



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.

IDENTIFICATION

1.1. Product identifier

3M(TM) Perfect-It(TM) Rubbing Compound PN 06085 Plus 3M™ Perfect-It™ EX Rubbing Compound hang tag

Product Identification Numbers

60-4550-7117-9

1.2. Recommended use and restrictions on use

Recommended use

Automotive

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

This product is a kit or a multipart product which consists of multiple, independently packaged components. An SDS for each of these components is included. Please do not separate the component SDSs from this cover page. The document numbers of the SDSs for components of this product are:

29-7566-2, 22-5036-3

TRANSPORT INFORMATION

This product is a kit that consists of two or more different regulated materials packed in the same outer packaging (ship unit). The transportation classifications of the individual components appear in Section 14 of the attached SDSs.

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.

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



Safety Data Sheet

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Issue Date:	11/09/2014	Supersedes Date:	26/06/2013

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) Perfect-It(TM) Rubbing Compound PN 06085, 06086, 06087, 39060, 6070

Product Identification Numbers

60-4550-5180-9 60-4550-5181-7 60-4550-5256-7 AS-0105-8216-6 XG-0038-1447-0

1.2. Recommended use and restrictions on use

Recommended use

Automotive

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

Not classified as hazardous according to Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

2.2. Label elements

Signal word

Not applicable.

Symbols

Not applicable.

Pictograms

Not applicable.

2.3. Other hazards

None known

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
Water	7732-18-5	40 - 70
Aluminum Oxide	1344-28-1	10 - 30
Kerosene	8008-20-6	10 - 30
Castor Oil	8001-79-4	1 - 5
White Mineral Oil (Petroleum)	8042-47-5	0.5 - 1.5
Ethylene Oxide, Polymer with Ethylenediamine and Propylene Oxide	26316-40-5	< 0.8
Poly(Oxy-1,2-Ethanediy),.Alpha.-Undecyl-.Omega.-Hydroxy-	34398-01-1	< 0.3
Terpenes and Terpenoids, Sweet Orange Oil	68647-72-3	< 0.2
Naphthalene	91-20-3	< 0.1

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

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

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

Material will not burn. Use a fire fighting agent suitable for the surrounding fire. In case of fire: Use a carbon dioxide or dry chemical extinguisher to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products**Substance**

Carbon monoxide
Carbon dioxide
Oxides of Nitrogen

Condition

During Combustion
During Combustion
During Combustion

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. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. 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. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

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 detergent and water. Seal the container. Dispose of collected material as soon as possible.

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

Store work clothes separately from other clothing, food and tobacco products. 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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Store away from areas where product may come into contact with food or pharmaceuticals.

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 Oxide	1344-28-1	Malaysia OELs	TWA (proposed)(8 hours):10 mg/m ³	
Aluminum, insoluble compounds	1344-28-1	ACGIH	TWA(respirable fraction):1 mg/m ³	A4: Not class. as human carcin
Aluminum Oxide	1344-28-1	CMRG	TWA:1 fiber/cc	
Kerosene	8008-20-6	CMRG	TWA:500 ppm(2000 mg/m ³)	

Kerosene	8008-20-6	ACGIH	TWA(as total hydrocarbon vapor, non-aerosol):200 mg/m ³	A3: Confirmed animal carcin., Skin Notation
White Mineral Oil (Petroleum)	8042-47-5	CMRG	TWA:5 mg/m ³ ;STEL:10 mg/m ³	
OIL MIST, MINERAL	8042-47-5	Malaysia OELs	TWA(as mist)(8 hours):5 mg/m ³	
MINERAL OILS, HIGHLY-REFINED OILS	8042-47-5	ACGIH	TWA(inhalable fraction):5 mg/m ³	A4: Not class. as human carcin
Naphthalene	91-20-3	ACGIH	TWA:10 ppm	A4: Not class. as human carcin, Skin Notation
Naphthalene	91-20-3	Malaysia OELs	TWA(8 hours):52 mg/m ³ (10 ppm)	

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 appropriate local exhaust ventilation on open containers. 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. Provide appropriate local exhaust ventilation for cutting, grinding, sanding or machining.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

Safety Glasses with side shields

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

Gloves made from the following material(s) are recommended: Neoprene

Nitrile Rubber

Respiratory protection

In case of inadequate ventilation wear 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
Appearance/Odor	Creamy off-white liquid; Solvent odor
Odor threshold	<i>No Data Available</i>
pH	7.5 - 8.5
Boiling point/Initial boiling point/Boiling range	100 °C
Flash Point	No flash point
Evaporation rate	<i>No Data Available</i>
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	<i>No Data Available</i>
Flammable Limits(UEL)	<i>No Data Available</i>
Vapor Pressure	2,399.8 Pa [@ 20 °C]
Density	1.06 - 1.08 g/ml
Relative Density	1.06 - 1.08 [<i>Ref Std: WATER=1</i>]
Water solubility	Moderate
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>No Data Available</i>
Decomposition temperature	<i>No Data Available</i>
Viscosity	30 - 38 Pa-s [@ 25 °C] [<i>Details: #6 Spindle</i>]
Hazardous Air Pollutants	0.1 % weight [<i>Test Method: Calculated</i>]
Volatile Organic Compounds	16.1 % weight [<i>Test Method: calculated per CARB title 2</i>]
Volatile Organic Compounds	176 g/l [<i>Test Method: calculated SCAQMD rule 443.1</i>]
Percent volatile	80.6 %
VOC Less H2O & Exempt Solvents	563 g/l [<i>Test Method: calculated SCAQMD rule 443.1</i>]

SECTION 10: Stability and reactivity**10.1. Reactivity**

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

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

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

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be

reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for 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:

Intentional concentration and inhalation may be harmful or fatal.

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

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system. 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.

Prolonged or repeated exposure may cause:

Dermal Defatting: Signs/symptoms may include localized redness, itching, drying and cracking of skin.

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. 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.

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
Kerosene	Dermal	Rabbit	LD50 > 2,000 mg/kg
Kerosene	Inhalation-Vapor (4 hours)	Rat	LC50 > 5 mg/l
Kerosene	Ingestion	Rat	LD50 > 5,000 mg/kg
Aluminum Oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminum Oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.3 mg/l
Aluminum Oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Castor Oil	Ingestion		LD50 estimated to be > 5,000
White Mineral Oil (Petroleum)	Dermal	Rabbit	LD50 > 2,000 mg/kg
White Mineral Oil (Petroleum)	Ingestion	Rat	LD50 > 5,000 mg/kg
Poly(Oxy-1,2-Ethanediy),..Alpha.-Undecyl-.Omega.-Hydroxy-	Dermal	Rat	LD50 > 2,000 mg/kg
Poly(Oxy-1,2-Ethanediy),..Alpha.-Undecyl-.Omega.-Hydroxy-	Ingestion	Rat	LD50 > 2,000 mg/kg
Terpenes and Terpenoids, Sweet Orange Oil	Inhalation-Vapor (4 hours)	Mouse	LC50 > 3.14 mg/l
Terpenes and Terpenoids, Sweet Orange Oil	Dermal	Rabbit	LD50 > 5,000 mg/kg

Terpenes and Terpenoids, Sweet Orange Oil	Ingestion	Rat	LD50 4,400 mg/kg
Naphthalene	Dermal	Human	LD50 estimated to be 2,000 - 5,000 mg/kg
Naphthalene	Inhalation-Vapor	Human	LC50 estimated to be 20 - 50 mg/l
Naphthalene	Ingestion	Human	LD50 estimated to be 300 - 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Kerosene	Rabbit	Minimal irritation
Aluminum Oxide	Rabbit	No significant irritation
Castor Oil	Human	Minimal irritation
White Mineral Oil (Petroleum)	Rabbit	No significant irritation
Terpenes and Terpenoids, Sweet Orange Oil	Rabbit	Mild irritant
Naphthalene	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Kerosene	Rabbit	No significant irritation
Aluminum Oxide	Rabbit	No significant irritation
Castor Oil	Rabbit	Mild irritant
White Mineral Oil (Petroleum)	Rabbit	Mild irritant
Terpenes and Terpenoids, Sweet Orange Oil	Rabbit	Mild irritant
Naphthalene	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
Kerosene	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Castor Oil	Human	Some positive data exist, but the data are not sufficient for classification
White Mineral Oil (Petroleum)	Guinea pig	Not sensitizing
Terpenes and Terpenoids, Sweet Orange Oil	Mouse	Sensitizing

Respiratory Sensitization

Name	Species	Value
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Germ Cell Mutagenicity

Name	Route	Value
Kerosene	In Vitro	Some positive data exist, but the data are not sufficient for classification
Kerosene	In vivo	Some positive data exist, but the data are not sufficient for classification
Aluminum Oxide	In Vitro	Not mutagenic
Castor Oil	In Vitro	Not mutagenic
Castor Oil	In vivo	Not mutagenic
White Mineral Oil (Petroleum)	In Vitro	Not mutagenic
Terpenes and Terpenoids, Sweet Orange Oil	In Vitro	Not mutagenic
Terpenes and Terpenoids, Sweet Orange Oil	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Kerosene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Aluminum Oxide	Inhalation	Rat	Not carcinogenic
White Mineral Oil (Petroleum)	Dermal	Mouse	Not carcinogenic
White Mineral Oil (Petroleum)	Inhalation	Multiple animal species	Not carcinogenic
Terpenes and Terpenoids, Sweet Orange Oil	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Naphthalene	Inhalation	Multiple animal	Carcinogenic

		species	
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Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Kerosene	Dermal	Not toxic to female reproduction	Rat	NOAEL 494 mg/kg/day	premating & during gestation
Kerosene	Dermal	Not toxic to male reproduction	Rat	NOAEL 494 mg/kg/day	premating & during gestation
Kerosene	Dermal	Not toxic to development	Rat	NOAEL 494 mg/kg/day	premating & during gestation
Kerosene	Inhalation	Not toxic to development	Rat	NOAEL 400 ppm	during organogenesis
Castor Oil	Ingestion	Not toxic to female reproduction	Rat	NOAEL 4,800 mg/kg/day	13 weeks
Castor Oil	Ingestion	Not toxic to male reproduction	Rat	NOAEL 4,800 mg/kg/day	13 weeks
White Mineral Oil (Petroleum)	Ingestion	Not toxic to female reproduction	Rat	NOAEL 4,350 mg/kg/day	13 weeks
White Mineral Oil (Petroleum)	Ingestion	Not toxic to male reproduction	Rat	NOAEL 4,350 mg/kg/day	13 weeks
White Mineral Oil (Petroleum)	Ingestion	Not toxic to development	Rat	NOAEL 4,350 mg/kg/day	during gestation
Terpenes and Terpenoids, Sweet Orange Oil	Ingestion	Not toxic to male reproduction	Rat	NOAEL 150 mg/kg/day	103 weeks
Terpenes and Terpenoids, Sweet Orange Oil	Ingestion	Some positive female reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 750 mg/kg/day	premating & during gestation
Terpenes and Terpenoids, Sweet Orange Oil	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 591 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
Kerosene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL not available	occupational exposure
Kerosene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL not available	not available
Kerosene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL not available	poisoning and/or abuse
Kerosene	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL not available	not applicable
Kerosene	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 18,912 mg/kg	not applicable
Kerosene	Ingestion	heart hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL not available	poisoning and/or abuse
Terpenes and Terpenoids, Sweet Orange Oil	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Naphthalene	Ingestion	blood	Causes damage to organs	Human	NOAEL Not	poisoning

					available	and/or abuse
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Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Kerosene	Dermal	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 500 mg/kg/day	13 weeks
Kerosene	Dermal	liver immune system kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 500 mg/kg/day	2 years
Kerosene	Dermal	nervous system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 2,700 mg/kg/day	1 weeks
Kerosene	Dermal	heart muscles respiratory system	All data are negative	Mouse	NOAEL 500 mg/kg/day	2 years
Kerosene	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL not available	1 years
Kerosene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.231 mg/l	14 weeks
Kerosene	Inhalation	heart	Some positive data exist, but the data are not sufficient for classification	Guinea pig	LOAEL 20.4 mg/l	not available
Kerosene	Inhalation	hematopoietic system muscles respiratory system	All data are negative	Multiple animal species	NOAEL 0.1 mg/l	13 weeks
Aluminum Oxide	Inhalation	pneumoconiosis pulmonary fibrosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Castor Oil	Ingestion	heart hematopoietic system liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 4,800 mg/kg/day	13 weeks
Castor Oil	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 13,000 mg/kg/day	13 weeks
White Mineral Oil (Petroleum)	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,381 mg/kg/day	90 days
White Mineral Oil (Petroleum)	Ingestion	liver immune system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,336 mg/kg/day	90 days
Terpenes and Terpenoids, Sweet Orange Oil	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 75 mg/kg/day	103 weeks
Terpenes and Terpenoids, Sweet Orange Oil	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
Terpenes and Terpenoids, Sweet Orange Oil	Ingestion	heart endocrine system bone, teeth, nails, and/or hair hematopoietic system immune system muscles nervous system respiratory system	All data are negative	Rat	NOAEL 600 mg/kg/day	103 weeks
Naphthalene	Dermal	blood	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Naphthalene	Dermal	eyes	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Naphthalene	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL .01 mg/l	13 weeks
Naphthalene	Inhalation	blood	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Naphthalene	Inhalation	eyes	Some positive data exist, but the data are not sufficient for	Human	NOAEL Not available	occupational exposure

			classification			
Naphthalene	Ingestion	blood	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Naphthalene	Ingestion	eyes	May cause damage to organs though prolonged or repeated exposure	Rabbit	LOAEL 500 mg/kg/day	15 days

Aspiration Hazard

Name	Value
Kerosene	Aspiration hazard
White Mineral Oil (Petroleum)	Aspiration hazard
Terpenes and Terpenoids, Sweet Orange Oil	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
Ethylene Oxide, Polymer with Ethylenediamine and Propylene Oxide	26316-40-5		Data not available or insufficient for classification			
Castor Oil	8001-79-4	Zebra Fish	Experimental	96 hours	Lethal Concentration 50%	>10,000 mg/l
White Mineral Oil (Petroleum)	8042-47-5		Data not available or insufficient for classification			
Terpenes and Terpenoids, Sweet Orange Oil	68647-72-3	Fathead Minnow	Experimental	96 hours	Lethal Concentration 50%	0.72 mg/l
Terpenes and Terpenoids, Sweet Orange Oil	68647-72-3	Water flea	Experimental	48 hours	Effect Concentration 50%	0.421 mg/l

Kerosene	8008-20-6		Data not available or insufficient for classification			
Naphthalene	91-20-3	Green algae	Experimental	24 hours	Effect Concentration 50%	33 mg/l
Naphthalene	91-20-3	Rainbow Trout	Experimental	96 hours	Lethal Concentration 50%	0.11 mg/l
Naphthalene	91-20-3	Water flea	Experimental	48 hours	Effect Concentration 50%	1.6 mg/l
Poly(Oxy-1,2-Ethanediy),.Al pha.-Undecyl-.Omega.-Hydroxy-	34398-01-1	Fathead Minnow	Experimental	96 hours	Lethal Concentration 50%	1.63 mg/l
Poly(Oxy-1,2-Ethanediy),.Al pha.-Undecyl-.Omega.-Hydroxy-	34398-01-1	Water flea	Experimental	48 hours	Effect Concentration 50%	2.1 mg/l
Poly(Oxy-1,2-Ethanediy),.Al pha.-Undecyl-.Omega.-Hydroxy-	34398-01-1	Green algae	Experimental	96 hours	Effect Concentration 50%	2.91 mg/l
Poly(Oxy-1,2-Ethanediy),.Al pha.-Undecyl-.Omega.-Hydroxy-	34398-01-1	Fathead Minnow	Experimental	30 days	No obs Effect Conc	0.73 mg/l
Aluminum Oxide	1344-28-1	Fish	Experimental	96 hours	Lethal Concentration 50%	>100 mg/l
Aluminum Oxide	1344-28-1	Green algae	Experimental	72 hours	Effect Concentration 50%	>100 mg/l
Aluminum Oxide	1344-28-1	Water flea	Experimental	48 hours	Effect Concentration 50%	>100 mg/l
Aluminum Oxide	1344-28-1	Green algae	Experimental	72 hours	No obs Effect Conc	>100 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Ethylene Oxide, Polymer with Ethylenediamine and Propylene Oxide	26316-40-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

Castor Oil	8001-79-4	Experimental Biodegradation	28 days	Biological Oxygen Demand	64 % weight	OECD 301D - Closed Bottle Test
White Mineral Oil (Petroleum)	8042-47-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Terpenes and Terpenoids, Sweet Orange Oil	68647-72-3	Estimated Photolysis		Photolytic half-life (in air)	2.3 hours (t 1/2)	Other methods
Terpenes and Terpenoids, Sweet Orange Oil	68647-72-3	Estimated Biodegradation	28 days	Biological Oxygen Demand	69 % weight	OECD 301C - MITI (I)
Kerosene	8008-20-6	Estimated Photolysis		Photolytic half-life (in air)	>2 days (t 1/2)	Other methods
Kerosene	8008-20-6	Experimental Biodegradation	28 days	Biological Oxygen Demand	58.6 % weight	OECD 301F - Manometric Respiro
Naphthalene	91-20-3	Experimental Photolysis		Photolytic half-life (in air)	1.24 days (t 1/2)	Other methods
Naphthalene	91-20-3	Estimated Biodegradation	28 days	Biological Oxygen Demand	3.2 % weight	OECD 301C - MITI (I)
Poly(Oxy-1,2-Ethanediy),.Al pha.-Undecyl-.Omega.-Hydroxy-	34398-01-1	Experimental Biodegradation	28 days	Biological Oxygen Demand	80 % weight	OECD 301D - Closed Bottle Test
Aluminum Oxide	1344-28-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Ethylene Oxide, Polymer with Ethylenediamine and Propylene Oxide	26316-40-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Castor Oil	8001-79-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
White Mineral Oil (Petroleum)	8042-47-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Terpenes and Terpenoids,	68647-72-3	Estimated BCF - Other		Bioaccumulation Factor	2136	Other methods

Sweet Orange Oil						
Kerosene	8008-20-6	Estimated Bioconcentration		Log of Octanol/H ₂ O part. coeff	6	Other methods
Naphthalene	91-20-3	Experimental BCF-Carp	56 days	Bioaccumulation Factor	23-146	OECD 305E-Bioaccum Fl-thru fis
Poly(Oxy-1,2-Ethanediy),.Al pha.-Undecyl-.Omega.-Hydroxy-	34398-01-1	Experimental BCF - Other	10 days	Bioaccumulation Factor	309	Other methods
Aluminum Oxide	1344-28-1	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

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 China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. 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.

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



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™ Perfect-It™ EX Rubbing Compound, 36058, 36059, 36060, 36061, 36062, 36063, 36064

Product Identification Numbers

60-4550-7010-6	60-4550-7028-8	60-4550-7048-6	60-4550-7049-4	60-4550-7050-2
60-4550-7119-5	HB-0043-2392-7	IA-2601-0096-0	IA-2601-0097-8	

1.2. Recommended use and restrictions on use

Recommended use

Automotive, Rubbing Compound

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

General:

P102 Keep out of reach of children.

P101 If medical advice is needed, have product container or label at hand.

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
Water	7732-18-5	40 - 70
Aluminum Oxide	1344-28-1	10 - 30
Hydrotreated Light Petroleum Distillates	64742-47-8	10 - 30
Glycerin	56-81-5	1 - 5
White Mineral Oil (Petroleum)	8042-47-5	1 - 5

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

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 carbon dioxide or dry chemical extinguisher to extinguish.

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

Substance

Hydrocarbons
Carbon monoxide
Carbon dioxide
Oxides of Nitrogen

Condition

During Combustion
During Combustion
During Combustion
During Combustion

5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. 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. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

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 detergent and water. 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. Avoid breathing dust/fume/gas/mist/vapors/spray. 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

Keep from freezing.

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
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Aluminum Oxide	1344-28-1	Malaysia OELs	TWA (proposed)(8 hours):10 mg/m ³	
Aluminum, insoluble compounds	1344-28-1	ACGIH	TWA(respirable fraction):1 mg/m ³	A4: Not class. as human carcin
DUST, INERT OR NUISANCE	1344-28-1	Malaysia OELs	TWA (proposed)(Inhalable particulate)(8 hours):10 mg/m ³ ;TWA (proposed)(respirable particles)(8 hours):3 mg/m ³	
Glycerin	56-81-5	Malaysia OELs	TWA(as mist)(8 hours):10 mg/m ³	
Kerosine (petroleum)	64742-47-8	ACGIH	TWA(as total hydrocarbon vapor, non-aerosol):200 mg/m ³	A3: Confirmed animal carcin., SKIN
MINERAL OILS, HIGHLY-REFINED OILS	8042-47-5	ACGIH	TWA(inhalable fraction):5 mg/m ³	A4: Not class. as human carcin
OIL MIST, MINERAL	8042-47-5	Malaysia OELs	TWA(as mist)(8 hours):5 mg/m ³	

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 appropriate local exhaust ventilation for cutting, grinding, sanding or machining. 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

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
Appearance/Odor	Tan liquid slight pine oil odor
Odor threshold	<i>No Data Available</i>
pH	7.5 - 9
Melting point/Freezing point	<i>No Data Available</i>
Boiling point/Initial boiling point/Boiling range	<i>No Data Available</i>
Flash Point	>=93.3 °C [<i>Test Method: Closed Cup</i>]
Evaporation rate	<i>No Data Available</i>
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	<i>No Data Available</i>
Flammable Limits(UEL)	<i>No Data Available</i>
Vapor Pressure	<i>No Data Available</i>
Vapor Density	<i>No Data Available</i>
Density	1.05 - 1.1 g/ml
Relative Density	1.05 - 1.1 [<i>Ref Std: WATER=1</i>]
Water solubility	<i>No Data Available</i>
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>No Data Available</i>
Decomposition temperature	<i>No Data Available</i>
Viscosity	30,000 - 35,000 mPa-s
Molecular weight	<i>No Data Available</i>
Volatile Organic Compounds	174 g/l [<i>Test Method: calculated SCAQMD rule 443.1</i>]
Volatile Organic Compounds	16.2 % weight [<i>Test Method: calculated per CARB title 2</i>]
Percent volatile	78.3 % weight
VOC Less H2O & Exempt Solvents	524 g/l [<i>Test Method: calculated SCAQMD rule 443.1</i>]

SECTION 10: Stability and reactivity**10.1. Reactivity**

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

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

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

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

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.

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
Hydrotreated Light Petroleum Distillates	Dermal	Rabbit	LD50 > 3,160 mg/kg
Hydrotreated Light Petroleum Distillates	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 3 mg/l
Hydrotreated Light Petroleum Distillates	Ingestion	Rat	LD50 > 5,000 mg/kg
Aluminum Oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminum Oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.3 mg/l
Aluminum Oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Glycerin	Dermal	Rabbit	LD50 estimated to be > 5,000 mg/kg
Glycerin	Ingestion	Rat	LD50 > 5,000 mg/kg
White Mineral Oil (Petroleum)	Dermal	Rabbit	LD50 > 2,000 mg/kg
White Mineral Oil (Petroleum)	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Hydrotreated Light Petroleum Distillates	Rabbit	Mild irritant
Aluminum Oxide	Rabbit	No significant irritation

Glycerin	Rabbit	No significant irritation
White Mineral Oil (Petroleum)	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Hydrotreated Light Petroleum Distillates	Rabbit	Mild irritant
Aluminum Oxide	Rabbit	No significant irritation
Glycerin	Rabbit	No significant irritation
White Mineral Oil (Petroleum)	Rabbit	Mild irritant

Skin Sensitization

Name	Species	Value
Hydrotreated Light Petroleum Distillates	Guinea pig	Not classified
Glycerin	Guinea pig	Not classified
White Mineral Oil (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
Hydrotreated Light Petroleum Distillates	In Vitro	Not mutagenic
Aluminum Oxide	In Vitro	Not mutagenic
White Mineral Oil (Petroleum)	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Hydrotreated Light Petroleum Distillates	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Aluminum Oxide	Inhalation	Rat	Not carcinogenic
Glycerin	Ingestion	Mouse	Some positive data exist, but the data are not sufficient for classification
White Mineral Oil (Petroleum)	Dermal	Mouse	Not carcinogenic
White Mineral Oil (Petroleum)	Inhalation	Multiple animal species	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
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
White Mineral Oil (Petroleum)	Ingestion	Not classified for female reproduction	Rat	NOAEL 4,350 mg/kg/day	13 weeks
White Mineral Oil (Petroleum)	Ingestion	Not classified for male reproduction	Rat	NOAEL 4,350 mg/kg/day	13 weeks

White Mineral Oil (Petroleum)	Ingestion	Not classified for development	Rat	NOAEL 4,350 mg/kg/day	during gestation
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Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Hydrotreated Light Petroleum Distillates	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Hydrotreated Light Petroleum Distillates	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Hydrotreated Light Petroleum Distillates	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Notavailable	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Aluminum Oxide	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Aluminum Oxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
Glycerin	Inhalation	respiratory system heart liver kidney and/or bladder	Not classified	Rat	NOAEL 3.91 mg/l	14 days
Glycerin	Ingestion	endocrine system hematopoietic system liver kidney and/or bladder	Not classified	Rat	NOAEL 10,000 mg/kg/day	2 years
White Mineral Oil (Petroleum)	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 1,381 mg/kg/day	90 days
White Mineral Oil (Petroleum)	Ingestion	liver immune system	Not classified	Rat	NOAEL 1,336 mg/kg/day	90 days

Aspiration Hazard

Name	Value
Hydrotreated Light Petroleum Distillates	Aspiration hazard
White Mineral Oil (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:

GHS Acute 2: Toxic 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
Aluminum Oxide	1344-28-1	Fish	Experimental	96 hours	Lethal Concentration 50%	>100 mg/l
Aluminum Oxide	1344-28-1	Green Algae	Experimental	72 hours	Effect Concentration 50%	>100 mg/l
Aluminum Oxide	1344-28-1	Water flea	Experimental	48 hours	Lethal Concentration 50%	>100 mg/l
Aluminum Oxide	1344-28-1	Green Algae	Experimental	72 hours	No obs Effect Conc	>100 mg/l
Hydrotreated Light Petroleum Distillates	64742-47-8	Green Algae	Estimated	72 hours	Effect Concentration 50%	1 mg/l
Hydrotreated Light Petroleum Distillates	64742-47-8	Rainbow Trout	Estimated	96 hours	Lethal Level 50%	2 mg/l
Hydrotreated Light Petroleum Distillates	64742-47-8	Water flea	Estimated	48 hours	Effect Level 50%	1.4 mg/l
Hydrotreated Light Petroleum Distillates	64742-47-8	Green Algae	Estimated	72 hours	No obs Effect Level	1 mg/l
Hydrotreated Light Petroleum Distillates	64742-47-8	Water flea	Estimated	21 days	No obs Effect Level	0.48 mg/l
Glycerin	56-81-5	Rainbow Trout	Experimental	96 hours	Lethal Concentration 50%	54,000 mg/l
Glycerin	56-81-5	Water flea	Experimental	48 hours	Lethal Concentration 50%	1,955 mg/l
White Mineral Oil (Petroleum)	8042-47-5	Water flea	Estimated	48 hours	Effect Level 50%	>100 mg/l
White Mineral Oil (Petroleum)	8042-47-5	Bluegill	Experimental	96 hours	Lethal Level 50%	>100 mg/l
White Mineral Oil (Petroleum)	8042-47-5	Green algae	Estimated	72 hours	No obs Effect Level	>100 mg/l
White Mineral Oil (Petroleum)	8042-47-5	Water flea	Estimated	21 days	No obs Effect Level	>100 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Aluminum Oxide	1344-28-1	Data not availbl- insufficient			N/A	
Hydrotreated Light Petroleum Distillates	64742-47-8	Data not availbl- insufficient			N/A	
Glycerin	56-81-5	Experimental Biodegradation	14 days	Biological Oxygen Demand	63 % BOD/ThBOD	OECD 301C - MITI (I)
White Mineral Oil (Petroleum)	8042-47-5	Experimental Biodegradation	28 days	Carbon dioxide evolution	0 % weight	OECD 301B - Mod. Sturm or CO2

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Aluminum Oxide	1344-28-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrotreated Light Petroleum Distillates	64742-47-8	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	-1.76	Other methods
White Mineral Oil (Petroleum)	8042-47-5	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:III
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:III
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. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC 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