Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Malaysia Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

SECTION 1: Identification

1.1. Product identifier
3M™ Marine Silicone Sealant - White, P.N. 08017, 08027

Product Identification Numbers
60-9800-4281-0 60-9800-4308-1 62-8027-5235-2

1.2. Recommended use and restrictions on use

Recommended use
Marine Mildew Resistant Silicone, Sealant

For Industrial or Professional use only

1.3. Supplier's details
ADDRESS: 3M Malaysia Sdn. Bhd., Level 8, Block F, Oasis Square, No.2, Jalan PJU 1A/7A, Ara Damansara 47301 Petaling, Jaya, Selangor
Telephone: 03-7884 2888
E Mail: 3mmyehsr@mmm.com
Website: www.3M.com.my

1.4. Emergency telephone number
+60 03-7884 2888

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Chronic Aquatic Toxicity: Category 3.

2.2. Label elements
Signal word
Not applicable

Symbols
Not applicable

Pictograms

Not applicable

Hazard Statements:

H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

Disposal:

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

2.3. Other hazards
Although titanium dioxide is classified as a carcinogen, exposures associated with this health effect are not expected during normal, intended use of this product.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
Siloxanes And Silicones, DI-ME, Hydroxy-Terminated	70131-67-8	70 - 90
Silica	7631-86-9	5 - 10
Siloxanes and Silicones, di-Me	63148-62-9	1 - 5
Titanium Dioxide	13463-67-7	< 2
Dodecamethylcyclohexasiloxane	540-97-6	< 0.3
Decamethylcyclopentasiloxane	541-02-6	< 0.2
Proprietary Biocide	Trade Secret	< 0.1
Octamethylcyclotetrasiloxane	556-67-2	< 0.1

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
No need for first aid is anticipated. If symptoms develop, remove the affected person to fresh air. Get medical attention.

Skin Contact:
If exposed, wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:
No need for first aid is anticipated. If signs/symptoms persist, get medical attention.

If Swallowed:
Do not induce vomiting. 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. 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	Condition
Formaldehyde	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Irritant Vapors or Gases	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
Avoid breathing of vapors created during cure cycle. Keep out of reach of children. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities
Store away from oxidizing 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	C.A.S. No.	Agency	Limit type	Additional Comments
DUST, INERT OR NUISANCE	13463-67-7	Malaysia OELs	TWA (proposed)(respirable particles)(8 hours):3 mg/m3;TWA (proposed)(Inhalable particulate)(8 hours):10 mg/m3	
Titanium Dioxide	13463-67-7	ACGIH	TWA(Respirable nanoscale particles):0.2	A3: Confirmed animal carcin.

			mg/m3;TWA(Respirable finescale particles):2.5 mg/m3	
Titanium Dioxide	13463-67-7	Malaysia OELs	TWA(8 hours):10 mg/m3	
DUST, INERT OR NUISANCE	7631-86-9	Malaysia OELs	TWA (proposed)(respirable particles)(8 hours):3 mg/m3;TWA (proposed)(Inhalable 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	

ACGIH : American Conference of Governmental Industrial Hygienists
CMRG : Chemical Manufacturer's Recommended Guidelines
Malaysia OELs : Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Provide ventilated enclosure for curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. 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/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection
None required.

Skin/hand protection
No chemical protective gloves are required.

Respiratory protection
None required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Specific Physical Form:	Paste
Color	White
Odor	Moderate Acetic Acid
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point/Freezing point	*No Data Available*
Boiling point/Initial boiling point/Boiling range	*Not Applicable*
Flash Point	No flash point
Evaporation rate	*Not Applicable*
Flammability	Not Applicable

Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*Not Applicable*
Relative Vapor Density	*Not Applicable*
Density	1.02 g/cm3
Relative Density	1.02 [*Ref Std:*WATER=1]
Water solubility	*No Data Available*
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*No Data Available*
Decomposition temperature	*No Data Available*
Kinematic Viscosity	*Not Applicable*
Volatile Organic Compounds	*No Data Available*
Percent volatile	2.1 % weight
VOC Less H2O & Exempt Solvents	22 g/l [*Test Method:*calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	2.1 % [*Test Method:*calculated per EPA method 24]

Particle Characteristics	*Not Applicable*

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 polymerization will not occur.

10.4. Conditions to avoid
Not determined

10.5. Incompatible materials
Strong oxidizing agents

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 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 labeling, 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:
No health effects are expected.

Skin Contact:
Contact with the skin during product use is not expected to result in significant irritation.

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

Ingestion:
No known health effects.

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	Ingestion		No data available; calculated ATE >5,000 mg/kg
Siloxanes And Silicones, DI-ME, Hydroxy-Terminated	Dermal	Rabbit	LD50 > 16,000 mg/kg
Siloxanes And Silicones, DI-ME, Hydroxy-Terminated	Ingestion	Rat	LD50 > 64,000 mg/kg
Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Siloxanes and Silicones, di-Me	Dermal	Rabbit	LD50 > 19,400 mg/kg
Siloxanes and Silicones, di-Me	Ingestion	Rat	LD50 > 17,000 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
Dodecamethylcyclohexasiloxane	Dermal	Rat	LD50 > 2,000 mg/kg
Dodecamethylcyclohexasiloxane	Ingestion	Rat	LD50 > 2,000 mg/kg
Decamethylcyclopentasiloxane	Dermal	Rabbit	LD50 > 2,000 mg/kg
Decamethylcyclopentasiloxane	Inhalation-Dust/Mist (4 hours)	Rat	LC50 8.7 mg/l
Decamethylcyclopentasiloxane	Inhalation-Vapor (4 hours)	Rat	LC50 > 6.72 mg/l
Decamethylcyclopentasiloxane	Ingestion	Rat	LD50 > 5,000 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
Silica	Rabbit	No significant irritation
Siloxanes and Silicones, di-Me	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
Dodecamethylcyclohexasiloxane	Rabbit	No significant irritation
Decamethylcyclopentasiloxane	Rabbit	No significant irritation
Octamethylcyclotetrasiloxane	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Silica	Rabbit	No significant irritation
Siloxanes and Silicones, di-Me	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
Dodecamethylcyclohexasiloxane	Rabbit	No significant irritation
Decamethylcyclopentasiloxane	Rabbit	No significant irritation
Octamethylcyclotetrasiloxane	Rabbit	No significant irritation

Sensitization:

Skin Sensitization

Name	Species	Value
Silica	Human and animal	Not classified
Titanium Dioxide	Human and animal	Not classified
Dodecamethylcyclohexasiloxane	Guinea pig	Not classified
Decamethylcyclopentasiloxane	Mouse	Not classified
Octamethylcyclotetrasiloxane	Human and animal	Not classified

Respiratory Sensitization

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 Silicones, DI-ME, Hydroxy-Terminated	In Vitro	Not mutagenic
Silica	In Vitro	Not mutagenic
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic
Dodecamethylcyclohexasiloxane	In Vitro	Not mutagenic
Dodecamethylcyclohexasiloxane	In vivo	Not mutagenic
Decamethylcyclopentasiloxane	In Vitro	Not mutagenic
Decamethylcyclopentasiloxane	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
Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Titanium Dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium Dioxide	Inhalation	Rat	Carcinogenic
Decamethylcyclopentasiloxane	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
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
Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Dodecamethylcyclohexasiloxane	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	2 generation
Dodecamethylcyclohexasiloxane	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	2 generation
Dodecamethylcyclohexasiloxane	Ingestion	Not classified for development	Multiple animal species	NOAEL 1,000 mg/kg/day	during gestation
Decamethylcyclopentasiloxane	Inhalation	Not classified for female reproduction	Rat	NOAEL 2.43 mg/l	2 generation
Decamethylcyclopentasiloxane	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.43 mg/l	2 generation
Decamethylcyclopentasiloxane	Inhalation	Not classified for development	Multiple animal species	NOAEL 2.4 mg/l	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
Dodecamethylcyclohexasiloxane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Silica	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
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
Dodecamethylcyclohexasiloxane	Inhalation	liver	Not classified	Rat	NOAEL 0.546 mg/l	90 days
Dodecamethylcyclohexasiloxane	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.018 mg/l	90 days
Dodecamethylcyclohexasiloxane	Inhalation	hematopoietic system | eyes	Not classified	Rat	NOAEL 0.546 mg/l	90 days
Dodecamethylcyclohexasiloxane	Ingestion	endocrine system | liver | hematopoietic system | nervous system | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days

Decamethylcyclopentasiloxane	Dermal	hematopoietic system | eyes	Not classified	Rat	NOAEL 1,600 mg/kg/day	28 days
Decamethylcyclopentasiloxane	Inhalation	hematopoietic system | respiratory system | liver | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 2.42 mg/l	2 years
Decamethylcyclopentasiloxane	Ingestion	liver | immune system | respiratory system | heart | gastrointestinal tract | hematopoietic system | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 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 labeling, 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:
GHS Acute 3: Harmful to aquatic life.

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

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
Siloxanes And Silicones, DI-ME, Hydroxy-Terminated	70131-67-8	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Silica	7631-86-9	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Siloxanes and	63148-62-9	N/A	Data not available	N/A	N/A	N/A

Silicones, di-Me			or insufficient for classification			
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
Dodecamethylcyclohexasiloxane	540-97-6	Activated sludge	Experimental	3 hours	EC50	>100 mg/l
Dodecamethylcyclohexasiloxane	540-97-6	Green algae	Experimental	72 hours	EC50	>100 mg/l
Dodecamethylcyclohexasiloxane	540-97-6	Fathead Minnow	Experimental	49 days	NOEC	100 mg/l
Dodecamethylcyclohexasiloxane	540-97-6	Green algae	Experimental	72 hours	NOEC	100 mg/l
Dodecamethylcyclohexasiloxane	540-97-6	Water flea	Experimental	21 days	NOEC	100 mg/l
Decamethylcyclopentasiloxane	541-02-6	Activated sludge	Experimental	3 hours	EC50	>2,000 mg/l
Decamethylcyclopentasiloxane	541-02-6	Green algae	Experimental	96 hours	ErC50	>100 mg/l
Decamethylcyclopentasiloxane	541-02-6	Rainbow Trout	Experimental	96 hours	LC50	>100 mg/l
Decamethylcyclopentasiloxane	541-02-6	Water flea	Experimental	48 hours	EC50	>100 mg/l
Decamethylcyclopentasiloxane	541-02-6	Green algae	Experimental	96 hours	NOEC	100 mg/l
Decamethylcyclopentasiloxane	541-02-6	Rainbow Trout	Experimental	90 days	NOEC	100 mg/l
Decamethylcyclopentasiloxane	541-02-6	Water flea	Experimental	21 days	NOEC	100 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
Proprietary Biocide	Trade Secret	Activated sludge	Experimental	N/A	IC50	>9 mg/l
Proprietary Biocide	Trade Secret	Green algae	Experimental	72 hours	EC50	0.102 mg/l
Proprietary Biocide	Trade Secret	Rainbow Trout	Experimental	96 hours	LC50	0.067 mg/l
Proprietary Biocide	Trade Secret	Water flea	Experimental	48 hours	EC50	0.279 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Siloxanes And Silicones, DI-ME, Hydroxy-Terminated	70131-67-8	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Silica	7631-86-9	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Siloxanes and	63148-62-9	Data not availbl-	N/A	N/A	N/A	N/A

Silicones, di-Me		insufficient				
Titanium Dioxide	13463-67-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Dodecamethylcyclohexasiloxane	540-97-6	Experimental Biodegradation	28 days	Carbon dioxide evolution	4.47 %CO2 evolution/THCO2 evolution	OECD 310 CO2 Headspace
Decamethylcyclopentasiloxane	541-02-6	Experimental Biodegradation	28 days	Carbon dioxide evolution	0.14 %CO2 evolution/THCO2 evolution	OECD 310 CO2 Headspace
Decamethylcyclopentasiloxane	541-02-6	Experimental Photolysis		Photolytic half-life (in air)	20.4 days (t 1/2)	
Decamethylcyclopentasiloxane	541-02-6	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	66 days (t 1/2)	
Octamethylcyclotetrasiloxane	556-67-2	Experimental Biodegradation	29 days	Carbon dioxide 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
Proprietary Biocide	Trade Secret	Experimental Biodegradation	28 days	Biological Oxygen Demand	<13.8 %BOD/ThOD	

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Siloxanes And Silicones, DI-ME, Hydroxy-Terminated	70131-67-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Silica	7631-86-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me	63148-62-9	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	
Dodecamethylcyclohexasiloxane	540-97-6	Experimental BCF - Fish	49 days	Bioaccumulation Factor	1160	OECD305-Bioconcentration
Decamethylcyclopentasiloxane	541-02-6	Experimental BCF - Fish	35 days	Bioaccumulation Factor	7060	OECD305-Bioconcentration
Decamethylcyclopentasiloxane	541-02-6	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	8.03	
Octamethylcyclotetrasiloxane	556-67-2	Experimental BCF - Fish	28 days	Bioaccumulation Factor	12400	40CFR 797.1520-Fish Bioaccumm
Octamethylcyclotetrasiloxane	556-67-2	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	6.49	OECD 123 log Kow slow stir
Proprietary Biocide	Trade Secret	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	2.66	

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

According to the Environmental Quality (Scheduled Wastes) Regulations 2005, scheduled waste has to be sent to a prescribed premise for recycling, treatment or disposal. Please approach Kualiti Alam for proper schedule waste classification and disposal.

SECTION 14: Transport Information

Not hazardous for transportation.

Marine Transport (IMDG)

UN Number: None assigned.
Proper Shipping Name: None assigned.
Technical Name: None assigned.
Hazard Class/Division: None assigned.
Subsidiary Risk: None assigned.
Packing Group: None assigned.
Limited Quantity: None assigned.
Marine Pollutant: None assigned.
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

Air Transport (IATA)

UN Number: None assigned.
Proper Shipping Name: None assigned.
Technical Name: None assigned.
Hazard Class/Division: None assigned.
Subsidiary Risk: None assigned.
Packing Group: None assigned.
Limited Quantity: None assigned.
Marine Pollutant: None assigned.
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

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 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.

SECTION 16: Other information

DISCLAIMER: The information in this Safety Data Sheet (SDS) 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 SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation 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 Malaysia, you are responsible for all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

3M Malaysia SDSs are available at www.3M.com.my