Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the DENR Administrative Order No. 2015-09 Rules and Procedures for the Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) in Preparation of Safety Data Sheet (SDS) and Labelling Requirements of Toxic Chemical Substances.

SECTION 1: Identification

1.1. Product identifier
PN8819 Underseal Rubberized Coating

Product Identification Numbers
UU-0115-3530-7

1.2. Recommended use and restrictions on use

Recommended use
Coating

1.3. Supplier's details
ADDRESS: 3M Philippines, Inc., 18th Floor, Bonifacio Stopover Corporate Center, 31st Street corner, 2nd Avenue, Bonifacio Global City, Taguig City, 1635 Philippines
Telephone: +632 827 11680
E Mail: mcvillalva@mmm.com
Website: www.3m.com/ph

1.4. Emergency telephone number
+632 827 11680

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Flammable Liquid: Category 3.
Skin Corrosion/Irritation: Category 2.
Carcinogenicity: Category 1A.
Reproductive Toxicity: Category 2.
Specific Target Organ Toxicity (single exposure): Category 2.
Specific Target Organ Toxicity (repeated exposure): Category 1.
Specific Target Organ Toxicity (single exposure): Category 3.
Chronic Aquatic Toxicity: Category 2.

2.2. Label elements

Signal word
Danger

Symbols
Flame |Exclamation mark |Health Hazard |Environment |

Pictograms

Hazard statements

H226	Flammable liquid and vapor.
H315	Causes skin irritation.
H350	May cause cancer.
H361	Suspected of damaging fertility or the unborn child.
H336	May cause drowsiness or dizziness.
H371	May cause damage to organs: sensory organs.
H372	Causes damage to organs through prolonged or repeated exposure: respiratory system.
H373	May cause damage to organs through prolonged or repeated exposure: nervous system.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention:

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P273	Avoid release to the environment.
P280F	Wear respiratory protection, if needed (see SDS Section 8).

Response:

P308 + P313	IF exposed or concerned: Get medical attention.
P370 + P378	In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

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
Kaolin	1332-58-7	10 - 30
Distillates, petroleum, light thermal	64741-82-8	10 - 30
Hydrotreated light naphtha (petroleum)	64742-49-0	10 - 30
Oxidized Petroleum Asphalt	64742-93-4	10 - 30
ISOMER MIXTURES	None	1 - 10
Methylcyclohexane	108-87-2	< 10
Cellulose	9004-34-6	5 - 10
Cyclohexane	110-82-7	< 10
Hexane	110-54-3	< 5
ylene	1330-20-7	1 - 5
Iron Oxide	1309-37-1	0.5 - 1.5
Ethylbenzene	100-41-4	< 1
Quart Silica	14808-60-7	0.1 - 1
Titanium Dioxide	13463-67-7	0.1 - 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:
Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately 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

Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness). Target organ effects. See Section 11 for additional details. 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
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide 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	Condition
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion

Carbon dioxide	During Combustion
Hydrogen Sulfide	During Combustion
Toxic Vapor, Gas, Particulate	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. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. 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. 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. 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 using non-sparking tools. Place in a metal 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
For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. 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. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep cool. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from heat. Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Ethylbenzene	100-41-4	ACGIH	TWA:20 ppm	A3: Confirmed animal carcin.,Ototoxicant
Ethylbenzene	100-41-4	Philippines OELs	CEIL:435 mg/m3(100 ppm)	
Methylcyclohexane	108-87-2	ACGIH	TWA:100 ppm	
Methylcyclohexane	108-87-2	Philippines OELs	TWA(8 hours):2000 mg/m3(500 ppm)	
Hexane	110-54-3	ACGIH	TWA:50 ppm	Danger of cutaneous absorption
Hexane	110-54-3	Philippines OELs	TWA(8 hours):1800 mg/m3(500 ppm)	
Cyclohexane	110-82-7	ACGIH	TWA:100 ppm	
Cyclohexane	110-82-7	Philippines OELs	TWA(8 hours):1050 mg/m3(300 ppm)	
Iron Oxide	1309-37-1	ACGIH	TWA(respirable fraction):5 mg/m3	A4: Not class. as human carcin
Iron Oxide	1309-37-1	Philippines OELs	TWA(as fume)(8 hours):10 mg/m3	
ylene	1330-20-7	ACGIH	TWA:20 ppm	A4: Not class. as human carcin
ylene	1330-20-7	Philippines OELs	TWA(8 hours):0.1 mg/m3;Limit value not established:	
Kaolin	1332-58-7	ACGIH	TWA(respirable fraction):2 mg/m3	A4: Not class. as human carcin
Titanium Dioxide	13463-67-7	ACGIH	TWA(Respirable nanoscale particles):0.2 mg/m3;TWA(Respirable finescale particles):2.5 mg/m3	A3: Confirmed animal carcin.
Titanium Dioxide	13463-67-7	Philippines OELs	TWA(8 hours):15 mg/m3	
Quart Silica	14808-60-7	Philippines OELs	TWA(as total dust)(8 hours):0.3 mg/m3;TWA(respirable)(8 hours):0.1 mg/m3;TWA (calculated) mppcf(respirable)(8 hours):2.4 millions of particles/cu. ft.	
Silica, crystalline, respirable fraction	14808-60-7	ACGIH	TWA(respirable fraction):0.025 mg/m3	A2: Suspected human carcin.
Mineral oil, excluding metal working fluids, poorly and mildly refined	64741-82-8	ACGIH	Limit value not established:	A2: Suspected human carcin., Cntrl all exposr-low as possib
Naphtha (coal tar)	64741-82-8	Philippines OELs	TWA(8 hours):400 mg/m3(100 ppm)	

Naphtha (coal tar)	64742-49-0	Philippines OELs	TWA(8 hours):400 mg/m3(100 ppm)	
Cellulose	9004-34-6	ACGIH	TWA:10 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
Philippines OELs : Philippines. Threshold Limit Values for Airborne Contaminants
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. Use explosion-proof ventilation 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
Specific Physical Form:	Viscous
Color	Dark Brown
Odor	Solvent
Odor threshold	*No Data Available*
pH	*No Data Available*
Melting point/Freezing point	*No Data Available*
Boiling point/Initial boiling point/Boiling range	243.3 ºC

Flash Point	40.6 - 46.1 ºC [*Test Method:*Closed Cup]
Evaporation rate	*Not Applicable*
Flammability	Flammable Liquid: Category 3.
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 - 1.2 kg/l [@ 25 ºC]
Relative Density	1.2 [*Ref Std:*WATER=1]
Water solubility	*No Data Available*
Solubility- non-water	Slight (less than 10%)
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*No Data Available*
Decomposition temperature	*No Data Available*
Kinematic Viscosity	58,333 mm2/sec
Volatile Organic Compounds	*No Data Available*
Percent volatile	*No Data Available*
VOC Less H2O & Exempt Solvents	*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
Not determined (RMs only)

10.4. Conditions to avoid
Heat
Sparks and/or flames

10.5. Incompatible materials
Water

10.6. Hazardous decomposition products

Substance	**Condition**
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

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

May cause additional health effects (see below).

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

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

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

May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:
Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

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.

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Peripheral Neuropathy: Signs/symptoms may include tingling or numbness of the extremities, incoordination, weakness of the hands and feet, tremors and muscle atrophy.

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg

Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Oxidized Petroleum Asphalt	Dermal	Rabbit	LD50 > 2,000 mg/kg
Oxidized Petroleum Asphalt	Ingestion	Rat	LD50 > 5,000 mg/kg
Kaolin	Dermal		LD50 estimated to be > 5,000 mg/kg
Kaolin	Ingestion	Human	LD50 > 15,000 mg/kg
Hydrotreated light naphtha (petroleum)	Dermal	Rabbit	LD50 > 3,160 mg/kg
Hydrotreated light naphtha (petroleum)	Inhalation-Vapor (4 hours)	Rat	LC50 > 14.7 mg/l
Hydrotreated light naphtha (petroleum)	Ingestion	Rat	LD50 > 5,000 mg/kg
Cyclohexane	Dermal	Rat	LD50 > 2,000 mg/kg
Cyclohexane	Inhalation-Vapor (4 hours)	Rat	LC50 > 32.9 mg/l
Cyclohexane	Ingestion	Rat	LD50 6,200 mg/kg
Methylcyclohexane	Inhalation-Vapor	Professional judgement	LC50 estimated to be 20 - 50 mg/l
Methylcyclohexane	Ingestion	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
Methylcyclohexane	Dermal	similar compounds	LD50 > 2,000 mg/kg
Cellulose	Dermal	Rabbit	LD50 > 2,000 mg/kg
Cellulose	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.8 mg/l
Cellulose	Ingestion	Rat	LD50 > 5,000 mg/kg
Hexane	Dermal	Rabbit	LD50 > 2,000 mg/kg
Hexane	Inhalation-Vapor (4 hours)	Rat	LC50 170 mg/l
Hexane	Ingestion	Rat	LD50 > 28,700 mg/kg
ylene	Dermal	Rabbit	LD50 > 4,200 mg/kg
ylene	Inhalation-Vapor (4 hours)	Rat	LC50 29 mg/l
ylene	Ingestion	Rat	LD50 3,523 mg/kg
Iron Oxide	Dermal	Not available	LD50 3,100 mg/kg
Iron Oxide	Ingestion	Not available	LD50 3,700 mg/kg
Ethylbenzene	Dermal	Rabbit	LD50 15,433 mg/kg
Ethylbenzene	Inhalation-Vapor (4 hours)	Rat	LC50 17.4 mg/l
Ethylbenzene	Ingestion	Rat	LD50 4,769 mg/kg
Quart Silica	Dermal		LD50 estimated to be > 5,000 mg/kg
Quart Silica	Ingestion		LD50 estimated to be > 5,000 mg/kg
Titanium Dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium Dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium Dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Oxidized Petroleum Asphalt	Human	Minimal irritation

Kaolin	Professional judgement	No significant irritation
Hydrotreated light naphtha (petroleum)	Rabbit	Irritant
Cyclohexane	Rabbit	Mild irritant
Methylcyclohexane	Rabbit	No significant irritation
Cellulose	Not available	No significant irritation
Hexane	Human and animal	Mild irritant
ylene	Rabbit	Mild irritant
Iron Oxide	Rabbit	No significant irritation
Ethylbenzene	Rabbit	Mild irritant
Quart Silica	Professional judgement	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Oxidized Petroleum Asphalt	Human	Mild irritant
Kaolin	Professional judgement	No significant irritation
Hydrotreated light naphtha (petroleum)	Rabbit	Mild irritant
Cyclohexane	Rabbit	Mild irritant
Methylcyclohexane	Rabbit	No significant irritation
Cellulose	Not available	No significant irritation
Hexane	Rabbit	Mild irritant
ylene	Rabbit	Mild irritant
Iron Oxide	Rabbit	No significant irritation
Ethylbenzene	Rabbit	Moderate irritant
Titanium Dioxide	Rabbit	No significant irritation

Sensitization:

Skin Sensitization

Name	Species	Value
Hydrotreated light naphtha (petroleum)	Guinea pig	Not classified
Methylcyclohexane	similar compounds	Not classified
Hexane	Human	Not classified
Iron Oxide	Human	Not classified
Ethylbenzene	Human	Not classified
Titanium Dioxide	Human and animal	Not classified

Photosensitization

Name	Species	Value
Oxidized Petroleum Asphalt	Human	Not sensitizing

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Oxidized Petroleum Asphalt	In vivo	Not mutagenic
Oxidized Petroleum Asphalt	In Vitro	Some positive data exist, but the data are not sufficient for classification
Hydrotreated light naphtha (petroleum)	In Vitro	Not mutagenic
Cyclohexane	In Vitro	Not mutagenic
Cyclohexane	In vivo	Some positive data exist, but the data are not sufficient for classification
Methylcyclohexane	In Vitro	Not mutagenic
Hexane	In Vitro	Not mutagenic
Hexane	In vivo	Not mutagenic
ylene	In Vitro	Not mutagenic
ylene	In vivo	Not mutagenic
Iron Oxide	In Vitro	Not mutagenic
Ethylbenzene	In vivo	Not mutagenic
Ethylbenzene	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quart Silica	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quart Silica	In vivo	Some positive data exist, but the data are not sufficient for classification
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Oxidized Petroleum Asphalt	Not Specified	Human and animal	Some positive data exist, but the data are not sufficient for classification
Kaolin	Inhalation	Multiple animal species	Not carcinogenic
Hydrotreated light naphtha (petroleum)	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
Methylcyclohexane	Inhalation	Multiple animal species	Not carcinogenic
Hexane	Dermal	Mouse	Not carcinogenic
Hexane	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
ylene	Dermal	Rat	Not carcinogenic
ylene	Ingestion	Multiple animal species	Not carcinogenic
ylene	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification
Iron Oxide	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification
Ethylbenzene	Inhalation	Multiple animal species	Carcinogenic
Quart Silica	Inhalation	Human and animal	Carcinogenic
Titanium Dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium Dioxide	Inhalation	Rat	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Cyclohexane	Inhalation	Not classified for female reproduction	Rat	NOAEL 24 mg/l	2 generation
Cyclohexane	Inhalation	Not classified for male reproduction	Rat	NOAEL 24 mg/l	2 generation
Cyclohexane	Inhalation	Not classified for development	Rat	NOAEL 6.9 mg/l	2 generation
Methylcyclohexane	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Methylcyclohexane	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	28 days
Methylcyclohexane	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Hexane	Ingestion	Not classified for development	Mouse	NOAEL 2,200 mg/kg/day	during organogenesis
Hexane	Inhalation	Not classified for development	Rat	NOAEL 0.7 mg/l	during gestation
Hexane	Ingestion	Toxic to male reproduction	Rat	NOAEL 1,140 mg/kg/day	90 days
Hexane	Inhalation	Toxic to male reproduction	Rat	LOAEL 3.52 mg/l	28 days
ylene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
ylene	Ingestion	Not classified for development	Mouse	NOAEL Not available	during organogenesis
ylene	Inhalation	Not classified for development	Multiple animal species	NOAEL Not available	during gestation
Ethylbenzene	Inhalation	Not classified for development	Rat	NOAEL 4.3 mg/l	premating & during gestation

Lactation

Name	Route	Species	Value
ylene	Ingestion	Mouse	Not classified for effects on or via lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

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

Cyclohexane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Methylcyclohexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	
Methylcyclohexane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Hexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	not available
Hexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rabbit	NOAEL Not available	8 hours
Hexane	Inhalation	respiratory system	Not classified	Rat	NOAEL 24.6 mg/l	8 hours
ylene	Inhalation	auditory system	Causes damage to organs	Rat	LOAEL 6.3 mg/l	8 hours
ylene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
ylene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
ylene	Inhalation	eyes	Not classified	Rat	NOAEL 3.5 mg/l	not available
ylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	
ylene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	
ylene	Ingestion	eyes	Not classified	Rat	NOAEL 250 mg/kg	not applicable
Ethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Ethylbenzene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
Ethylbenzene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Oxidized Petroleum Asphalt	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
Kaolin	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL NA	occupational exposure
Kaolin	Inhalation	pulmonary fibrosis	Not classified	Rat	NOAEL Not available	
Cyclohexane	Inhalation	liver	Not classified	Rat	NOAEL 24 mg/l	90 days
Cyclohexane	Inhalation	auditory system	Not classified	Rat	NOAEL 1.7 mg/l	90 days
Cyclohexane	Inhalation	kidney and/or bladder	Not classified	Rabbit	NOAEL 2.7 mg/l	10 weeks
Cyclohexane	Inhalation	hematopoietic system	Not classified	Mouse	NOAEL 24 mg/l	14 weeks
Cyclohexane	Inhalation	peripheral nervous system	Not classified	Rat	NOAEL 8.6 mg/l	30 weeks
Methylcyclohexane	Inhalation	kidney and/or bladder | heart | skin | endocrine system |	Not classified	Rat	NOAEL 8 mg/l	1 years

		gastrointestinal tract | hematopoietic system | liver | immune system | nervous system | respiratory system				
Methylcyclohexane	Ingestion	endocrine system | hematopoietic system | liver | kidney and/or bladder | heart | gastrointestinal tract | bone, teeth, nails, and/or hair | immune system | muscles | nervous system | eyes | respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Hexane	Inhalation	peripheral nervous system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Hexane	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Mouse	LOAEL 1.76 mg/l	13 weeks
Hexane	Inhalation	liver	Not classified	Rat	NOAEL Not available	6 months
Hexane	Inhalation	kidney and/or bladder	Not classified	Rat	LOAEL 1.76 mg/l	6 months
Hexane	Inhalation	hematopoietic system	Not classified	Mouse	NOAEL 35.2 mg/l	13 weeks
Hexane	Inhalation	auditory system | immune system | eyes	Not classified	Human	NOAEL Not available	occupational exposure
Hexane	Inhalation	heart | skin | endocrine system	Not classified	Rat	NOAEL 1.76 mg/l	6 months
Hexane	Ingestion	peripheral nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,140 mg/kg/day	90 days
Hexane	Ingestion	endocrine system | hematopoietic system | liver | immune system | kidney and/or bladder	Not classified	Rat	NOAEL Not available	13 weeks
ylene	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.4 mg/l	4 weeks
ylene	Inhalation	auditory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 7.8 mg/l	5 days
ylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	
ylene	Inhalation	heart | endocrine system | gastrointestinal tract | hematopoietic system | muscles | kidney and/or bladder | respiratory system	Not classified	Multiple animal species	NOAEL 3.5 mg/l	13 weeks
ylene	Ingestion	auditory system	Not classified	Rat	NOAEL 900 mg/kg/day	2 weeks
ylene	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1,500 mg/kg/day	90 days
ylene	Ingestion	liver	Not classified	Multiple animal species	NOAEL Not available	
ylene	Ingestion	heart | skin |	Not classified	Mouse	NOAEL	103 weeks

		endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | immune system | nervous system | respiratory system			1,000 mg/kg/day	
Iron Oxide	Inhalation	pulmonary fibrosis | pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
Ethylbenzene	Inhalation	auditory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 0.9 mg/l	13 weeks
Ethylbenzene	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.1 mg/l	2 years
Ethylbenzene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1.1 mg/l	103 weeks
Ethylbenzene	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 3.4 mg/l	28 days
Ethylbenzene	Inhalation	endocrine system	Not classified	Mouse	NOAEL 3.3 mg/l	103 weeks
Ethylbenzene	Inhalation	gastrointestinal tract	Not classified	Rat	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Inhalation	bone, teeth, nails, and/or hair | muscles	Not classified	Multiple animal species	NOAEL 4.2 mg/l	90 days
Ethylbenzene	Inhalation	heart | immune system | respiratory system	Not classified	Multiple animal species	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Ingestion	liver | kidney and/or bladder	Not classified	Rat	NOAEL 680 mg/kg/day	6 months
Quart Silica	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Titanium Dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium Dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

Name	Value
Hydrotreated light naphtha (petroleum)	Aspiration hazard
Cyclohexane	Aspiration hazard
Methylcyclohexane	Aspiration hazard
Hexane	Aspiration hazard
ylene	Aspiration hazard
Ethylbenzene	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 2: Toxic to aquatic life with long lasting effects

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
Distillates, petroleum, light thermal	64741-82-8	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Hydrotreated light naphtha (petroleum)	64742-49-0	Fathead Minnow	Estimated	96 hours	LL50	8.2 mg/l
Hydrotreated light naphtha (petroleum)	64742-49-0	Green algae	Estimated	72 hours	EL50	3.1 mg/l
Hydrotreated light naphtha (petroleum)	64742-49-0	Water flea	Estimated	48 hours	EL50	4.5 mg/l
Hydrotreated light naphtha (petroleum)	64742-49-0	Green algae	Estimated	72 hours	NOEL	0.5 mg/l
Hydrotreated light naphtha (petroleum)	64742-49-0	Water flea	Estimated	21 days	NOEL	2.6 mg/l
Kaolin	1332-58-7	Water flea	Experimental	48 hours	LC50	>1,100 mg/l
Oxidized Petroleum Asphalt	64742-93-4	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Cellulose	9004-34-6	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Cyclohexane	110-82-7	Fathead Minnow	Experimental	96 hours	LC50	4.53 mg/l
Cyclohexane	110-82-7	Water flea	Experimental	48 hours	EC50	0.9 mg/l
Cyclohexane	110-82-7	Bacteria	Experimental	24 hours	IC50	97 mg/l
Methylcyclohexane	108-87-2	N/A	Experimental	96 hours	LC50	3.3 mg/l
Methylcyclohexane	108-87-2	Green algae	Experimental	72 hours	ErC50	0.134 mg/l
Methylcyclohexane	108-87-2	Medaka	Experimental	96 hours	LC50	2.07 mg/l
Methylcyclohexane	108-87-2	Striped bass	Experimental	96 hours	LC50	5.8 mg/l
Methylcyclohexane	108-87-2	Water flea	Experimental	48 hours	EC50	0.326 mg/l
Methylcyclohexane	108-87-2	Green algae	Experimental	72 hours	NOEC	0.022 mg/l
Hexane	110-54-3	Fathead Minnow	Experimental	96 hours	LC50	2.5 mg/l
Hexane	110-54-3	Water flea	Experimental	48 hours	LC50	3.9 mg/l
ylene	1330-20-7	Green algae	Analogous Compound	73 hours	ErC50	4.36 mg/l
ylene	1330-20-7	Rainbow Trout	Analogous Compound	96 hours	LC50	2.6 mg/l
ylene	1330-20-7	Water flea	Analogous Compound	48 hours	EC50	3.82 mg/l
ylene	1330-20-7	Green algae	Analogous Compound	73 hours	NOEC	0.44 mg/l
ylene	1330-20-7	Water flea	Analogous Compound	7 days	NOEC	0.96 mg/l
ylene	1330-20-7	Rainbow Trout	Experimental	56 days	NOEC	1.3 mg/l
ylene	1330-20-7	Activated sludge	Analogous Compound	30 minutes	EC50	>198 mg/l
ylene	1330-20-7	Redworm	Experimental	56 days	NOEC	42.6 mg/kg (Dry Weight)
ylene	1330-20-7	Soil microbes	Experimental	28 days	EC50	>1,000 mg/kg (Dry Weight)
Iron Oxide	1309-37-1	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Iron Oxide	1309-37-1	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Iron Oxide	1309-37-1	Zebra Fish	Experimental	96 hours	No tox obs at lmt	>100 mg/l

					of water sol	
Iron Oxide	1309-37-1	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Iron Oxide	1309-37-1	Water flea	Experimental	21 days	No tox obs at lmt of water sol	>100 mg/l
Iron Oxide	1309-37-1	Activated sludge	Experimental	3 hours	EC50	>10,000 mg/l
Ethylbenzene	100-41-4	Activated sludge	Experimental	49 hours	EC50	130 mg/l
Ethylbenzene	100-41-4	Atlantic Silverside	Experimental	96 hours	LC50	5.1 mg/l
Ethylbenzene	100-41-4	Green algae	Experimental	96 hours	EC50	3.6 mg/l
Ethylbenzene	100-41-4	Mysid Shrimp	Experimental	96 hours	LC50	2.6 mg/l
Ethylbenzene	100-41-4	Rainbow Trout	Experimental	96 hours	LC50	4.2 mg/l
Ethylbenzene	100-41-4	Water flea	Experimental	48 hours	EC50	1.8 mg/l
Ethylbenzene	100-41-4	Water flea	Experimental	7 days	NOEC	0.96 mg/l
Quart Silica	14808-60-7	Green algae	Estimated	72 hours	EC50	440 mg/l
Quart Silica	14808-60-7	Water flea	Estimated	48 hours	EC50	7,600 mg/l
Quart Silica	14808-60-7	Zebra Fish	Estimated	96 hours	LC50	5,000 mg/l
Quart Silica	14808-60-7	Green algae	Estimated	72 hours	NOEC	60 mg/l
Titanium Dioxide	13463-67-7	Activated sludge	Experimental	3 hours	NOEC	>=1,000 mg/l
Titanium Dioxide	13463-67-7	Diatom	Experimental	72 hours	EC50	>10,000 mg/l
Titanium Dioxide	13463-67-7	Fathead Minnow	Experimental	96 hours	LC50	>100 mg/l
Titanium Dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium Dioxide	13463-67-7	Diatom	Experimental	72 hours	NOEC	5,600 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Distillates, petroleum, light thermal	64741-82-8	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Hydrotreated light naphtha (petroleum)	64742-49-0	Estimated Biodegradation	28 days	Biological Oxygen Demand	77 %BOD/ThOD	OECD 301F - Manometric Respiro
Kaolin	1332-58-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Oxidized Petroleum Asphalt	64742-93-4	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Cellulose	9004-34-6	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Cyclohexane	110-82-7	Experimental Biodegradation	28 days	Biological Oxygen Demand	77 %BOD/ThOD	OECD 301F - Manometric Respiro
Cyclohexane	110-82-7	Experimental Photolysis		Photolytic half-life (in air)	4.3 days (t 1/2)	
Methylcyclohexane	108-87-2	Experimental Biodegradation	28 days	Biological Oxygen Demand	0 %BOD/ThOD	OECD 301D - Closed Bottle Test
Methylcyclohexane	108-87-2	Experimental Photolysis		Photolytic half-life (in air)	3.0 days (t 1/2)	
Hexane	110-54-3	Experimental Bioconcentration	28 days	Biological Oxygen Demand	100 %BOD/ThOD	OECD 301C - MITI (I)
Hexane	110-54-3	Experimental Photolysis		Photolytic half-life (in air)	5.4 days (t 1/2)	
ylene	1330-20-7	Analogous Compound Biodegradation	28 days	Biological Oxygen Demand	94 %BOD/ThOD	OECD 301F - Manometric Respiro
ylene	1330-20-7	Experimental Photolysis		Photolytic half-life (in air)	1.4 days (t 1/2)	
Iron Oxide	1309-37-1	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Ethylbenzene	100-41-4	Experimental Biodegradation	28 days	Carbon dioxide evolution	70-80 %CO2 evolution/THCO2 evolution	ISO 14593 Inorg C Headspace
Ethylbenzene	100-41-4	Experimental Photolysis		Photolytic half-life (in air)	4.26 days (t 1/2)	

Quart Silica	14808-60-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Titanium Dioxide	13463-67-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Distillates, petroleum, light thermal	64741-82-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrotreated light naphtha (petroleum)	64742-49-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Kaolin	1332-58-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Oxidized Petroleum Asphalt	64742-93-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Cellulose	9004-34-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Cyclohexane	110-82-7	Experimental BCF - Fish	56 days	Bioaccumulation Factor	129	OECD305-Bioconcentration
Cyclohexane	110-82-7	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	3.44	
Methylcyclohexane	108-87-2	Experimental BCF - Fish	56 days	Bioaccumulation Factor	<=321	OECD305-Bioconcentration
Methylcyclohexane	108-87-2	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	3.88	
Hexane	110-54-3	Modeled Bioconcentration		Bioaccumulation Factor	50	Catalogic™
ylene	1330-20-7	Experimental BCF - Fish	56 days	Bioaccumulation Factor	<=25.9	
ylene	1330-20-7	Analogous Compound Bioconcentration		Log of Octanol/H2O part. coeff	3.2	
Iron Oxide	1309-37-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ethylbenzene	100-41-4	Experimental BCF - Fish	42 days	Bioaccumulation Factor	1	
Quart Silica	14808-60-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium Dioxide	13463-67-7	Experimental BCF - Fish	42 days	Bioaccumulation Factor	9.6	

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

Incinerate in a permitted waste incineration facility. As a disposal alternative, utilize an acceptable permitted waste disposal

facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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 Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information.

SECTION 16: Other information

Revision information:
Section 01: Address information was modified.
Section 01: Product identification numbers information was added.
Section 02: Hazard - Other information was modified.
Section 02: PH GHS Classification information was modified.
Section 02: PH Hazard - Cat 1 Repeated Target Organ information was modified.
Section 02: PH Hazard - Cat 2 Repeated Target Organ information was modified.
Section 02: PH Hazard - Cat 2 Single Target Organ information was modified.
Section 02: PH Hazard - Environmental information was modified.
Section 02: PH Hazard - Health information was modified.
Section 02: PH Hazard - Phys/Chem information was added.
Section 02: PH Pictogram information was modified.
Section 02: PH Precautionary - Disposal information was modified.
Section 02: PH Precautionary - Prevention information was modified.
Section 02: PH Precautionary - Response information was modified.
Section 02: PH Symbol Text information was modified.
Section 03: Ingredient table information was modified.
Section 04: First Aid - Symptoms and Effects (GHS) information was added.
Section 05: Fire - Advice for fire fighters information information was modified.
Section 05: Fire - Extinguishing media information information was modified.
Section 05: Fire - Special hazards information information was modified.
Section 05: Hazardous combustion products table information was modified.
Section 06: Accidental release clean-up information information was modified.
Section 06: Accidental release personal information information was modified.
Section 07: Conditions safe storage information was modified.
Section 07: Precautions safe handling information information was modified.
Section 08: Appropriate Engineering controls information information was modified.
Section 08: Eye/face protection information information was modified.
Section 08: Occupational exposure limit table information was modified.
Section 08: Personal Protection - Skin/hand information information was modified.
Section 08: Skin protection - recommended gloves information information was modified.
Section 08: Skin protection - recommended gloves text information was added.
Section 08: Skin protection - recommended gloves text information was deleted.
Section 09: Boiling point/Initial boiling point/Boiling range information was modified.
Section 09: Flammability (solid, gas) information information was deleted.
Section 09: Flammability information information was added.
Section 09: Flash point information information was modified.
Section 09: Kinematic Viscosity information information was added.
Section 09: Particle Characteristics N/A information was added.
Section 09: Vapor Density Value information was modified.
Section 09: Viscosity information was deleted.
Section 11: Acute Toxicity table information was modified.
Section 11: Aspiration Hazard Table information was modified.
Section 11: Carcinogenicity Table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Lactation Table information was modified.
Section 11: Photosensitization Table information was modified.
Section 11: Prolonged or repeated exposure may cause standard phrases information was modified.
Section 11: Reproductive Hazards information information was added.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 11: Target Organs - Single Table information was modified.
Section 12: Chronic aquatic hazard information information was modified.

Section 12: Component ecotoxicity information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 14: Transportation Information information was added.

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 Philippines SDSs are available at www.3m.com/ph