Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
3M MS Caulkable Sealer P/N 08855

Product Identification Numbers
FS-9100-3147-5

7000079955

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

Identified uses
Automotive.

1.3. Details of the supplier of the safety data sheet

Address:	3M Ireland Limited, 70 SIR JOHN ROGERSON'S QUAY, D02R296 DUBLIN 2
Telephone:	+353 1 280 3555
E Mail:	ner-productstewardship@mmm.com
Website:	www.3M.com

1.4. Emergency telephone number
Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
CLP REGULATION (EC) No 1272/2008

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

CLASSIFICATION:
Flammable Liquid, Category 3 - Flam. Liq. 3; H226
Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

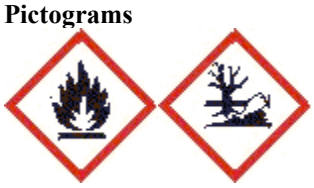
For full text of H phrases, see Section 16.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008

SIGNAL WORD
WARNING.

Symbols
GHS02 (Flame) |GHS09 (Environment) |

Pictograms



HAZARD STATEMENTS:

H226	Flammable liquid and vapour.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273	Avoid release to the environment.

Response:

P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P370 + P378	In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.
P391	Collect spillage.

SUPPLEMENTAL INFORMATION:

Supplemental Hazard Statements:

EUH208	Contains Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-. | Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate. | Trimethoxyvinylsilane. | N-(3-(Trimethoxysilyl)propyl)ethylenediamine. May produce an allergic reaction.

17% of the mixture consists of components of unknown acute oral toxicity.

2.3. Other hazards

Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines.
This material does not contain any substances that are assessed to be a PBT or vPvB

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Quartz	(CAS-No.) 14808-60-7 (EC-No.) 238-878-4	40 - 80	STOT RE 1, H372
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.',.alpha.''-1,2,3-propanetriyltris[. omega.-[3-(dimethoxymethylsilyl)propoxy]-	(CAS-No.) 151865-59-7	< 20	Substance not classified as hazardous
N-Ethyl-o(or p)-toluenesulphonamide	(CAS-No.) 8047-99-2 (EC-No.) 232-465-2	< 10	Substance not classified as hazardous
Titanium dioxide	(CAS-No.) 13463-67-7 (EC-No.) 236-675-5 (REACH-No.) 01-2119489379-17	< 5	Substance with a national occupational exposure limit
Calcium carbonate	(CAS-No.) 471-34-1 (EC-No.) 207-439-9	< 5	Substance with a national occupational exposure limit
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	(CAS-No.) 68515-49-1 (EC-No.) 271-091-4 (REACH-No.) 01-2119422347-43	< 3	Substance not classified as hazardous
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	(EC-No.) 918-167-1 (REACH-No.) 01-2119472146-39	< 3	Flam. Liq. 3, H226 Asp. Tox. 1, H304 EUH066
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	(EC-No.) ELINCS 484-050-2 (REACH-No.) 01-0000020228-74	< 2.5	Aquatic Acute 1, H400,M=10 Aquatic Chronic 1, H410,M=10
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	(CAS-No.) 1760-24-3 (EC-No.) 217-164-6	< 2.5	Acute Tox. 4, H332 Acute Tox. 4, H302 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 2, H373
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	(CAS-No.) 54068-28-9 (EC-No.) ELINCS 483-270-6 (REACH-No.) 01-0000020199-67	< 1	Skin Sens. 1B, H317 Repr. 2, H361d STOT RE 1, H372 Aquatic Chronic 2, H411
Trimethoxyvinylsilane	(CAS-No.) 2768-02-7 (EC-No.) 220-449-8 (REACH-No.) 01-2119513215-52	< 1	Skin Sens. 1B, H317 Flam. Liq. 3, H226 Acute Tox. 4, H332
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	(CAS-No.) 1065336-91-5 (EC-No.) 915-687-0 (REACH-No.) 01-2119491304-40	< 0.025	Skin Sens. 1A, H317 Repr. 2, H361f Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1

Any entry in the Identifier(s) column that begins with the numbers 6, 7, 8, or 9 are a Provisional List Number provided by ECHA pending publication of the official EC Inventory Number for the substance.
Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If swallowed
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
No critical symptoms or effects. See Section 11.1, information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Extinguishing media
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Irritant vapours or gases.	During combustion.

5.3. Advice for fire-fighters
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools.

Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

6.2. Environmental precautions
Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up
Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections
Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling
For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (eg. gloves, respirators…) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapour accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep cool. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from heat. Store away from acids. Store away from oxidising agents.

7.3. Specific end use(s)
See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Titanium dioxide	13463-67-7	Ireland OELs	TWA(Total inhalable dust)(8 hours):10 mg/m3;TWA(as respirable dust)(8 hours):4 mg/m3	
Silica, crystalline, respirable dust (Cristobalite, Quartz, Tridymite, Tripoli)	14808-60-7	Ireland OELs	TWA(as respirable dust)(8 hours):0.1 mg/m3	
Dusts non-specific	471-34-1	Ireland OELs	TWA(Total inhalable dust)(8 hours):10 mg/m3;TWA(as respirable dust)(8 hours):4 mg/m3	
Tin, Organic compounds	54068-28-9	Ireland OELs	TWA(8 hours):0.1 mg/m3;STEL(15 minutes):0.2 mg/m3	as Sn

Ireland OELs : Ireland. OELs
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

Biological limit values
No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from Indust. Inspect./Ministry (IE)

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Eye protection not required.

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended:

Material	Thickness (mm)	Breakthrough Time
Polymer laminate	No data available	No data available

Applicable Norms/Standards
Use gloves tested to EN 374

If this product is used in a manner that presents a higher potential for exposure (e.g., spraying, high splash potential, etc.), then use of a protective apron may be necessary. See recommended glove material(s) for determining appropriate apron

material(s). If a glove material is not available as an apron, polymer laminate is a suitable option.

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

Applicable Norms/Standards
Use a respirator conforming to EN 140 or EN 136: filter types A & P

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Paste
Colour	Grey
Odor	Characteristic Particular
Odour threshold	*No data available.*
Melting point/freezing point	*Not applicable.*
Boiling point/boiling range	*Not applicable.*
Flammability	Flammable liquid: Category 3.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Flash point	57.6 ºC [*Test Method:*Closed Cup]
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
pH	*substance/mixture is non-soluble (in water)*
Kinematic Viscosity	686 - 1,091 mm²/sec
Water solubility	Nil
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	*No data available.*
Density	1.7 g/ml [@ 23 ºC]
Relative density	1.65 - 1.75 [*Ref Std:*WATER=1]
Relative Vapour Density	*No data available.*
Particle Characteristics	*Not applicable.*

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	*No data available.*
Evaporation rate	*No data available.*
Molecular weight	*No data available.*
Percent volatile	4 - 8 %

SECTION 10: Stability and reactivity

10.1 Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
Heat.

10.5 Incompatible materials
Water

10.6 Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation
Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin contact
Contact with the skin during product use is not expected to result in significant irritation. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact
Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Additional information:
Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapour(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Quartz	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz	Ingestion		LD50 estimated to be > 5,000 mg/kg
N-Ethyl-o(or p)-toluenesulphonamide	Dermal	Rabbit	LD50 > 5,000 mg/kg
N-Ethyl-o(or p)-toluenesulphonamide	Ingestion	Rat	LD50 5,800 mg/kg
Calcium carbonate	Dermal	Rat	LD50 > 2,000 mg/kg
Calcium carbonate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Calcium carbonate	Ingestion	Rat	LD50 6,450 mg/kg
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	Dermal	similar compounds	LD50 > 5,000 mg/kg
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	Ingestion	similar compounds	LD50 > 5,000 mg/kg
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Dermal	Rabbit	LD50 > 3,160 mg/kg
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 12.5 mg/l
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Ingestion	Rat	LD50 > 9,700 mg/kg
Titanium dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	Dermal	Rat	LD50 > 2,000
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.3
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	Ingestion	Rat	LD50 > 2,000
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Dermal	Rabbit	LD50 > 2,000 mg/kg
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Inhalation-Dust/Mist (4 hours)	Rat	LC50 >1.49, <2.44 mg/l
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Ingestion	Rat	LD50 1,897 mg/kg
Trimethoxyvinylsilane	Dermal	Rabbit	LD50 3,260 mg/kg
Trimethoxyvinylsilane	Inhalation-Vapour (4 hours)	Rat	LC50 16.8 mg/l
Trimethoxyvinylsilane	Ingestion	Rat	LD50 7,120 mg/kg

Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	Dermal	Rat	LD50 > 2,000 mg/kg
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	Ingestion	Rat	LD50 > 2,000 mg/kg
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	Rat	LD50 3,125 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Quartz	Professional judgement	No significant irritation
N-Ethyl-o(or p)-toluenesulphonamide	Rabbit	No significant irritation
Calcium carbonate	Rabbit	No significant irritation
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	similar compounds	Mild irritant
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Rabbit	Minimal irritation
Titanium dioxide	Rabbit	No significant irritation
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	Rabbit	No significant irritation
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Rabbit	Mild irritant
Trimethoxyvinylsilane	Rabbit	Minimal irritation
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	Rabbit	No significant irritation
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
N-Ethyl-o(or p)-toluenesulphonamide	Rabbit	No significant irritation
Calcium carbonate	Rabbit	No significant irritation
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	similar compounds	No significant irritation
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Rabbit	Mild irritant
Titanium dioxide	Rabbit	No significant irritation
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	Rabbit	Mild irritant
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Rabbit	Corrosive
Trimethoxyvinylsilane	Rabbit	No significant irritation
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	Rabbit	Mild irritant
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
N-Ethyl-o(or p)-toluenesulphonamide	similar compounds	Not classified
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	similar compounds	Not classified
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Guinea pig	Not classified
Titanium dioxide	Human	Not classified

	and animal	
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	Mouse	Not classified
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Multiple animal species	Sensitising
Trimethoxyvinylsilane	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	Mouse	Sensitising
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Guinea pig	Sensitising

Respiratory Sensitisation

For the component/components, either no data is currently available or the data is not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Quartz	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz	In vivo	Some positive data exist, but the data are not sufficient for classification
N-Ethyl-o(or p)-toluenesulphonamide	In Vitro	Not mutagenic
N-Ethyl-o(or p)-toluenesulphonamide	In vivo	Not mutagenic
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	In Vitro	Not mutagenic
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	In Vitro	Not mutagenic
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	In vivo	Not mutagenic
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	In Vitro	Not mutagenic
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	In Vitro	Not mutagenic
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	In vivo	Not mutagenic
Trimethoxyvinylsilane	In vivo	Not mutagenic
Trimethoxyvinylsilane	In Vitro	Some positive data exist, but the data are not sufficient for classification
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	In Vitro	Not mutagenic
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	In vivo	Not mutagenic
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Quartz	Inhalation	Human and animal	Carcinogenic.
Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium dioxide	Inhalation	Rat	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Calcium carbonate	Ingestion	Not classified for development	Rat	NOAEL 625 mg/kg/day	premating & during gestation
1,2-Benzenedicarboxylic acid, di-C9-11-	Ingestion	Not classified for female reproduction	Rat	NOAEL 927	2 generation

branched alkyl esters, C10-rich				mg/kg/day	
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Ingestion	Not classified for male reproduction	Rat	NOAEL 929 mg/kg/day	2 generation
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Ingestion	Toxic to development	Rat	NOAEL 38 mg/kg/day	2 generation
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	28 days
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Ingestion	Not classified for female reproduction	Rat	NOAEL 500 mg/kg/day	premating into lactation
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	28 days
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	during gestation
Trimethoxyvinylsilane	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Trimethoxyvinylsilane	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Trimethoxyvinylsilane	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Trimethoxyvinylsilane	Inhalation	Not classified for development	Rat	NOAEL 1.8 mg/l	during organogenesis
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	Ingestion	Toxic to development	similar compounds	NOAEL not available	2 generation
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,493 mg/kg/day	29 days
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	Not classified for development	Rat	NOAEL 209 mg/kg/day	premating into lactation
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	Toxic to female reproduction	Rat	NOAEL 804 mg/kg/day	premating into lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Calcium carbonate	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.812 mg/l	90 minutes
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Quartz	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
N-Ethyl-o(or p)-toluenesulphonamide	Ingestion	liver	Not classified	Rat	NOAEL 400 mg/kg/day	90 days
N-Ethyl-o(or p)-toluenesulphonamide	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 100 mg/kg/day	90 days
N-Ethyl-o(or p)-toluenesulphonamide	Ingestion	heart | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | immune system | nervous system | eyes | respiratory system | vascular system	Not classified	Rat	NOAEL 400 mg/kg/day	90 days
Calcium carbonate	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Inhalation	respiratory system | hematopoietic system | liver	Not classified	Rat	NOAEL 0.5 mg/l	2 weeks
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 0.5 mg/l	2 generation
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Ingestion	endocrine system	Not classified	Rat	NOAEL 686 mg/kg/day	90 days
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Ingestion	liver | kidney and/or bladder | heart	Not classified	Rat	NOAEL 500 mg/kg/day	90 days
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Ingestion	hematopoietic system	Not classified	Dog	NOAEL 320 mg/kg/day	90 days
Titanium dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Dermal	skin | endocrine system | hematopoietic system | kidney and/or bladder	Not classified	Rat	NOAEL 1,545 mg/kg/day	11 days
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Inhalation	respiratory system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 0.015 mg/l	90 days
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Inhalation	hematopoietic system | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 0.044 mg/l	90 days
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Ingestion	hematopoietic system | nervous system	Not classified	Rat	NOAEL 500 mg/kg/day	28 days
Trimethoxyvinylsilane	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL mg/l	14 weeks
Trimethoxyvinylsilane	Inhalation	hematopoietic system | eyes	Not classified	Rat	NOAEL 2.4 mg/l	14 weeks
Trimethoxyvinylsilane	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for	Rat	NOAEL 250 mg/kg/day	40 days

			classification			
Trimethoxyvinylsilane	Ingestion	endocrine system | hematopoietic system | liver | immune system	Not classified	Rat	NOAEL 1,000 mg/kg/day	40 days
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	Ingestion	immune system	Causes damage to organs through prolonged or repeated exposure	similar compounds	NOAEL not available	
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	eyes	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 300 mg/kg/day	28 days
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	gastrointestinal tract | liver | immune system | heart | endocrine system | hematopoietic system | nervous system | kidney and/or bladder	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days

Aspiration Hazard

Name	Value
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

11.2. Information on other hazards

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
Quartz	14808-60-7	Green algae	Estimated	72 hours	EC50	440 mg/l
Quartz	14808-60-7	Water flea	Estimated	48 hours	EC50	7,600 mg/l
Quartz	14808-60-7	Zebra Fish	Estimated	96 hours	LC50	5,000 mg/l
Quartz	14808-60-7	Green algae	Estimated	72 hours	NOEC	60 mg/l
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.',.alpha."-1,2,3-propanetriyltris[.omega.-[3-(dimethoxymethylsilyl) propoxy]-	151865-59-7	N/A	Data not available or insufficient for classification	N/A	N/A	NA
N-Ethyl-o(or p)-toluenesulphonamide	8047-99-2	Activated sludge	Experimental	3 hours	EC50	644 mg/l

N-Ethyl-o(or p)-toluenesulphonamide	8047-99-2	Green algae	Experimental	72 hours	EC50	78 mg/l
N-Ethyl-o(or p)-toluenesulphonamide	8047-99-2	Rainbow trout	Experimental	96 hours	LC50	80 mg/l
N-Ethyl-o(or p)-toluenesulphonamide	8047-99-2	Water flea	Experimental	48 hours	EC50	>1,000 mg/l
N-Ethyl-o(or p)-toluenesulphonamide	8047-99-2	Green algae	Experimental	72 hours	EC10	13 mg/l
Calcium carbonate	471-34-1	Green algae	Experimental	72 hours	EC50	>100 mg/l
Calcium carbonate	471-34-1	Rainbow trout	Experimental	96 hours	LC50	>100 mg/l
Calcium carbonate	471-34-1	Water flea	Experimental	48 hours	EC50	>100 mg/l
Calcium carbonate	471-34-1	Green algae	Experimental	72 hours	EC10	100 mg/l
Titanium dioxide	13463-67-7	Activated sludge	Experimental	3 hours	NOEC	>=1,000 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	EC50	>10,000 mg/l
Titanium dioxide	13463-67-7	Fathead minnow	Experimental	96 hours	LC50	>100 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	NOEC	5,600 mg/l
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	918-167-1	Green algae	Analogous Compound	72 hours	EL50	>1,000 mg/l
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	918-167-1	Rainbow trout	Analogous Compound	96 hours	LL50	>1,000 mg/l
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	918-167-1	Water flea	Analogous Compound	48 hours	EL50	>1,000 mg/l
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	918-167-1	Fathead minnow	Analogous Compound	32 days	NOEL	>100 mg/l
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	918-167-1	Green algae	Analogous Compound	72 hours	NOEL	1,000 mg/l
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	918-167-1	Water flea	Experimental	21 days	NOEL	>1 mg/l
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	68515-49-1	Activated sludge	Experimental	30 minutes	EC50	>83.3 mg/l
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	68515-49-1	Green algae	Experimental	96 hours	EC50	>100 mg/l
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	68515-49-1	Rainbow trout	Experimental	96 hours	LC50	>100 mg/l
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	68515-49-1	Water flea	Experimental	48 hours	EC50	>100 mg/l
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters,	68515-49-1	Green algae	Experimental	96 hours	NOEC	100 mg/l

C10-rich						
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	68515-49-1	Water flea	Experimental	21 days	NOEC	100 mg/l
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Bacteria	Experimental	16 hours	EC50	67 mg/l
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Fathead minnow	Experimental	96 hours	LC50	168 mg/l
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Green algae	Experimental	72 hours	ErC50	8.8 mg/l
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Water flea	Experimental	48 hours	EC50	81 mg/l
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Green algae	Experimental	72 hours	NOEC	3.1 mg/l
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	484-050-2	Water flea	Endpoint not reached	48 hours	EC50	>100 mg/l
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	484-050-2	Activated sludge	Experimental	3 hours	EC50	>100 mg/l
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	484-050-2	Common Carp	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	484-050-2	Green algae	Experimental	72 hours	EC50	0.025 mg/l
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]o	484-050-2	Water flea	Endpoint not reached	21 days	NOEC	>100 mg/l

ctadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]						
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	484-050-2	Green algae	Experimental	72 hours	NOEC	0.007 mg/l
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	54068-28-9	Fathead minnow	Estimated	96 hours	LC50	282 mg/l
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	54068-28-9	Green algae	Estimated	72 hours	ErC50	226 mg/l
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	54068-28-9	Water flea	Estimated	48 hours	EC50	70.2 mg/l
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	54068-28-9	Fathead minnow	Estimated	34 days	NOEC	27 mg/l
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	54068-28-9	Green algae	Estimated	72 hours	NOEC	8.7 mg/l
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	54068-28-9	Water flea	Estimated	21 days	NOEC	0.62 mg/l
Trimethoxyvinylsilane	2768-02-7	Bacteria	Experimental	5 hours	EC10	1.1 mg/l
Trimethoxyvinylsilane	2768-02-7	Green algae	Experimental	72 hours	EC50	>957 mg/l
Trimethoxyvinylsilane	2768-02-7	Rainbow trout	Experimental	96 hours	LC50	191 mg/l
Trimethoxyvinylsilane	2768-02-7	Water flea	Experimental	48 hours	EC50	169 mg/l
Trimethoxyvinylsilane	2768-02-7	Green algae	Experimental	72 hours	NOEC	957 mg/l
Trimethoxyvinylsilane	2768-02-7	Water flea	Experimental	21 days	NOEC	28 mg/l
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	1065336-91-5	Green algae	Experimental	72 hours	ErC50	1.68 mg/l
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	1065336-91-5	Zebra Fish	Experimental	96 hours	LC50	0.9 mg/l
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-	1065336-91-5	Green algae	Experimental	72 hours	ErC10	0.34 mg/l

pentamethyl-4-piperidyl sebacate						
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	1065336-91-5	Water flea	Experimental	21 days	NOEC	1 mg/l
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	1065336-91-5	Activated sludge	Experimental	3 hours	IC50	>=100 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Quartz	14808-60-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.', .alpha."-1,2,3-propanetriyltris[. omega.-[3-(dimethoxymethylsilyl)propoxy]-	151865-59-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
N-Ethyl-o(or p)-toluenesulphonamide	8047-99-2	Estimated Biodegradation	28 days	BOD	25 %BOD/ThOD	
N-Ethyl-o(or p)-toluenesulphonamide	8047-99-2	Estimated Photolysis		Photolytic half-life (in air)	3.1 days (t 1/2)	
Calcium carbonate	471-34-1	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	918-167-1	Analogous Compound Biodegradation	28 days	BOD	31.3 %BOD/ThOD	similar to OECD 301F
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	68515-49-1	Experimental Biodegradation	28 days	BOD	74 %BOD/ThOD	OECD 301F - Manometric respirometry
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	39 %removal of DOC	EC C.4.A. DOC Die-Away Test
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	1.5 minutes (t 1/2)	
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	484-050-2	Experimental Biodegradation	28 days	CO2 evolution	7 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	54068-28-9	Experimental Biodegradation	28 days	BOD	9 %BOD/ThOD	OECD 301F - Manometric respirometry
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	54068-28-9	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	<10 minutes (t 1/2)	OECD 111 Hydrolysis func of pH
Trimethoxyvinylsilane	2768-02-7	Experimental Biodegradation	28 days	BOD	51 %BOD/ThOD	OECD 301F - Manometric respirometry
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-	1065336-91-5	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	38 %removal of DOC	OECD 301E - Modif. OECD Screen

pentamethyl-4-piperidyl sebacate						
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	1065336-91-5	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	68 days (t 1/2)	OECD 111 Hydrolysis func of pH

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Quartz	14808-60-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.',.alpha."-1,2,3-propanetriyltris[. omega.-[3-(dimethoxymethylsilyl)propoxy]-	151865-59-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
N-Ethyl-o(or p)-toluenesulphonamide	8047-99-2	Experimental Bioconcentration		Log Kow	1.8	
Calcium carbonate	471-34-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Experimental BCF - Fish	42 days	Bioaccumulation factor	9.6	
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	68515-49-1	Estimated BCF - Fish	56 days	Bioaccumulation factor	<14.4	OECD305-Bioconcentration
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	484-050-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	54068-28-9	Analogous Compound BCF - Fish	30 days	Bioaccumulation factor	<100	OECD305-Bioconcentration
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	54068-28-9	Hydrolysis product Bioconcentration		Log Kow	0.68	EC A.8 Partition Coefficient
Trimethoxyvinylsilane	2768-02-7	Estimated Bioconcentration		Log Kow	-2	
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	1065336-91-5	Analogous Compound BCF - Fish	56 days	Bioaccumulation factor	<31.4	
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	1065336-91-5	Experimental Bioconcentration		Log Kow	2.77	OECD 107 log Kow shke flsk mtd

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	484-050-2	Experimental Mobility in Soil	Koc	>430000 l/kg	OECD 121 Estim. of Koc by HPLC
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	54068-28-9	Analogous Compound Mobility in Soil	Koc	290,000 l/kg	
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	54068-28-9	Analogous Compound Mobility in Soil	Koc	33 l/kg	ACD/Labs ChemSketch™
Trimethoxyvinylsilane	2768-02-7	Estimated Mobility in Soil	Koc	650 l/kg	Episuite™
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	1065336-91-5	Modeled Mobility in Soil	Koc	7 l/kg	Episuite™

12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

12.6. Endocrine disrupting properties

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

12.7. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product as sold)
20 01 27* Paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transportation information

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number or ID number	UN1133	UN1133	UN1133
14.2 UN proper shipping name	ADHESIVES	ADHESIVES	ADHESIVES(POLYAMIDE WAX)
14.3 Transport hazard class(es)	3	3	3
14.4 Packing group	III	III	III
14.5 Environmental hazards	Environmentally Hazardous	Not applicable	Marine Pollutant
14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Marine Transport in bulk according to IMO instruments	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR Classification Code	F1	Not applicable.	Not applicable.
IMDG Segregation Code	Not applicable.	Not applicable.	NONE

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Carcinogenicity

Ingredient	CAS Nbr	Classification	Regulation
Quartz	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Titanium dioxide	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

Global inventory status
Contact 3M for more information.

DIRECTIVE 2012/18/EU
Seveso hazard categories, Annex 1, Part 1

Hazard Categories	Qualifying quantity (tonnes) for the application of	
	Lower-tier requirements	Upper-tier requirements
E2 Hazardous to the Aquatic environment	200	500
P5c FLAMMABLE LIQUIDS*	5000	50000

*If maintained at a temperature above its boiling point or if particular processing conditions, such as high pressure or high temperature, may create major-accident hazards, P5a or P5b FLAMMABLE LIQUIDS may apply

Seveso named dangerous substances, Annex 1, Part 2
None

Regulation (EU) No 649/2012

Chemical	Identifier(s)	Annex I
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	54068-28-9	Part 1

15.2. Chemical Safety Assessment
A chemical safety assessment has not been carried out for this mixture. Chemical safety assessments for the contained substances may have been carried out by the registrants of the substances in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information

List of relevant H statements

EUH066	Repeated exposure may cause skin dryness or cracking.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H361d	Suspected of damaging the unborn child.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Revision information:
No revision information

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the

product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into the European Union, you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration.

3M Ireland MSDSs are available at www.3M.com