



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

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SECTION 1: Identification

1.1. Product identifier

3M™ Fire Barrier Water Tight Sealant 1000 NS

1.2. Recommended use and restrictions on use

Recommended use

Fire Protection, This product is a watertight sealant that will help control the spread of fire, smoke and noxious gases.

1.3. Supplier's details

Address: 3M Technologies (S) Pte Ltd, 10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number

+65 6591 6601 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Serious Eye Damage/Irritation: Category 2.

Skin Sensitizer: Category 1.

Carcinogenicity: Category 1B.

2.2. Label elements

SIGNAL WORD

DANGER!

Symbols

Exclamation mark | Health Hazard |

Pictograms



HAZARD STATEMENTS

H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H350	May cause cancer.

PRECAUTIONARY STATEMENTS**Prevention:**

P201	Obtain special instructions before use.
P280K	Wear protective gloves and respiratory protection.

Response:

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.

Storage:

P405	Store locked up.
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Disposal:

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.
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2.3. Other hazards

Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines. This product may release methyl ethyl ketoxime (CAS 96-29-7) during curing and/or when exposed to water or humid air.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Calcium Carbonate	1317-65-3	15 - 40
Poly(Dimethylsiloxane)	63148-62-9	15 - 40
Siloxanes and Silcones, Di-Me, Hydroxy-Terminated	70131-67-8	15 - 40
Ketoxime Silane	22984-54-9	3 - 7
Silane, trimethoxyoctyl-, hydrolysis products with silica	7631-86-9	0.5 - 5
Pigments	Mixture	1 - 2
Methyl ethyl ketone oxime	96-29-7	0.01 - 1.2
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	< 1
Octamethylcyclotetrasiloxane	556-67-2	< 0.1

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

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. 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

Allergic skin reaction (redness, swelling, blistering, and itching). Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

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

Not applicable

SECTION 5: Fire-fighting measures**5.1. Suitable extinguishing media**

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products**Substance**

Formaldehyde

Carbon monoxide.

Carbon dioxide.

Oxides of nitrogen.

Condition

During combustion.

During combustion.

During combustion.

During combustion.

5.3. Special protective actions for fire-fighters

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. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Keep out of reach of children. Do not handle until all safety precautions have been read and understood. 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.) Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities

Store away from acids. Store away from strong bases. Store away from oxidising agents.

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
Calcium Carbonate	1317-65-3	Singapore PELs	TWA(8 hours):10 mg/m3	
Particles (insoluble or poorly soluble) not otherwise specified, inhalable particles	1317-65-3	ACGIH	TWA(inhalable particulates):10 mg/m3	
Particles (insoluble or poorly soluble) not otherwise specified, respirable particles	1317-65-3	ACGIH	TWA(respirable particles):3 mg/m3	
Octamethylcyclotetrasiloxane	556-67-2	AIHA	TWA:10 ppm	
DUST, INERT OR NUISANCE	7631-86-9	Singapore PELs	TWA(as particulate)(8 hours):10 mg/m3	
Particles (insoluble or poorly soluble) not otherwise specified, inhalable particles	7631-86-9	ACGIH	TWA(inhalable particulates):10 mg/m3	
Particles (insoluble or poorly soluble) not otherwise specified, respirable particles	7631-86-9	ACGIH	TWA(respirable particles):3 mg/m3	
Methyl ethyl ketone oxime	96-29-7	AIHA	TWA:36 mg/m3(10 ppm)	Dermal Sensitizer

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

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.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Safety glasses with side shields.

Indirect vented goggles.

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: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an Apron - polymer laminate

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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Paste
Color	Gray
Odor	Low Silicone
Odour threshold	<i>No data available.</i>
pH	<i>No data available.</i>
Melting point/Freezing point	<i>No data available.</i>
Boiling point/Initial boiling point/Boiling range	<i>Not applicable.</i>
Flash point	> 100 °C [Test Method: Closed Cup]
Evaporation rate	<i>Not applicable.</i>
Flammability	Not applicable.
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapour pressure	< 666.6 Pa [@ 25 °C]
Vapor Density and/or Relative Vapor Density	>=1 [Ref Std: AIR=1]
Density	1.32 g/cm3
Relative density	1.31 - 1.33 [Ref Std: WATER=1]
Water solubility	Nil
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Kinematic Viscosity	<i>No data available.</i>
Volatile organic compounds (VOC)	<=4 % weight [Test Method: tested per EPA method 24]
VOC less H2O & exempt solvents	<=53 g/l [Test Method: tested per EPA method 24]
Molecular weight	<i>No data available.</i>

Particle Characteristics	<i>Not applicable.</i>
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SECTION 10: Stability and reactivity

10.1 Reactivity

This material is considered to be non reactive under normal use conditions

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Not determined

10.5 Incompatible materials

Strong acids.

Strong bases.

Strong oxidising agents.

10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

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. May cause additional health effects (see below).

Skin contact

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact

Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

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:**Prolonged or repeated exposure may cause target organ effects:**

Hematopoietic effects: Signs/symptoms may include generalised weakness, fatigue and alterations in numbers of circulating blood cells. Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

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-Vapor(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 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
Siloxanes and Silcones, Di-Me, Hydroxy-Terminated	Dermal	Rabbit	LD50 > 16,000 mg/kg
Siloxanes and Silcones, Di-Me, Hydroxy-Terminated	Ingestion	Rat	LD50 > 64,000 mg/kg
Poly(Dimethylsiloxane)	Dermal	Rabbit	LD50 > 19,400 mg/kg
Poly(Dimethylsiloxane)	Ingestion	Rat	LD50 > 17,000 mg/kg
Silane, trimethoxyoctyl-, hydrolysis products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silane, trimethoxyoctyl-, hydrolysis products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silane, trimethoxyoctyl-, hydrolysis products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Ketoxime Silane	Dermal	Rat	LD50 > 2,000 mg/kg
Ketoxime Silane	Ingestion	Rat	LD50 2,260 mg/kg
Methyl ethyl ketone oxime	Dermal	official classification	LD50 1,100 mg/kg
Methyl ethyl ketone oxime	Ingestion	official classification	LD50 100 mg/kg
Methyl ethyl ketone oxime	Inhalation-Vapor	Rat	LC50 estimated to be 20 - 50 mg/l
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
Octamethylcyclotetrasiloxane	Dermal	Rat	LD50 > 2,400 mg/kg
Octamethylcyclotetrasiloxane	Inhalation-Dust/Mist (4 hours)	Rat	LC50 36 mg/l
Octamethylcyclotetrasiloxane	Ingestion	Rat	LD50 > 4,800 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Calcium Carbonate	Rabbit	No significant irritation
Poly(Dimethylsiloxane)	Rabbit	No significant irritation
Silane, trimethoxyoctyl-, hydrolysis products with silica	Rabbit	No significant irritation
Ketoxime Silane	Rabbit	No significant irritation
Methyl ethyl ketone oxime	Rabbit	Irritant
N-(3-(trimethoxysilyl)propyl)ethylenediamine	Rabbit	Mild irritant
Octamethylcyclotetrasiloxane	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Calcium Carbonate	Rabbit	No significant irritation
Poly(Dimethylsiloxane)	Rabbit	No significant irritation
Silane, trimethoxyoctyl-, hydrolysis products with silica	Rabbit	No significant irritation
Ketoxime Silane	Rabbit	Moderate irritant
Methyl ethyl ketone oxime	Rabbit	Corrosive
N-(3-(trimethoxysilyl)propyl)ethylenediamine	Rabbit	Corrosive
Octamethylcyclotetrasiloxane	Rabbit	No significant irritation

Sensitization:**Skin Sensitisation**

Name	Species	Value
Silane, trimethoxyoctyl-, hydrolysis products with silica	Human and animal	Not classified
Ketoxime Silane	Guinea pig	Sensitising
Methyl ethyl ketone oxime	Guinea pig	Sensitising
N-(3-(trimethoxysilyl)propyl)ethylenediamine	Multiple animal species	Sensitising
Octamethylcyclotetrasiloxane	Human and animal	Not classified

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
Siloxanes and Silcones, Di-Me, Hydroxy-Terminated	In Vitro	Not mutagenic
Silane, trimethoxyoctyl-, hydrolysis products with silica	In Vitro	Not mutagenic
Ketoxime Silane	In Vitro	Not mutagenic
Methyl ethyl ketone oxime	In Vitro	Not mutagenic
Methyl ethyl ketone oxime	In vivo	Not mutagenic
N-(3-(trimethoxysilyl)propyl)ethylenediamine	In Vitro	Not mutagenic
N-(3-(trimethoxysilyl)propyl)ethylenediamine	In vivo	Not mutagenic
Octamethylcyclotetrasiloxane	In vivo	Not mutagenic
Octamethylcyclotetrasiloxane	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Silane, trimethoxyoctyl-, hydrolysis products with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification

Methyl ethyl ketone oxime	Inhalation	Multiple animal species	Carcinogenic.
Octamethylcyclotetrasiloxane	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification

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
Silane, trimethoxyoctyl-, hydrolysis products with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silane, trimethoxyoctyl-, hydrolysis products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silane, trimethoxyoctyl-, hydrolysis products with silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Ketoxime Silane	Ingestion	Not classified for female reproduction	Rat	NOAEL 250 mg/kg/day	premating into lactation
Ketoxime Silane	Ingestion	Not classified for male reproduction	Rat	NOAEL 250 mg/kg/day	28 days
Ketoxime Silane	Ingestion	Not classified for development	Rat	NOAEL 250 mg/kg/day	premating into lactation
Methyl ethyl ketone oxime	Ingestion	Not classified for female reproduction	Rat	NOAEL 200 mg/kg/day	2 generation
Methyl ethyl ketone oxime	Ingestion	Not classified for male reproduction	Rat	NOAEL 200 mg/kg/day	2 generation
Methyl ethyl ketone oxime	Ingestion	Not classified for development	Rat	NOAEL 600 mg/kg/day	during organogenesis
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
Octamethylcyclotetrasiloxane	Inhalation	Not classified for male reproduction	Rat	NOAEL 8.5 mg/l	2 generation
Octamethylcyclotetrasiloxane	Inhalation	Not classified for development	Rabbit	NOAEL 6 mg/l	during organogenesis
Octamethylcyclotetrasiloxane	Ingestion	Not classified for development	Rabbit	NOAEL 100 mg/kg	during organogenesis
Octamethylcyclotetrasiloxane	Inhalation	Toxic to female reproduction	Rat	NOAEL 3.6 mg/l	2 generation

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
Ketoxime Silane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Methyl ethyl ketone oxime	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Methyl ethyl ketone oxime	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Rat	NOAEL 100 mg/kg	
N-(3-(trimethoxysilyl)propyl)eth	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for	similar health	NOAEL Not available	

ylenediamine			classification	hazards		
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Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Calcium Carbonate	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
Silane, trimethoxyoctyl-, hydrolysis products with silica	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Ketoxime Silane	Ingestion	hematopoietic system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 10 mg/kg/day	28 days
Ketoxime Silane	Ingestion	endocrine system liver nervous system kidney and/or bladder	Not classified	Rat	NOAEL 250 mg/kg/day	28 days
Methyl ethyl ketone oxime	Inhalation	hematopoietic system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 0.36 mg/l	28 days
Methyl ethyl ketone oxime	Inhalation	respiratory system	May cause damage to organs though prolonged or repeated exposure	Mouse	NOAEL 0.01 mg/l	90 days
Methyl ethyl ketone oxime	Inhalation	liver	Not classified	Rat	NOAEL 1.44 mg/l	28 days
Methyl ethyl ketone oxime	Ingestion	hematopoietic system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 25 mg/kg/day	90 days
Methyl ethyl ketone oxime	Ingestion	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 100 mg/kg/day	90 days
Methyl ethyl ketone oxime	Ingestion	nervous system	Not classified	Rat	NOAEL 400 mg/kg/day	90 days
Methyl ethyl ketone oxime	Ingestion	liver kidney and/or bladder heart endocrine system bone, teeth, nails, and/or hair immune system	Not classified	Rat	NOAEL 335 mg/kg/day	90 days
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
Octamethylcyclotetrasiloxane	Dermal	hematopoietic system	Not classified	Rabbit	NOAEL 960 mg/kg/day	3 weeks
Octamethylcyclotetrasiloxane	Inhalation	liver	Not classified	Rat	NOAEL 8.5 mg/l	13 weeks
Octamethylcyclotetrasiloxane	Inhalation	endocrine system immune system kidney and/or bladder	Not classified	Rat	NOAEL 8.5 mg/l	2 generation
Octamethylcyclotetrasiloxane	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 8.5 mg/l	13 weeks
Octamethylcyclotetrasiloxane	Ingestion	liver	Not classified	Rat	NOAEL 1,600 mg/kg/day	2 weeks

Aspiration Hazard

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

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.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity**Acute aquatic hazard:**

Not acutely toxic to aquatic life by GHS criteria.

Chronic aquatic hazard:

GHS Chronic 3: Harmful to aquatic life with long lasting effects.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Calcium Carbonate	1317-65-3	Green algae	Estimated	72 hours	EC50	>100 mg/l
Calcium Carbonate	1317-65-3	Rainbow trout	Estimated	96 hours	LC50	>100 mg/l
Calcium Carbonate	1317-65-3	Water flea	Estimated	48 hours	EC50	>100 mg/l
Calcium Carbonate	1317-65-3	Green algae	Estimated	72 hours	EC10	>100 mg/l
Poly(Dimethylsiloxane)	63148-62-9	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Siloxanes and Silcones, Di-Me, Hydroxy-Terminated	70131-67-8	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Ketoxime Silane	22984-54-9	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Ketoxime Silane	22984-54-9	Green algae	Experimental	72 hours	EC50	94 mg/l
Ketoxime Silane	22984-54-9	Rainbow trout	Experimental	96 hours	LC50	>120 mg/l
Ketoxime Silane	22984-54-9	Water flea	Experimental	48 hours	EC50	>120 mg/l
Ketoxime Silane	22984-54-9	Water flea	Analogous Compound	21 days	NOEC	100 mg/l
Ketoxime Silane	22984-54-9	Green algae	Experimental	72 hours	NOEC	30 mg/l
Silane, trimethoxyoctyl-, hydrolysis products with silica	7631-86-9	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Methyl ethyl ketone oxime	96-29-7	Bacteria	Experimental	17 hours	EC50	281 mg/l
Methyl ethyl ketone oxime	96-29-7	Green algae	Experimental	72 hours	EC50	16 mg/l
Methyl ethyl ketone oxime	96-29-7	Medaka	Experimental	96 hours	LC50	>100 mg/l
Methyl ethyl ketone oxime	96-29-7	Water flea	Experimental	48 hours	EC50	201 mg/l
Methyl ethyl ketone oxime	96-29-7	Green algae	Experimental	72 hours	NOEC	2.6 mg/l
Methyl ethyl ketone oxime	96-29-7	Water flea	Experimental	21 days	NOEC	>=100 mg/l
N-(3-	1760-24-3	Bacteria	Experimental	16 hours	EC50	67 mg/l

(trimethoxysilyl)propyl)ethylenediamine						
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
Octamethylcyclotetrasiloxane	556-67-2	Blackworm	Experimental	28 days	NOEC	0.73 mg/kg (Dry Weight)
Octamethylcyclotetrasiloxane	556-67-2	Midge	Experimental	14 days	LC50	>170 mg/kg (Dry Weight)
Octamethylcyclotetrasiloxane	556-67-2	Mysid Shrimp	Experimental	96 hours	LC50	>0.0091 mg/l
Octamethylcyclotetrasiloxane	556-67-2	Rainbow trout	Experimental	96 hours	LC50	>0.022 mg/l
Octamethylcyclotetrasiloxane	556-67-2	Water flea	Experimental	48 hours	EC50	>0.015 mg/l
Octamethylcyclotetrasiloxane	556-67-2	Rainbow trout	Experimental	93 days	NOEC	0.0044 mg/l
Octamethylcyclotetrasiloxane	556-67-2	Water flea	Experimental	21 days	NOEC	0.015 mg/l
Octamethylcyclotetrasiloxane	556-67-2	Activated sludge	Experimental	3 hours	EC50	>10,000 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Calcium Carbonate	1317-65-3	Data not available-insufficient	N/A	N/A	N/A	N/A
Poly(Dimethylsiloxane)	63148-62-9	Data not available-insufficient	N/A	N/A	N/A	N/A
Siloxanes and Silcones, Di-Me, Hydroxy-Terminated	70131-67-8	Data not available-insufficient	N/A	N/A	N/A	N/A
Ketoxime Silane	22984-54-9	Analogous Compound Biodegradation	28 days	Dissolv. Organic Carbon Deplet	0 %removal of DOC	OECD 301A - DOC Die Away Test
Ketoxime Silane	22984-54-9	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	1 minutes (t 1/2)	
Silane, trimethoxyoctyl-, hydrolysis products with silica	7631-86-9	Data not available-insufficient	N/A	N/A	N/A	N/A
Methyl ethyl ketone oxime	96-29-7	Experimental Biodegradation	21 days	BOD	14.5 %BOD/ThOD	
Methyl ethyl ketone oxime	96-29-7	Estimated Photolysis		Photolytic half-life (in air)	21.6 days (t 1/2)	
Methyl ethyl	96-29-7	Experimental		Hydrolytic half-life	18 days (t 1/2)	

3M™ Fire Barrier Water Tight Sealant 1000 NS

ketone oxime		Hydrolysis				
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)	
Octamethylcyclotetrasiloxane	556-67-2	Experimental Biodegradation	29 days	CO2 evolution	3.7 %CO2 evolution/THCO2 evolution	OECD 310 CO2 Headspace
Octamethylcyclotetrasiloxane	556-67-2	Experimental Photolysis		Photolytic half-life (in air)	31 days (t 1/2)	
Octamethylcyclotetrasiloxane	556-67-2	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	69.3-144 hours (t 1/2)	OECD 111 Hydrolysis func of pH

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Calcium Carbonate	1317-65-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Poly(Dimethylsiloxane)	63148-62-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silcones, Di-Me, Hydroxy-Terminated	70131-67-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ketoxime Silane	22984-54-9	Analogous Compound Bioconcentration		Log Kow	<0.65	
Silane, trimethoxyoctyl-, hydrolysis products with silica	7631-86-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Methyl ethyl ketone oxime	96-29-7	Experimental BCF - Fish	42 days	Bioaccumulation factor	<5.8	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
Octamethylcyclotetrasiloxane	556-67-2	Experimental BCF - Fish	28 days	Bioaccumulation factor	12400	40CFR 797.1520-Fish Bioaccumm
Octamethylcyclotetrasiloxane	556-67-2	Experimental Bioconcentration		Log Kow	6.49	OECD 123 log Kow slow stir

12.4. Mobility in soil

Please contact manufacturer for more details

12.5 Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1. Disposal methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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.

SECTION 14: Transport Information

International Regulations

UN No.: Not restricted for transport.

UN Proper shipping name: Not restricted for transport.

Transportation Class (IMO): None assigned

Transportation Class (IATA): None assigned

Other Dangerous Goods Descriptions (IMO): None assigned

Other Dangerous Goods Descriptions (IATA): None assigned

Packing Group: None assigned

Marine pollutant: None assigned

SECTION 15: Regulatory information

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

Global inventory status

Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

This product may contain component(s) that are regulated by the following:

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.

SECTION 16: Other 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.

3M Singapore SDSs are available at www.3m.com.sg