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(TM) Marine Silicone Sealant - Clear, PN 08016, 08019, 08029

Product Identification Numbers
60-9800-4282-8 60-9800-4309-9 62-8029-5235-8 XS-0414-1264-3 XS-0414-1498-7

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
Serious Eye Damage/Irritation: Category 2.
Skin Corrosion/Irritation: Category 2.
Chronic Aquatic Toxicity: Category 2.

2.2. Label elements
Signal word
Warning

Symbols
Exclamation mark | Environment |

Pictograms

Hazard Statements

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

General:

P102	Keep out of reach of children.
P101	If medical advice is needed, have product container or label at hand.

Prevention:

P280B	Wear protective gloves and eye/face protection.
P273	Avoid release to the environment.

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.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P332 + P313	If skin irritation occurs: Get medical advice/attention.

Disposal:

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

2.3. Other hazards

None known

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	50 - 90
Silica	7631-86-9	10 - 40
Ethyltriacetoxysilane	17689-77-9	1 - 10
Methyltriacetoxysilane	4253-34-3	1 - 10
Poly(dimethylsiloxane)	63148-62-9	1 - 10
PHENARSAZINE OXIDE	58-36-6	0 - 0.1

Any remaining components do not contribute to the hazards of this material.

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
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

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 breathing dust/fume/gas/mist/vapors/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. 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
No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

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

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:
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

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 vapors 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	Colorless
Odor	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 (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*Not Applicable*
Vapor Density	*Not Applicable*
Density	1.02 g/ml
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*
Viscosity	*Not Applicable*
Percent volatile	2 - 4 % weight
VOC Less H2O & Exempt Solvents	22 g/l [*Test Method:*calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	2.2 % [*Test Method:*calculated per EPA method 24]

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:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:
Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.

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 diarrhea.

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	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
Poly(dimethylsiloxane)	Dermal	Rabbit	LD50 > 19,400 mg/kg
Ethyltriacetoxysilane	Ingestion	Rat	LD50 1,462 mg/kg
Methyltriacetoxysilane	Ingestion	Rat	LD50 1,602 mg/kg
Poly(dimethylsiloxane)	Ingestion	Rat	LD50 > 17,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Silica	Rabbit	No significant irritation
Ethyltriacetoxysilane	Rabbit	Corrosive
Methyltriacetoxysilane	Rabbit	Corrosive
Poly(dimethylsiloxane)	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Silica	Rabbit	No significant irritation
Ethyltriacetoxysilane	similar health hazards	Corrosive

Methyltriacetoxysilane	Rabbit	Corrosive
Poly(dimethylsiloxane)	Rabbit	No significant irritation

Sensitization:

Skin Sensitization

Name	Species	Value
Silica	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

Carcinogenicity

Name	Route	Species	Value
Silica	Not Specified	Mouse	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

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Ethyltriacetoxysilane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Methyltriacetoxysilane	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
Silica	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure

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 2: Toxic to aquatic life.

Chronic aquatic hazard:
GHS Chronic 2: Toxic 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		Data not available or insufficient for classification			
Silica	7631-86-9		Data not available or insufficient for classification			
Ethyltriacetoxysilane	17689-77-9	Green Algae	Estimated	72 hours	Effect Concentration 50%	>1,562.5 mg/l
Ethyltriacetoxysilane	17689-77-9	Water flea	Estimated	48 hours	Effect Concentration 50%	168.7 mg/l
Ethyltriacetoxysilane	17689-77-9	Zebra Fish	Experimental	96 hours	Lethal Concentration 50%	251 mg/l
Ethyltriacetoxysilane	17689-77-9	Green Algae	Estimated	72 hours	No obs Effect Conc	40 mg/l
Ethyltriacetoxysilane	17689-77-9	Water flea	Estimated	21 days	No obs Effect Conc	>=100 mg/l
Methyltriacetoxysilane	4253-34-3	Green Algae	Estimated	72 hours	Effect Concentration 50%	>500 mg/l
Methyltriacetoxysilane	4253-34-3	Water flea	Experimental	48 hours	Effect Concentration 50%	>500 mg/l
Methyltriacetoxysilane	4253-34-3	Zebra Fish	Experimental	96 hours	Lethal Concentration 50%	>500 mg/l
Methyltriacetoxysilane	4253-34-3	Fish other	Estimated	90 days	No obs Effect Level	1.26 mg/l
Methyltriacetoxysilane	4253-34-3	Green Algae	Estimated	72 hours	No obs Effect Conc	500 mg/l

Methyltriacetoxysilane	4253-34-3	Water flea	Estimated	21 days	No obs Effect Conc	31.4 mg/l
Poly(dimethylsiloxane)	63148-62-9		Data not available or insufficient for classification			
PHENARSAZINE OXIDE	58-36-6	Rainbow Trout	Experimental	96 hours	Lethal Concentration 50%	0.0035 mg/l
PHENARSAZINE OXIDE	58-36-6	Water flea	Experimental	48 hours	Effect Concentration 50%	0.0048 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	
Silica	7631-86-9	Data not availbl-insufficient			N/A	
Ethyltriacetoxysilane	17689-77-9	Experimental Hydrolysis			<13 seconds (t 1/2)	Other methods
Ethyltriacetoxysilane	17689-77-9	Experimental Biodegradation	21 days	Dissolv. Organic Carbon Deplet	74 % weight	Other methods
Methyltriacetoxysilane	4253-34-3	Experimental Hydrolysis		Hydrolytic half-life	<12 seconds (t 1/2)	Other methods
Methyltriacetoxysilane	4253-34-3	Experimental Biodegradation	21 days	Dissolv. Organic Carbon Deplet	74 % weight	Other methods
Poly(dimethylsiloxane)	63148-62-9	Data not availbl-insufficient			N/A	
PHENARSAZINE OXIDE	58-36-6	Estimated Biodegradation	28 days	Biological Oxygen Demand	1.21 % weight	OECD 301C - MITI (I)

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
Ethyltriacetoxysilane	17689-77-9	Estimated Bioconcentration		Log of Octanol/H2O part. coeff	0.74	Other methods

Methyltriacetoxysilane	4253-34-3	Estimated Bioconcentration		Log of Octanol/H2O part. coeff	-0.17	Other methods
Poly(dimethylsiloxane)	63148-62-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
PHENARSAZINE OXIDE	58-36-6	Estimated Bioconcentration		Bioaccumulation Factor	6800	Est: Bioconcentration factor

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