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™ Rubbing Compound, 05973, 05974, 05968, 3900, 39002, 39002S, 39005

Product Identification Numbers
60-4550-5784-8 60-4550-5786-3 60-4550-5788-9 60-4550-6559-3 60-4551-0213-1

60-4551-0214-9 60-4551-0215-6

1.2. Recommended use and restrictions on use

Recommended use
Automotive, Rubbing Compound

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

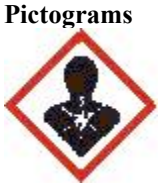
SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Specific Target Organ Toxicity (repeated exposure): Category 2.

2.2. Label elements
Signal word
Warning

Symbols
Health Hazard |

Pictograms



Hazard Statements:

H373	May cause damage to organs through prolonged or repeated exposure: respiratory system.

Precautionary statements
General:

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

Prevention:

P260	Do not breathe dust/fume/gas/mist/vapors/spray.

Disposal:

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

2.3. Other hazards
Aspiration hazard classification does not apply due to the kinematic viscosity of the product.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
Water	7732-18-5	30 - 60
Silica	7631-86-9	15 - 40
Hydrotreated Light Petroleum Distilaltes	64742-47-8	10 - 30
Kaolinite	1318-74-7	3 - 7
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	64742-65-0	1 - 5
Oleic Acid	112-80-1	< 2
Glycerin	56-81-5	< 2
Illite	12173-60-3	0.5 - 1.5
Hydrotreated Light Paraffinic Distillates (Petroleum)	64742-55-8	< 1
Poly(Oxyethylene)Sorbitan Monostearate	9005-67-8	0.1 - 1
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	64742-56-9	< 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:
Wash with soap and water. 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

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
Non-combustible. Use a fire fighting agent suitable for surrounding fire.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

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. Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. 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 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. Avoid release to the environment.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat.

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
Aluminum metal and insoluble compounds, respirable fraction	1318-74-7	ACGIH	TWA(respirable fraction):1 mg/m3	A4: Not class. as human carcin
Glycerin	56-81-5	Malaysia OELs	TWA(as mist)(8 hours):10 mg/m3	
Particulates not Otherwise Classified (PNOC), Inhalable particulate	56-81-5	Malaysia OELs	TWA (proposed)(respirable particles)(8 hours):3 mg/m3;TWA (proposed)(Inhalable particulate)(8 hours):10 mg/m3	
Kerosene/Jet fuels (non-aerosol), as total hydrocarbon vapor	64742-47-8	ACGIH	TWA(as total hydrocarbon vapor, non-aerosol):200 mg/m3	A3: Confirmed animal carcin., SKIN
Mineral oil, excluding metal working fluids, pure, highly and severely refined, inhalable fraction	64742-47-8	ACGIH	TWA(inhalable fraction):5 mg/m3	A4: Not class. as human carcin
Oil mist, mineral	64742-55-8	Malaysia OELs	TWA(as mist)(8 hours):5 mg/m3	
Mineral oil, excluding metal working fluids, pure, highly and severely refined, inhalable fraction	64742-56-9	ACGIH	TWA(inhalable fraction):5 mg/m3	A4: Not class. as human carcin
Oil mist, mineral	64742-56-9	Malaysia OELs	TWA(as mist)(8 hours):5 mg/m3	
Oil mist, mineral	64742-65-0	Malaysia OELs	TWA(as mist)(8 hours):5 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	
Particulates not Otherwise Classified (PNOC), Inhalable particulate	7631-86-9	Malaysia OELs	TWA (proposed)(respirable particles)(8 hours):3 mg/m3;TWA (proposed)(Inhalable particulate)(8 hours):10 mg/m3	

Stearates	9005-67-8	Malaysia OELs	TWA(8 hours):10 mg/m3	
Stearates (except stearates of toxic metals), inhalable fraction	9005-67-8	ACGIH	TWA(respirable fraction):3 mg/m3;TWA(inhalable fraction):10 mg/m3	A4: Not class. as human carcin

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

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	Liquid
Color	Tan
Odor	Slight Solvent
Odor threshold	*No Data Available*
pH	7.5 - 8.5
Melting point/Freezing point	*Not Applicable*

Boiling point/Initial boiling point/Boiling range	98.3 ºC
Flash Point	No flash point
Evaporation rate	*No Data Available*
Flammability	Not Applicable
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Vapor Pressure	*No Data Available*
Relative Vapor Density	*No Data Available*
Density	1.2 g/ml
Relative Density	1.2 [*Ref Std:*WATER=1]
Water solubility	Negligible
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	5,000 mm2/sec
Volatile Organic Compounds	213 g/l [*Test Method:*calculated SCAQMD rule 443.1]
Volatile Organic Compounds	15.2 % weight [*Test Method:*calculated per CARB title 2]
Percent volatile	58.3 % weight
VOC Less H2O & Exempt Solvents	415 g/l [*Test Method:*calculated SCAQMD rule 443.1]
Molecular weight	*No Data Available*

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
Heat
Sparks and/or flames

10.5. Incompatible materials
None known.

10.6. Hazardous decomposition products

Substance	**Condition**
Carbon monoxide	At Elevated Temperatures
Carbon dioxide	At Elevated Temperatures

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:
May cause additional health effects (see below).

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

Eye Contact:
Dust created by cutting, grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:
Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

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	Inhalation-Vapor(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 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
Hydrotreated Light Petroleum Distilaltes	Dermal	Rabbit	LD50 > 2,000 mg/kg
Hydrotreated Light Petroleum Distilaltes	Ingestion	Rat	LD50 > 5,000 mg/kg
Kaolinite	Dermal		LD50 estimated to be > 5,000 mg/kg
Kaolinite	Ingestion	Human	LD50 > 15,000 mg/kg
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	Dermal	Rabbit	LD50 > 5,000 mg/kg
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	Ingestion	Rat	LD50 > 5,000 mg/kg
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	Inhalation-Dust/Mist (4 hours)	similar compounds	LC50 > 4 mg/l
Oleic Acid	Dermal	Guinea pig	LD50 > 3,000 mg/kg
Oleic Acid	Ingestion	Rat	LD50 57,000 mg/kg
Glycerin	Dermal	Rabbit	LD50 estimated to be > 5,000 mg/kg
Glycerin	Ingestion	Rat	LD50 > 5,000 mg/kg
Poly(Oxyethylene)Sorbitan Monostearate	Dermal	Rat	LD50 > 2,000 mg/kg
Poly(Oxyethylene)Sorbitan Monostearate	Ingestion	Rat	LD50 > 60,000 mg/kg
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	Dermal	Rabbit	LD50 > 5,000 mg/kg

Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 4 mg/l
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	Ingestion	Rat	LD50 > 5,000 mg/kg
Hydrotreated Light Paraffinic Distillates (Petroleum)	Dermal	similar compounds	LD50 > 2,000 mg/kg
Hydrotreated Light Paraffinic Distillates (Petroleum)	Inhalation-Dust/Mist (4 hours)	similar compounds	LC50 > 5.53 mg/l
Hydrotreated Light Paraffinic Distillates (Petroleum)	Ingestion	similar compounds	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Silica	Rabbit	No significant irritation
Hydrotreated Light Petroleum Distilaltes	similar compounds	Mild irritant
Kaolinite	Professional judgement	No significant irritation
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	Rabbit	No significant irritation
Oleic Acid	Rabbit	Minimal irritation
Glycerin	Rabbit	No significant irritation
Poly(Oxyethylene)Sorbitan Monostearate	Rabbit	No significant irritation
Hydrotreated Light Paraffinic Distillates (Petroleum)	similar compounds	No significant irritation
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Silica	Rabbit	No significant irritation
Hydrotreated Light Petroleum Distilaltes	similar compounds	No significant irritation
Kaolinite	Professional judgement	No significant irritation
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	Rabbit	No significant irritation
Oleic Acid	Rabbit	Mild irritant
Glycerin	Rabbit	No significant irritation
Poly(Oxyethylene)Sorbitan Monostearate	Rabbit	No significant irritation
Hydrotreated Light Paraffinic Distillates (Petroleum)	similar compounds	No significant irritation
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	Rabbit	No significant irritation

Sensitization:

Skin Sensitization

Name	Species	Value
Silica	Human and animal	Not classified
Hydrotreated Light Petroleum Distilaltes	similar	Not classified

	compounds	
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	Guinea pig	Not classified
Oleic Acid	similar compounds	Not classified
Glycerin	Guinea pig	Not classified
Poly(Oxyethylene)Sorbitan Monostearate	Human	Not classified
Hydrotreated Light Paraffinic Distillates (Petroleum)	similar compounds	Not classified
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	Guinea pig	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
Silica	In Vitro	Not mutagenic
Hydrotreated Light Petroleum Distilaltes	In Vitro	Not mutagenic
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	In Vitro	Not mutagenic
Oleic Acid	In Vitro	Some positive data exist, but the data are not sufficient for classification
Poly(Oxyethylene)Sorbitan Monostearate	In Vitro	Not mutagenic
Hydrotreated Light Paraffinic Distillates (Petroleum)	In Vitro	Not mutagenic
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	In vivo	Not mutagenic
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	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
Kaolinite	Inhalation	Multiple animal species	Not carcinogenic
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	Dermal	Mouse	Not carcinogenic
Oleic Acid	Dermal	Mouse	Not carcinogenic
Oleic Acid	Ingestion	Rat	Not carcinogenic
Oleic Acid	Not Specified	Multiple animal species	Not carcinogenic
Glycerin	Ingestion	Mouse	Some positive data exist, but the data are not sufficient for classification
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	Dermal	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
Solvent Dewaxed Heavy Paraffinic	Dermal	Not classified for development	Rat	NOAEL	during

Distillates (Petroleum)				1,000 mg/kg/day	gestation
Glycerin	Ingestion	Not classified for female reproduction	Rat	NOAEL 2,000 mg/kg/day	2 generation
Glycerin	Ingestion	Not classified for male reproduction	Rat	NOAEL 2,000 mg/kg/day	2 generation
Glycerin	Ingestion	Not classified for development	Rat	NOAEL 2,000 mg/kg/day	2 generation
Poly(Oxyethylene)Sorbitan Monostearate	Ingestion	Not classified for male reproduction	Rat	NOAEL 10,000 mg/kg/day	3 generation
Poly(Oxyethylene)Sorbitan Monostearate	Ingestion	Not classified for female reproduction	Rat	NOAEL 10,000 mg/kg/day	3 generation
Poly(Oxyethylene)Sorbitan Monostearate	Ingestion	Not classified for development	Rat	NOAEL 7,693 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
Hydrotreated Light Petroleum Distilaltes	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	Not classified	Human	NOAEL Not available	occupational exposure
Silica	Inhalation	silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Kaolinite	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL NA	occupational exposure
Kaolinite	Inhalation	pulmonary fibrosis	Not classified	Rat	NOAEL Not available	
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	Dermal	skin	Not classified	Rat	NOAEL 2,000 mg/kg/day	13 weeks
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	Dermal	liver	Not classified	Rat	NOAEL 2,000 mg/kg/day	13 weeks
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	Dermal	hematopoietic system	Not classified	Rat	NOAEL 2,000 mg/kg/day	13 weeks
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	Dermal	kidney and/or bladder	Not classified	Rat	NOAEL 2,000 mg/kg/day	13 weeks
Oleic Acid	Ingestion	liver	Not classified	Rat	NOAEL 2,250 mg/kg/day	108 weeks
Oleic Acid	Ingestion	immune system	Not classified	Rat	NOAEL 2,250 mg/kg/day	108 weeks
Oleic Acid	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 2,550 mg/kg/day	108 weeks
Glycerin	Inhalation	respiratory system	Not classified	Rat	NOAEL 3.91 mg/l	14 days
Glycerin	Inhalation	heart	Not classified	Rat	NOAEL 3.91 mg/l	14 days

Glycerin	Inhalation	liver	Not classified	Rat	NOAEL 3.91 mg/l	14 days
Glycerin	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 3.91 mg/l	14 days
Glycerin	Ingestion	endocrine system	Not classified	Rat	NOAEL 10,000 mg/kg/day	2 years
Glycerin	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 10,000 mg/kg/day	2 years
Glycerin	Ingestion	liver	Not classified	Rat	NOAEL 10,000 mg/kg/day	2 years
Glycerin	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 10,000 mg/kg/day	2 years
Poly(Oxyethylene)Sorbitan Monostearate	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 12,500 mg/kg/day	2 years
Poly(Oxyethylene)Sorbitan Monostearate	Ingestion	liver	Not classified	Rat	NOAEL 12,500 mg/kg/day	2 years
Poly(Oxyethylene)Sorbitan Monostearate	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 12,500 mg/kg/day	2 years
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	Dermal	hematopoietic system	Not classified	Rabbit	NOAEL 5,000 mg/kg/day	3 weeks
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	Dermal	liver	Not classified	Rabbit	NOAEL 5,000 mg/kg/day	3 weeks
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	Dermal	kidney and/or bladder	Not classified	Rabbit	NOAEL 5,000 mg/kg/day	3 weeks

Aspiration Hazard

Name	Value
Hydrotreated Light Petroleum Distilaltes	Aspiration hazard
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	Not an aspiration hazard
Hydrotreated Light Paraffinic Distillates (Petroleum)	Aspiration hazard
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	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:
Not chronically toxic to aquatic life by GHS criteria.

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
Silica	7631-86-9	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Hydrotreated Light Petroleum Distilaltes	64742-47-8	Green algae	Analogous Compound	72 hours	EL50	>1,000 mg/l
Hydrotreated Light Petroleum Distilaltes	64742-47-8	Rainbow Trout	Analogous Compound	96 hours	LL50	>1,000 mg/l
Hydrotreated Light Petroleum Distilaltes	64742-47-8	Water flea	Analogous Compound	48 hours	EL50	>1,000 mg/l
Hydrotreated Light Petroleum Distilaltes	64742-47-8	Green algae	Analogous Compound	72 hours	NOEL	1,000 mg/l
Kaolinite	1318-74-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	64742-65-0	Green algae	Analogous Compound	96 hours	EC50	>100 mg/l
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	64742-65-0	Water flea	Analogous Compound	48 hours	EC50	>100 mg/l
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	64742-65-0	Rainbow Trout	Experimental	96 hours	LC50	>100 mg/l
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	64742-65-0	Water flea	Experimental	21 days	NOEC	100 mg/l
Glycerin	56-81-5	Rainbow Trout	Experimental	96 hours	LC50	54,000 mg/l
Glycerin	56-81-5	Water flea	Experimental	48 hours	LC50	1,955 mg/l
Glycerin	56-81-5	Bacteria	Experimental	16 hours	NOEC	10,000 mg/l
Oleic Acid	112-80-1	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Illite	12173-60-3	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Hydrotreated Light Paraffinic Distillates (Petroleum)	64742-55-8	Fathead Minnow	Estimated	96 hours	LL50	>100 mg/l
Hydrotreated Light Paraffinic Distillates (Petroleum)	64742-55-8	Water flea	Estimated	48 hours	EL50	>100 mg/l
Hydrotreated Light Paraffinic Distillates (Petroleum)	64742-55-8	Green algae	Estimated	72 hours	NOEL	100 mg/l
Hydrotreated Light Paraffinic Distillates (Petroleum)	64742-55-8	Water flea	Estimated	21 days	NOEC	10 mg/l
Poly(Oxyethylene) Sorbitan Monostearate	9005-67-8	Copepod	Analogous Compound	48 hours	LL50	>10,000 mg/l
Poly(Oxyethylene) Sorbitan Monostearate	9005-67-8	Green algae	Analogous Compound	72 hours	EL50	58.84 mg/l

Poly(Oxyethylene) Sorbitan Monostearate	9005-67-8	Zebra Fish	Analogous Compound	96 hours	LL50	>100 mg/l
Poly(Oxyethylene) Sorbitan Monostearate	9005-67-8	Green algae	Analogous Compound	72 hours	EC10	19.05 mg/l
Poly(Oxyethylene) Sorbitan Monostearate	9005-67-8	Water flea	Analogous Compound	21 days	NOEL	10 mg/l
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	64742-56-9	Fathead Minnow	Estimated	96 hours	LL50	>100 mg/l
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	64742-56-9	Green algae	Estimated	72 hours	EL50	>100 mg/l
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	64742-56-9	Water flea	Estimated	48 hours	EL50	>100 mg/l
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	64742-56-9	Green algae	Estimated	72 hours	NOEL	100 mg/l
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	64742-56-9	Water flea	Estimated	21 days	NOEL	100 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Silica	7631-86-9	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Hydrotreated Light Petroleum Distilaltes	64742-47-8	Experimental Biodegradation	28 hours	Biological Oxygen Demand	77.6 %BOD/ThOD	OECD 301F - Manometric Respiro
Hydrotreated Light Petroleum Distilaltes	64742-47-8	Analogous Compound Biodegradation	28 days	Biological Oxygen Demand	68.8 %BOD/ThOD	OECD 306(Misc)-Biodegrad. Seaw
Hydrotreated Light Petroleum Distilaltes	64742-47-8	Analogous Compound Soil Inherent Biodegradability	61 days	Biological Oxygen Demand	>60 %BOD/ThOD	OECD 304A-Inherent Biodegrad.
Kaolinite	1318-74-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	64742-65-0	Experimental Biodegradation	28 days	Carbon dioxide evolution	23 %CO2 evolution/THCO2 evolution	similar to OECD 301B
Glycerin	56-81-5	Experimental Biodegradation	14 days	Biological Oxygen Demand	63 %BOD/ThOD	OECD 301C - MITI (I)
Oleic Acid	112-80-1	Experimental Biodegradation	28 days	Biological Oxygen Demand	78 %BOD/ThOD	OECD 301C - MITI (I)
Illite	12173-60-3	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Hydrotreated Light Paraffinic Distillates (Petroleum)	64742-55-8	Estimated Biodegradation	28 days	Carbon dioxide evolution	22 %CO2 evolution/THCO2 evolution	OECD 301B - Mod. Sturm or CO2
Poly(Oxyethylene) Sorbitan	9005-67-8	Analogous Compound	28 days	Carbon dioxide evolution	61 %CO2 evolution/THCO2	ISO 14593 Inorg C Headspace

Monostearate		Biodegradation			evolution	
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	64742-56-9	Analogous Compound Biodegradation	28 days	Biological Oxygen Demand	31 %BOD/ThOD	OECD 301F - Manometric Respiro

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Silica	7631-86-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrotreated Light Petroleum Distilaltes	64742-47-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Kaolinite	1318-74-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Solvent Dewaxed Heavy Paraffinic Distillates (Petroleum)	64742-65-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Glycerin	56-81-5	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	-1.75	similar to OECD 107
Oleic Acid	112-80-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Illite	12173-60-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrotreated Light Paraffinic Distillates (Petroleum)	64742-55-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Poly(Oxyethylene) Sorbitan Monostearate	9005-67-8	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	0.03	
Solvent Dewaxed Light Paraffinic Distillates (Petroleum)	64742-56-9	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 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. 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