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) Sealant 740 UV, White, Gray and Black

Product Identification Numbers

62-5274-3932-7	62-5274-3936-8	62-5274-5232-0	62-5274-5233-8	62-5274-5237-9
62-5275-3932-4	62-5275-3936-5	62-5275-5232-7	62-5275-5233-5	62-5275-5237-6
62-5275-9530-0	62-5286-3932-1	62-5286-3936-2	62-5286-5232-4	62-5286-5233-2
62-5286-5237-3	62-5286-5239-9	62-5286-8530-8	DE-2729-2810-7	DE-2729-2811-5
DE-2729-2814-9	DE-2729-2815-6	FI-3000-0003-6	FI-3000-0006-9	FI-3000-0077-0
FI-3000-0084-6	FI-3000-0189-3	HB-0041-0001-0	HB-0041-0135-6	HB-0041-5754-9
HB-0041-5755-6	JS-3000-4984-3	JS-3000-4986-8	KS-9990-0663-2	KS-9990-0664-0
KS-9990-0665-7	KS-9990-0666-5	KS-9990-0667-3	KS-9990-0668-1	KS-9990-0669-9
KS-9990-0670-7	KS-9990-0671-5	KS-9990-0672-3	KS-9990-0673-1	KS-9990-0674-9
UU-0031-1794-0	UU-0031-1795-7	UU-0031-1796-5	UU-0031-1811-2	UU-0031-1812-0
UU-0031-1813-8	UU-0031-1814-6	UU-0031-1815-3	UU-0031-1816-1	UU-0031-1817-9
UU-0031-1818-7	UU-0031-1819-5			

1.2. Recommended use and restrictions on use

Recommended use
Single component elastomeric sealant without isocyanates., Sealant

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
Reproductive Toxicity: Category 1B.

Chronic Aquatic Toxicity: Category 3.

2.2. Label elements
Signal word
Danger

Symbols
Health Hazard |

Pictograms

Hazard Statements:

H360	May damage fertility or the unborn child.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements
General:

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

Prevention:

P201	Obtain special instructions before use.
P281	Use personal protective equipment as required.

Response:

P308 + P313	IF exposed or concerned: Get medical advice/attention.

Storage:

P405	Store locked up.

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., Persons previously sensitized to amines may develop a cross-sensitization reaction to certain other amines.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
Calcium Carbonate	471-34-1	50 - 70
Polyether	Trade Secret	10 - 30
Diisodecyl Phthalate	68515-49-1	5 - 10
Titanium Dioxide	13463-67-7	< 10
Non-aromatic Hydrocarbons	64742-47-8	3 - 7

Phenol Alkyl Sulfonate	Trade Secret	< 4
Carbon Black	1333-86-4	< 3
VINYLTRIMETHOXYSILANE	2768-02-7	< 1.5
1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]-	1760-24-3	< 1
Dioctyltinbis(acetylacetonate)	54068-28-9	0.1 - 0.5
Hindered Amine	63843-89-0	< 0.1
COPPER	7440-50-8	< 0.005

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

Allergic skin reaction (redness, swelling, blistering, and itching).

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
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Irritant Vapors or Gases	During Combustion
Oxides of Nitrogen	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/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. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities
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 amines.

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
Carbon Black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m3	A3: Confirmed animal carcin.
Carbon Black	1333-86-4	Malaysia OELs	TWA(8 hours):3.5 mg/m3	
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:10 mg/m3	A4: Not class. as human carcin
Titanium Dioxide	13463-67-7	Malaysia OELs	TWA(8 hours):10 mg/m3	
DUST, INERT OR NUISANCE	471-34-1	Malaysia OELs	TWA (proposed)(respirable particles)(8 hours):3 mg/m3;TWA (proposed)(Inhalable particulate)(8 hours):10 mg/m3	
Limestone	471-34-1	Malaysia OELs	TWA (proposed)(8 hours):10 mg/m3	
TIN, ORGANIC COMPOUNDS	54068-28-9	ACGIH	TWA(as Sn):0.1 mg/m3;STEL(as Sn):0.2 mg/m3	A4: Not class. as human carcin, SKIN

TIN, ORGANIC COMPOUNDS	54068-28-9	Malaysia OELs	TWA(as Sn)(8 hours):0.1 mg/m3	SKIN
Kerosine (petroleum)	64742-47-8	ACGIH	TWA(as total hydrocarbon vapor, non-aerosol):200 mg/m3	A3: Confirmed animal carcin., SKIN
COPPER	7440-50-8	Malaysia OELs	TWA(as fume)(8 hours):0.2 mg/m3;TWA(as Cu dust or mist)(8 hours):1 mg/m3	
COPPER, DUSTS AND MISTS, AS CU	7440-50-8	ACGIH	TWA(as Cu dust or mist):1 mg/m3	
COPPER, FUME AS CU	7440-50-8	ACGIH	TWA(as Cu, fume):0.2 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
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:
Safety Glasses with side shields

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

When only incidental contact is anticipated, alternative glove material(s) may be used. If contact with the glove does occur, remove immediately and replace with a set of new gloves. For incidental contact, gloves made of the following material(s) may be used:Nitrile Rubber

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 exposure assessment. The following protective clothing material(s) are recommended: 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 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	Multicolor
Odor	Slight Polyether
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point/Freezing point	*No Data Available*
Boiling point/Initial boiling point/Boiling range	> 120 ºC
Flash Point	No flash point
Evaporation rate	*No Data Available*
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*Not Applicable*
Vapor Density and/or Relative Vapor Density	*Not Applicable*
Density	1.65 g/cm3
Relative Density	*No Data Available*
Water solubility	Negligible
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	> 200 ºC
Decomposition temperature	*No Data Available*
Viscosity/Kinematic Viscosity	*No Data Available*
Volatile Organic Compounds	
Percent volatile	
VOC Less H2O & Exempt Solvents	1.32 % [*Test Method:*tested per EPA method 24]
VOC Less H2O & Exempt Solvents	22 g/l [*Test Method:*tested per EPA method 24]
Molecular weight	*No Data Available*
Solids Content	99 %

Nanoparticles
This material contains nanoparticles.

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
Heat

10.5. Incompatible materials
Alcohols

Water
Amines

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:
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 diarrhea.

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 sensitized to amines may develop a cross-sensitization 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-		No data available; calculated ATE >50 mg/l

	Vapor(4 hr)		
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
Polyether	Dermal		LD50 estimated to be > 5,000 mg/kg
Polyether	Ingestion	Rat	LD50 5,000 mg/kg
Diisodecyl Phthalate	Dermal	Rabbit	LD50 > 3,160 mg/kg
Diisodecyl Phthalate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 12.5 mg/l
Diisodecyl Phthalate	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
Non-aromatic Hydrocarbons	Inhalation-Vapor	Professional judgement	LC50 estimated to be 20 - 50 mg/l
Non-aromatic Hydrocarbons	Dermal	Rabbit	LD50 > 5,000 mg/kg
Non-aromatic Hydrocarbons	Ingestion	Rat	LD50 > 5,000 mg/kg
Phenol Alkyl Sulfonate	Dermal	Rat	LD50 > 1,000 mg/kg
Phenol Alkyl Sulfonate	Ingestion	Rat	LD50 > 5,000 mg/kg
Carbon Black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon Black	Ingestion	Rat	LD50 > 8,000 mg/kg
VINYLTRIMETHOXYSILANE	Dermal	Rabbit	LD50 3,260 mg/kg
VINYLTRIMETHOXYSILANE	Inhalation-Vapor (4 hours)	Rat	LC50 16.8 mg/l
VINYLTRIMETHOXYSILANE	Ingestion	Rat	LD50 7,120 mg/kg
1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]-	Dermal	Rabbit	LD50 > 2,000 mg/kg
1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]-	Inhalation-Dust/Mist (4 hours)	Rat	LC50 >1.49, <2.44 mg/l
1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]-	Ingestion	Rat	LD50 1,897 mg/kg
COPPER	Dermal	Rat	LD50 > 2,000 mg/kg
COPPER	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.11 mg/l
COPPER	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Calcium Carbonate	Rabbit	No significant irritation
Diisodecyl Phthalate	Rabbit	Minimal irritation
Titanium Dioxide	Rabbit	No significant irritation
Non-aromatic Hydrocarbons	Rabbit	Minimal irritation
Carbon Black	Rabbit	No significant irritation
VINYLTRIMETHOXYSILANE	Rabbit	Minimal irritation
1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]-	Rabbit	Mild irritant
COPPER	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Calcium Carbonate	Rabbit	No significant irritation
Diisodecyl Phthalate	Rabbit	Mild irritant
Titanium Dioxide	Rabbit	No significant irritation

Non-aromatic Hydrocarbons	Rabbit	Mild irritant
Carbon Black	Rabbit	No significant irritation
VINYLTRIMETHOXYSILANE	Rabbit	No significant irritation
1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]-	Rabbit	Corrosive
COPPER	Rabbit	Mild irritant

Sensitization:

Skin Sensitization

Name	Species	Value
Diisodecyl Phthalate	Guinea pig	Not classified
Titanium Dioxide	Human and animal	Not classified
Non-aromatic Hydrocarbons	Guinea pig	Not classified
VINYLTRIMETHOXYSILANE	Guinea pig	Not classified
1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]-	Multiple animal species	Sensitizing
Dioctyltinbis(acetylacetonate)	Mouse	Sensitizing

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
Diisodecyl Phthalate	In Vitro	Not mutagenic
Diisodecyl Phthalate	In vivo	Not mutagenic
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic
Non-aromatic Hydrocarbons	In Vitro	Not mutagenic
Non-aromatic Hydrocarbons	In vivo	Not mutagenic
Carbon Black	In Vitro	Not mutagenic
Carbon Black	In vivo	Some positive data exist, but the data are not sufficient for classification
VINYLTRIMETHOXYSILANE	In vivo	Not mutagenic
VINYLTRIMETHOXYSILANE	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Titanium Dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium Dioxide	Inhalation	Rat	Carcinogenic
Non-aromatic Hydrocarbons	Not Specified	Not available	Not carcinogenic
Carbon Black	Dermal	Mouse	Not carcinogenic
Carbon Black	Ingestion	Mouse	Not carcinogenic
Carbon Black	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
Diisodecyl Phthalate	Ingestion	Not classified for female reproduction	Rat	NOAEL 927 mg/kg/day	2 generation
Diisodecyl Phthalate	Ingestion	Not classified for male reproduction	Rat	NOAEL 929 mg/kg/day	2 generation
Diisodecyl Phthalate	Ingestion	Toxic to development	Rat	NOAEL 38 mg/kg/day	2 generation
Non-aromatic Hydrocarbons	Not Specified	Not classified for female reproduction	Rat	NOAEL Not available	premating & during gestation
Non-aromatic Hydrocarbons	Not Specified	Not classified for male reproduction	Rat	NOAEL Not available	28 days
Non-aromatic Hydrocarbons	Not Specified	Not classified for development	Rat	NOAEL Not available	during gestation
VINYLTRIMETHOXYSILANE	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
VINYLTRIMETHOXYSILANE	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
VINYLTRIMETHOXYSILANE	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
VINYLTRIMETHOXYSILANE	Inhalation	Not classified for development	Rat	NOAEL 1.8 mg/l	during organogenesis
Dioctyltinbis(acetylacetonate)	Ingestion	Toxic to development	Rat	NOAEL 1.8 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

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
Diisodecyl Phthalate	Inhalation	respiratory system | hematopoietic system | liver	Not classified	Rat	NOAEL 0.5 mg/l	2 weeks
Diisodecyl Phthalate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 0.5 mg/l	2 generation
Diisodecyl Phthalate	Ingestion	endocrine system	Not classified	Rat	NOAEL 686 mg/kg/day	90 days
Diisodecyl Phthalate	Ingestion	liver | kidney and/or bladder | heart	Not classified	Rat	NOAEL 500 mg/kg/day	90 days
Diisodecyl Phthalate	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
Carbon Black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
VINYLTRIMETHOXYSILANE	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL mg/l	14 weeks
VINYLTRIMETHOXYSILANE	Inhalation	hematopoietic system | eyes	Not classified	Rat	NOAEL 2.4 mg/l	14 weeks
VINYLTRIMETHOXYSILANE	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg/day	40 days

VINYLTRIMETHOXYSILANE	Ingestion	endocrine system | hematopoietic system | liver | immune system	Not classified	Rat	NOAEL 1,000 mg/kg/day	40 days
1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]-	Inhalation	respiratory system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 0.015 mg/l	90 days

Aspiration Hazard

Name	Value
Non-aromatic Hydrocarbons	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.

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:
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 #	Organism	Type	Exposure	Test Endpoint	Test Result
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
Polyether	Trade Secret		Data not available or insufficient for classification			N/A
Diisodecyl Phthalate	68515-49-1	Activated sludge	Experimental	30 minutes	EC50	>83.3 mg/l
Diisodecyl Phthalate	68515-49-1	Green algae	Experimental	96 hours	EC50	>100 mg/l
Diisodecyl Phthalate	68515-49-1	Rainbow Trout	Experimental	96 hours	LC50	>100 mg/l
Diisodecyl Phthalate	68515-49-1	Water flea	Experimental	48 hours	EC50	>100 mg/l
Diisodecyl Phthalate	68515-49-1	Green algae	Experimental	96 hours	NOEC	100 mg/l

Diisodecyl Phthalate	68515-49-1	Water flea	Experimental	21 days	NOEC	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
Non-aromatic Hydrocarbons	64742-47-8	Green Algae	Estimated	72 hours	EL50	>1,000 mg/l
Non-aromatic Hydrocarbons	64742-47-8	Rainbow Trout	Estimated	96 hours	LL50	>1,000 mg/l
Non-aromatic Hydrocarbons	64742-47-8	Water flea	Estimated	48 hours	EL50	>1,000 mg/l
Non-aromatic Hydrocarbons	64742-47-8	Green Algae	Estimated	72 hours	NOEL	1,000 mg/l
Phenol Alkyl Sulfonate	Trade Secret	Medaka	Experimental	96 hours	LC50	>100 mg/l
Phenol Alkyl Sulfonate	Trade Secret	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Phenol Alkyl Sulfonate	Trade Secret	Green algae	Experimental	72 hours	EC10	>=2 mg/l
Carbon Black	1333-86-4	Activated sludge	Experimental	3 hours	EC50	>=100 mg/l
Carbon Black	1333-86-4		Data not available or insufficient for classification			N/A
VINYLTRIMETHOXYSILANE	2768-02-7	Bacteria	Experimental	5 hours	EC10	1.1 mg/l
VINYLTRIMETHOXYSILANE	2768-02-7	Green algae	Experimental	72 hours	EC50	>957 mg/l
VINYLTRIMETHOXYSILANE	2768-02-7	Rainbow Trout	Experimental	96 hours	LC50	191 mg/l
VINYLTRIMETHOXYSILANE	2768-02-7	Water flea	Experimental	48 hours	EC50	169 mg/l
VINYLTRIMETHOXYSILANE	2768-02-7	Green algae	Experimental	72 hours	NOEC	957 mg/l
VINYLTRIMETHOXYSILANE	2768-02-7	Water flea	Experimental	21 days	NOEC	28 mg/l
1,2-Ethanediamine, N1-[3-(trimethoxysily	1760-24-3	Bacteria	Experimental	16 hours	EC50	67 mg/l

l)propyl]-						
1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]-	1760-24-3	Fathead Minnow	Experimental	96 hours	LC50	168 mg/l
1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]-	1760-24-3	Green Algae	Experimental	72 hours	EC50	8.8 mg/l
1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]-	1760-24-3	Water flea	Experimental	48 hours	EC50	81 mg/l
1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]-	1760-24-3	Green Algae	Experimental	72 hours	NOEC	3.1 mg/l
Dioctyltinbis(acetylacetonate)	54068-28-9	Water flea	Estimated	24 hours	EC50	1.3 mg/l
Dioctyltinbis(acetylacetonate)	54068-28-9	Water flea	Estimated	21 days	NOEC	0.52 mg/l
Hindered Amine	63843-89-0	Activated sludge	Experimental	3 hours	IC20	>100 mg/l
Hindered Amine	63843-89-0	Water flea	Experimental	21 days	NOEC	0.002 mg/l
COPPER	7440-50-8	Green Algae	Experimental	72 hours	NOEC	0.0003 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Calcium Carbonate	471-34-1	Data not availbl-insufficient			N/A	
Polyether	Trade Secret	Data not availbl-insufficient			N/A	
Diisodecyl Phthalate	68515-49-1	Experimental Biodegradation	28 days	Biological Oxygen Demand	74 % BOD/ThBOD	OECD 301F - Manometric Respiro
Titanium Dioxide	13463-67-7	Data not availbl-insufficient			N/A	
Non-aromatic Hydrocarbons	64742-47-8	Estimated Biodegradation	28 days	Biological Oxygen Demand	67.6 % BOD/ThBOD	OECD 301F - Manometric Respiro
Phenol Alkyl Sulfonate	Trade Secret	Estimated Biodegradation	28 days	Biological Oxygen Demand	51 % BOD/ThBOD	
Carbon Black	1333-86-4	Data not availbl-insufficient			N/A	

VINYLTRIMETHOXYSILANE	2768-02-7	Experimental Biodegradation	28 days	Biological Oxygen Demand	51 % BOD/ThBOD	OECD 301F - Manometric Respiro
1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]-	1760-24-3	Experimental Hydrolysis		Hydrolytic half-life	1.5 minutes (t 1/2)	Non-standard method
1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]-	1760-24-3	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	39 % weight	Non-standard method
Dioctyltinbis(acetylacetonate)	54068-28-9	Data not availbl-insufficient			N/A	
Hindered Amine	63843-89-0	Experimental Biodegradation	28 days	Carbon dioxide evolution	2 % weight	OECD 301B - Mod. Sturm or CO2
COPPER	7440-50-8	Data not availbl-insufficient			N/A	

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Calcium Carbonate	471-34-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polyether	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Diisodecyl Phthalate	68515-49-1	Estimated BCF-Carp	56 days	Bioaccumulation Factor	<14.4	OECD 305E-Bioaccum Fl-thru fis
Titanium Dioxide	13463-67-7	Experimental BCF-Carp	42 days	Bioaccumulation Factor	9.6	Non-standard method
Non-aromatic Hydrocarbons	64742-47-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Phenol Alkyl Sulfonate	Trade Secret	Experimental BCF-Carp	36 days	Bioaccumulation Factor	56-212	
Carbon Black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
VINYLTRIMETHOXYSILANE	2768-02-7	Estimated Bioconcentration		Log of Octanol/H2O part. coeff	-2	Non-standard method
1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]-	1760-24-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

Dioctyltinbis(acetylacetonate)	54068-28-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hindered Amine	63843-89-0	Experimental BCF-Carp	60 days	Bioaccumulation Factor	≤437.1	OECD 305C-Bioaccum degree fish
COPPER	7440-50-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

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 manufacturer for more information

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.

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