poorly soluble) not otherwise specified, respirable particles 471-34-1	**Value type**	Time Weighted Average (TWA):
	mg/m³	3
	Remarks	ACGIH
Particles (insoluble or poorly soluble) not otherwise specified, inhalable particles 471-34-1	**Value type**	Time Weighted Average (TWA):
	mg/m³	10
	Remarks	ACGIH
Calcium carbonate, inhalable dust 471-34-1	**Value type**	Time Weighted Average (TWA):
	mg/m³	15
	Remarks	TH OEL
CARBON BLACK, INHALABLE FRACTION 1333-86-4	**Value type**	Time Weighted Average (TWA):
	mg/m³	3
	Remarks	ACGIH
TIN, ORGANIC COMPOUNDS, AS SN 3349-36-8	**Value type**	Time Weighted Average (TWA):
	mg/m³	0.1
	Remarks	ACGIH
TIN, ORGANIC COMPOUNDS, AS SN 3349-36-8	**Value type**	Short Term Exposure Limit (STEL):
	mg/m³	0.2
	Remarks	ACGIH
TIN, ORGANIC COMPOUNDS, AS SN 3349-36-8	**Value type**	Skin designation:
	Remarks	ACGIH Danger of cutaneous absorption

Respiratory protection:
Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

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): Polychloroprene (CR; >= 1 mm thickness) or natural rubber (NR; >=1 mm thickness) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Polychloroprene (CR; >= 1 mm thickness) or natural rubber (NR; >=1 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 goggles or safety glasses with side shields.
Protective eye equipment should conform to EN166.

Body protection:
Chemical resistant, impermeable gloves.
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, Liquid
Odor:	Mild
Odor threshold (CA):	No data available.
pH:	No data available.
Melting point / freezing point:	No data available.
Specific gravity:	No data available.
Boiling point:	No data available.
Flash point:	> 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:	No data available.
Vapor density:	No data available.
Density:	No data available.
Solubility:	No data available.
Partition coefficient: n-octanol/water:	No data available.
Auto ignition:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.
VOC content:	No data available.

Section 10. Stability and reactivity

Reactivity/Incompatible materials:
Acids and bases.
Oxidizing agents.
Chemical stability:
Stable under recommended storage conditions.
Conditions to avoid:
Extremes of temperature and direct sunlight.
Heat, flames, sparks and other sources of ignition.
Hazardous decomposition products:
Oxides of nitrogen.
Oxides of carbon.
Aldehydes.
Irritating organic vapours.
Toxic fumes.

Section 11. Toxicological information

Inhalative toxicity: Acute toxicity estimate (ATE) : > 20 mg/l
Exposure time: 4 h
Test atmosphere: Vapor.
Method: Calculation method

Health Effects:
Skin: May cause an allergic skin reaction.
Eyes: Causes serious eye irritation.
Symptoms of Overexposure**:** None known.

Acute oral toxicity:

Calcium carbonate 471-34-1	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 420 (Acute Oral Toxicity)
3-(Trimethoxysilyl)propylamine 13822-56-5	Value type	LD50
	Value	3,030 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Trimethoxyvinylsilane 2768-02-7	Value type	LD50
	Value	6,899 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Carbon black - Nano 1333-86-4	Value type	LD50
	Value	> 8,000 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
Dibutoxydibutylstannane 3349-36-8	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 420 (Acute Oral Toxicity)
Dibutoxydibutylstannane 3349-36-8	Value type	Acute toxicity estimate (ATE)
	Value	2,500 mg/kg
	Species	
	Method	Expert judgement
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	Value type	LD50
	Value	3,700 mg/kg
	Species	rat
	Method	OECD Guideline 423 (Acute Oral toxicity)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate] 36443-68-2	Value type	LD50
	Value	> 7,000 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 423 (Acute Oral toxicity)

Acute inhalative toxicity:

Calcium carbonate 471-34-1	Value type	LC50
	Value	> 3 mg/l
	Exposure time	4 h
	Species	rat
	Method	OECD Guideline 403 (Acute Inhalation Toxicity)
Trimethoxyvinylsilane 2768-02-7	Value type	LC50
	Value	16.8 mg/l
	Exposure time	4 h
	Species	rat
	Method	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
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)

Acute dermal toxicity:

Calcium carbonate 471-34-1	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
3-(Trimethoxysilyl)propylamine 13822-56-5	Value type	LD50
	Value	11,300 mg/kg
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
Trimethoxyvinylsilane 2768-02-7	Value type	LD50
	Value	3,158 mg/kg
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	Value type	LD50
	Value	> 3,170 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate] 36443-68-2	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

Calcium carbonate 471-34-1	Result	not irritating
	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
3-(Trimethoxysilyl)propylamine 13822-56-5	Result	irritating
	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Trimethoxyvinylsilane 2768-02-7	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	other guideline:
Carbon black - Nano 1333-86-4	Result	not irritating
	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Dibutoxydibutylstannane 3349-36-8	Result	not corrosive
	Exposure time	
	Species	Human, EpiSkinTM (SM), Reconstructed Human Epidermis (RHE)
	Method	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed

		Human Epidermis (RHE) Test Method)
Dibutoxydibutylstannane 3349-36-8	Result	irritating
	Exposure time	
	Species	Human, EpiSkinTM (SM), Reconstructed Human Epidermis (RHE)
	Method	other guideline:
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	Result	not irritating
	Exposure time	24 h
	Species	rabbit
	Method	EPA OPP 81-5 (Acute Dermal Irritation)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate] 36443-68-2	Result	not irritating
	Exposure time	24 h
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Calcium carbonate 471-34-1	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
3-(Trimethoxysilyl)propylamine 13822-56-5	Result	corrosive
	Exposure time	
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Trimethoxyvinylsilane 2768-02-7	Result	not irritating
	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)
Dibutoxydibutylstannane 3349-36-8	Result	Category 1 (irreversible effects on the eye)
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	Result	corrosive
	Exposure time	24 h
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate] 36443-68-2	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Calcium carbonate 471-34-1	Result	not sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
3-(Trimethoxysilyl)propylamine 13822-56-5	Result	not sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
Trimethoxyvinylsilane 2768-02-7	Result	Sub-Category 1B (sensitising)
	Test type	Buehler 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)
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	Result	not sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate] 36443-68-2	Result	not sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Calcium carbonate 471-34-1	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)
Calcium carbonate 471-34-1	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)
Calcium carbonate 471-34-1	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)
Trimethoxyvinylsilane 2768-02-7	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Trimethoxyvinylsilane 2768-02-7	Result	positive
	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)
Trimethoxyvinylsilane 2768-02-7	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)
Trimethoxyvinylsilane 2768-02-7	Result	
	Type of study / Route of administration	
	Metabolic activation / Exposure time	
	Method	
Trimethoxyvinylsilane 2768-02-7	Result	negative
	Type of study / Route of administration	intraperitoneal
	Metabolic activation / Exposure time	
	Species	mouse
	Method	other guideline:
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)

Dibutoxydibutylstannane 3349-36-8	Result	positive
	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)
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	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)
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	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)

Repeated dose toxicity:

Calcium carbonate 471-34-1	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)
Trimethoxyvinylsilane 2768-02-7	Result	NOAEL=62.5 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	42ddaily
	Species	rat
	Method	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Trimethoxyvinylsilane 2768-02-7	Result	NOAEL=0.605 mg/l
	Route of application	inhalation: vapour
	Exposure time / Frequency of treatment	5 days/week for 14 weeks6 hours/day
	Species	rat
	Method	not specified
Trimethoxyvinylsilane 2768-02-7	Result	NOAEL=50 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	28 ddaily
	Species	rat
	Method	OECD Guideline 407 (Repeated Dose 28-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
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	Result	NOAEL=36 mg/kg
	Route of application	oral: feed
	Exposure time / Frequency of treatment	daily
	Species	rat
	Method	other guideline:

Section 12. Ecological information

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

Ecotoxicity: H412 Harmful to aquatic life with long lasting effects.

Toxicity:

Calcium carbonate 471-34-1	Value type	LC50
	Value	Toxicity > Water solubility
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Oncorhynchus mykiss
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Calcium carbonate 471-34-1	Value type	EC50
	Value	Toxicity > Water solubility
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Calcium carbonate 471-34-1	Value type	EC50
	Value	Toxicity > Water solubility
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Desmodesmus subspicatus
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	14 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Desmodesmus subspicatus
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Calcium carbonate 471-34-1	Value type	EC50
	Value	Toxicity > Water solubility
	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)
3-(Trimethoxysilyl)propylamine 13822-56-5	Value type	LC50
	Value	> 934 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)
3-(Trimethoxysilyl)propylamine 13822-56-5	Value type	EC50
	Value	331 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
3-(Trimethoxysilyl)propylamine 13822-56-5	Value type	EC50
	Value	> 1,000 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Desmodesmus subspicatus
	Method	EU Method C.3 (Algal Inhibition test)
	Value type	NOEC
	Value	1.3 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Desmodesmus subspicatus
	Method	EU Method C.3 (Algal Inhibition test)
Trimethoxyvinylsilane 2768-02-7	Value type	LC50
	Value	191 mg/l
	Acute Toxicity Study	Fish

	Exposure time	96 h
	Species	Oncorhynchus mykiss
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Trimethoxyvinylsilane 2768-02-7	Value type	EC50
	Value	168.7 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	EU Method C.2 (Acute Toxicity for Daphnia)
Trimethoxyvinylsilane 2768-02-7	Value type	EC50
	Value	> 957 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Desmodesmus subspicatus
	Method	EU Method C.3 (Algal Inhibition test)
	Value type	NOEC
	Value	957 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Desmodesmus subspicatus
	Method	EU Method C.3 (Algal Inhibition test)
Trimethoxyvinylsilane 2768-02-7	Value type	EC50
	Value	> 100 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)
Carbon black - Nano 1333-86-4	Value type	LC50
	Value	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 1333-86-4	Value type	EC50
	Value	Toxicity > Water solubility
	Acute Toxicity Study	Daphnia
	Exposure time	24 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Carbon black - Nano 1333-86-4	Value type	EC50
	Value	Toxicity > Water solubility
	Acute Toxicity Study	Algae
	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)
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	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Dibutoxydibutylstannane 3349-36-8	Value type	LC50
	Value	> 3.1 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)
Dibutoxydibutylstannane 3349-36-8	Value type	EC50
	Value	1.9 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Dibutoxydibutylstannane 3349-36-8	Value type	EC50
	Value	1.6 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Dibutoxydibutylstannane 3349-36-8	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)
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	Value type	LC50
	Value	4.4 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Lepomis macrochirus
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	Value type	EC50
	Value	8.58 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	Value type	EC50
	Value	0.705 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EC10
	Value	0.188 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	Value type	EC50
	Value	> 100 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	activated sludge, domestic
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate] 36443-68-2	Value type	LC50
	Value	Toxicity > Water solubility
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Lepomis macrochirus
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
	Value type	NOEC
	Value	0.0088 mg/l
	Acute Toxicity Study	Fish
	Exposure time	32 d
	Species	Pimephales promelas
	Method	OECD Guideline 210 (fish early lite stage toxicity test)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate] 36443-68-2	Value type	EC50
	Value	Toxicity > Water solubility
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate] 36443-68-2	Value type	EC50
	Value	Toxicity > Water solubility
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Raphidocelis subcapitata (new name: Pseudokirchneriella subcapitata)
	Method	EU Method C.3 (Algal Inhibition test)
	Value type	EC10
	Value	Toxicity > Water solubility
	Acute Toxicity Study	Algae
	Exposure time	72 h

	Species	Raphidocelis subcapitata (new name: Pseudokirchneriella subcapitata)
	Method	EU Method C.3 (Algal Inhibition test)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate] 36443-68-2	Value type	IC50
	Value	Toxicity > Water solubility
	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	activated sludge, domestic
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

Persistence and degradability:

3-(Trimethoxysilyl)propylamine 13822-56-5	Result	readily biodegradable
	Route of application	aerobic
	Degradability	80.2 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Trimethoxyvinylsilane 2768-02-7	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	51 %
	Method	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Dibutoxydibutylstannane 3349-36-8	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	> 0 - < 60 %
	Method	OECD 301 A - F
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	24 %
	Method	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate] 36443-68-2	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	8 %
	Method	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)

Bioaccumulative potential / Mobility in soil:

Calcium carbonate 471-34-1	LogPow	-2.12
	Temperature	
	Method	not specified
3-(Trimethoxysilyl)propylamine 13822-56-5	LogPow	-1.3
	Temperature	20 °C
	Method	QSAR (Quantitative Structure Activity Relationship)
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	LogPow	0.35
	Temperature	25 °C
	Method	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate] 36443-68-2	Bioconcentration factor (BCF)	> 0.11 - 2.45
	Exposure time	56 d
	Species	Cyprinus carpio
	Temperature	
	Method	OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate] 36443-68-2	LogPow	4.7
	Temperature	23 °C
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

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
ENCS (JP)	yes
ISHL (JP)	yes
KECI (KR)	yes
IECSC	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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