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
3M™ Scotchkote™ Electrical Coating FD

Product Identification Numbers
80-6116-1578-4

1.2. Recommended use and restrictions on use

Recommended use
Electrical

For Industrial or Professional use only

1.3. Supplier's details
ADDRESS: 3M Philippines, 10th and 11th Floor, The Finance Center, 26th Street Corner 9th Avenue Bonifacio Global City, Taguig City, 1634 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 2.
Serious Eye Damage/Irritation: Category 1.
Skin Sensitizer: Category 1.
Specific Target Organ Toxicity (single exposure): Category 3.
Chronic Aquatic Toxicity: Category 1.

2.2. Label elements
Signal word
Danger

Symbols
Flame |Corrosion |Exclamation mark |Environment |

Pictograms

Hazard statements

H225	Highly flammable liquid and vapor.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements
General:

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

Prevention:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280B	Wear protective gloves and eye/face protection.

Response:

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P333 + P313	If skin irritation or rash occurs: Get medical advice/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.

Storage:

P405	Store locked up.

Disposal:

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

2.3. Other hazards
Repeated exposure may cause skin dryness or cracking.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
Acetone	67-64-1	60 - 75
Acrylonitrile-Butadiene Polymer	9003-18-3	10 - 20
FUMARATED ROSIN	65997-04-8	5 - 10
Phenol-Formaldehyde Polymer	25085-50-1	5 - 10
Salicylic Acid	69-72-7	< 3
Zinc Oxide	1314-13-2	< 2.5
Toluene	108-88-3	< 0.3
p-Tert-Butylphenol	98-54-4	< 0.3

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

Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness).

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
Oxides of Nitrogen	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. 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. Cover spill area with a fire-extinguishing foam. 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
Keep out of reach of children. 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. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. 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. 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
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcin, Ototoxicant
Toluene	108-88-3	Philippines OELs	TWA(8 hours):375 mg/m3(100 ppm)	

Zinc Oxide	1314-13-2	ACGIH	TWA(respirable fraction):2 mg/m3;STEL(respirable fraction):10 mg/m3	
Zinc Oxide	1314-13-2	Philippines OELs	TWA(as fume)(8 hours):1 mg/m3	
Acetone	67-64-1	ACGIH	TWA:250 ppm;STEL:500 ppm	A4: Not class. as human carcin
Acetone	67-64-1	Philippines OELs	TWA(8 hours):2400 mg/m3(1000 ppm)	

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:
Full Face Shield
Indirect Vented Goggles

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors
Organic vapor cartridges may have short service life.

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	Sharp Solvent
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point/Freezing point	*Not Applicable*
Boiling point/Initial boiling point/Boiling range	>=56 ºC [*Details:*Acetone]
Flash Point	-20 ºC [*Test Method:*Closed Cup]
Evaporation rate	1.9 [*Ref Std:*ETHER=1]
Flammability	Flammable Liquid: Category 2.
Flammable Limits(LEL)	2.6 %
Flammable Limits(UEL)	12.8 %
Vapor Pressure	<=24,664.6 Pa [@ 20 ºC]
Relative Vapor Density	2 [*Ref Std:*AIR=1]
Density	0.87 g/ml
Relative Density	0.87 [*Ref Std:*WATER=1]
Water solubility	Slight (less than 10%)
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	465 ºC
Decomposition temperature	*No Data Available*
Kinematic Viscosity	374 mm2/sec
Volatile Organic Compounds	1 % weight [*Test Method:*calculated per CARB]
Volatile Organic Compounds	9.1 g/l [*Test Method:*calculated SCAQMD rule 443.1]
Percent volatile	40 - 75 % weight
VOC Less H2O & Exempt Solvents	37.8 g/l [*Test Method:*calculated SCAQMD rule 443.1]
Average particle size	*No Data Available*
Bulk density	*No Data Available*
Molecular weight	*No Data Available*
Softening point	*No Data Available*
Solids Content	>=28 % weight

Particle Characteristics	*Not Applicable*

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Heat

Sparks and/or flames

10.5. Incompatible materials
Strong oxidizing agents

10.6. Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

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

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

May cause additional health effects (see below).

Skin Contact:
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:
Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

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

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

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
Acetone	Dermal	Rabbit	LD50 > 15,688 mg/kg
Acetone	Inhalation-Vapor (4 hours)	Rat	LC50 76 mg/l
Acetone	Ingestion	Rat	LD50 5,800 mg/kg
Acrylonitrile-Butadiene Polymer	Dermal	Rabbit	LD50 > 15,000 mg/kg
Acrylonitrile-Butadiene Polymer	Ingestion	Rat	LD50 > 30,000 mg/kg
FUMARATED ROSIN	Dermal	Rat	LD50 > 2,000 mg/kg
FUMARATED ROSIN	Ingestion	Rat	LD50 > 2,000 mg/kg
Phenol-Formaldehyde Polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Phenol-Formaldehyde Polymer	Ingestion	Rat	LD50 5,660 mg/kg
Zinc Oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Zinc Oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.7 mg/l
Zinc Oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Salicylic Acid	Dermal	Rat	LD50 > 2,000 mg/kg
Salicylic Acid	Ingestion	Rat	LD50 891 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg
p-Tert-Butylphenol	Dermal	Rabbit	LD50 2,318 mg/kg
p-Tert-Butylphenol	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.6 mg/l
p-Tert-Butylphenol	Ingestion	Rat	LD50 4,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Acetone	Mouse	Minimal irritation
Acrylonitrile-Butadiene Polymer	Professional judgement	No significant irritation
FUMARATED ROSIN	Rabbit	No significant irritation
Zinc Oxide	Human and animal	No significant irritation
Salicylic Acid	Rabbit	No significant irritation
Toluene	Rabbit	Irritant
p-Tert-Butylphenol	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Acetone	Rabbit	Severe irritant
Acrylonitrile-Butadiene Polymer	Professional judgement	No significant irritation
FUMARATED ROSIN	Rabbit	Corrosive
Zinc Oxide	Rabbit	Mild irritant
Salicylic Acid	Rabbit	Corrosive

Toluene	Rabbit	Moderate irritant
p-Tert-Butylphenol	Rabbit	Corrosive

Sensitization:

Skin Sensitization

Name	Species	Value
FUMARATED ROSIN	Mouse	Sensitizing
Phenol-Formaldehyde Polymer	Human	Some positive data exist, but the data are not sufficient for classification
Zinc Oxide	Guinea pig	Not classified
Salicylic Acid	Mouse	Not classified
Toluene	Guinea pig	Not classified
p-Tert-Butylphenol	Human and animal	Not classified

Photosensitization

Name	Species	Value
Salicylic Acid	Mouse	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
Acetone	In vivo	Not mutagenic
Acetone	In Vitro	Some positive data exist, but the data are not sufficient for classification
FUMARATED ROSIN	In Vitro	Not mutagenic
Zinc Oxide	In Vitro	Some positive data exist, but the data are not sufficient for classification
Zinc Oxide	In vivo	Some positive data exist, but the data are not sufficient for classification
Salicylic Acid	In Vitro	Not mutagenic
Salicylic Acid	In vivo	Not mutagenic
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic
p-Tert-Butylphenol	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Acetone	Not Specified	Multiple animal species	Not carcinogenic
Toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
p-Tert-Butylphenol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Acetone	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,700 mg/kg/day	13 weeks
Acetone	Inhalation	Not classified for development	Rat	NOAEL 5.2 mg/l	during organogenesis
FUMARATED ROSIN	Ingestion	Not classified for female reproduction	Rat	NOAEL 450 mg/kg/day	premating into lactation
FUMARATED ROSIN	Ingestion	Not classified for male reproduction	Rat	NOAEL 650 mg/kg/day	28 days
FUMARATED ROSIN	Ingestion	Not classified for development	Rat	NOAEL 370 mg/kg/day	during gestation
Zinc Oxide	Ingestion	Not classified for reproduction and/or development	Multiple animal species	NOAEL 125 mg/kg/day	premating & during gestation
Salicylic Acid	Ingestion	Toxic to development	Rat	NOAEL 75 mg/kg/day	during organogenesis
Toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse
p-Tert-Butylphenol	Ingestion	Not classified for male reproduction	Rat	NOAEL 600 mg/kg/day	2 generation
p-Tert-Butylphenol	Ingestion	Not classified for development	Rat	NOAEL 70 mg/kg/day	2 generation
p-Tert-Butylphenol	Ingestion	Toxic to female reproduction	Rat	NOAEL 200 mg/kg/day	2 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Acetone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Acetone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 hours
Acetone	Inhalation	liver	Not classified	Guinea pig	NOAEL Not available	
Acetone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
FUMARATED ROSIN	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not Available	
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
p-Tert-Butylphenol	Inhalation	respiratory irritation	May cause respiratory irritation	Rat	LOAEL 5.6 mg/l	4 hours

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Acetone	Dermal	eyes	Not classified	Guinea pig	NOAEL Not available	3 weeks
Acetone	Inhalation	hematopoietic system	Not classified	Human	NOAEL 3 mg/l	6 weeks
Acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 days
Acetone	Inhalation	kidney and/or bladder	Not classified	Guinea pig	NOAEL 119 mg/l	not available
Acetone	Inhalation	heart | liver	Not classified	Rat	NOAEL 45 mg/l	8 weeks
Acetone	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 900 mg/kg/day	13 weeks
Acetone	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Acetone	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 200 mg/kg/day	13 weeks
Acetone	Ingestion	liver	Not classified	Mouse	NOAEL 3,896 mg/kg/day	14 days
Acetone	Ingestion	eyes	Not classified	Rat	NOAEL 3,400 mg/kg/day	13 weeks
Acetone	Ingestion	respiratory system	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Acetone	Ingestion	muscles	Not classified	Rat	NOAEL 2,500 mg/kg	13 weeks
Acetone	Ingestion	skin | bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 11,298 mg/kg/day	13 weeks
FUMARATED ROSIN	Ingestion	endocrine system | immune system	Not classified	Rat	NOAEL 450 mg/kg/day	53 days
FUMARATED ROSIN	Ingestion	nervous system | eyes	Not classified	Rat	NOAEL 705 mg/kg/day	90 days
FUMARATED ROSIN	Ingestion	gastrointestinal tract | hematopoietic system | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 450 mg/kg/day	53 days
Zinc Oxide	Ingestion	nervous system	Not classified	Rat	NOAEL 600 mg/kg/day	10 days
Zinc Oxide	Ingestion	endocrine system | hematopoietic system | kidney and/or bladder	Not classified	Other	NOAEL 500 mg/kg/day	6 months
Salicylic Acid	Ingestion	liver	Not classified	Rat	NOAEL 500 mg/kg/day	3 days
Toluene	Inhalation	auditory system | nervous system | eyes | olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart | liver | kidney and/or bladder	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1.1 mg/l	4 weeks
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system | vascular system	Not classified	Human	NOAEL Not available	occupational exposure

Toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal species	NOAEL 11.3 mg/l	15 weeks
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver | kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Not classified	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Not classified	Mouse	NOAEL 105 mg/kg/day	4 weeks
p-Tert-Butylphenol	Ingestion	endocrine system | liver | kidney and/or bladder	Not classified	Rat	NOAEL 600 mg/kg/day	2 generation
p-Tert-Butylphenol	Ingestion	blood	Not classified	Rat	NOAEL 200 mg/kg	6 weeks

Aspiration Hazard

Name	Value
Toluene	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 1: Very toxic to aquatic life with long lasting effects.

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
Acetone	67-64-1	Algae or other aquatic plants	Experimental	96 hours	EC50	11,493 mg/l
Acetone	67-64-1	Invertebrate	Experimental	24 hours	LC50	2,100 mg/l
Acetone	67-64-1	Rainbow Trout	Experimental	96 hours	LC50	5,540 mg/l
Acetone	67-64-1	Water flea	Experimental	21 days	NOEC	1,000 mg/l
Acetone	67-64-1	Bacteria	Experimental	16 hours	NOEC	1,700 mg/l
Acetone	67-64-1	Redworm	Experimental	48 hours	LC50	>100
Acrylonitrile-Butadiene Polymer	9003-18-3	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
FUMARATED	65997-04-8	Fathead Minnow	Experimental	96 hours	No tox obs at lmt	>100 mg/l

ROSIN					of water sol	
FUMARATED ROSIN	65997-04-8	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
FUMARATED ROSIN	65997-04-8	Water flea	Experimental	48 hours	EL50	>100 mg/l
FUMARATED ROSIN	65997-04-8	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	100 mg/l
FUMARATED ROSIN	65997-04-8	Activated sludge	Analogous Compound	3 hours	EC50	>1,000 mg/l
Phenol-Formaldehyde Polymer	25085-50-1	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Salicylic Acid	69-72-7	Green algae	Experimental	72 hours	EC50	>100 mg/l
Salicylic Acid	69-72-7	Medaka	Experimental	96 hours	LC50	>100 mg/l
Salicylic Acid	69-72-7	Water flea	Experimental	48 hours	EC50	870 mg/l
Salicylic Acid	69-72-7	Water flea	Experimental	21 days	NOEC	10 mg/l
Salicylic Acid	69-72-7	Activated sludge	Experimental	3 hours	EC50	>3,200
Salicylic Acid	69-72-7	Bacteria	Experimental	18 hours	EC10	465
Zinc Oxide	1314-13-2	Activated sludge	Estimated	3 hours	EC50	6.5 mg/l
Zinc Oxide	1314-13-2	Green algae	Estimated	72 hours	EC50	0.052 mg/l
Zinc Oxide	1314-13-2	Rainbow Trout	Estimated	96 hours	LC50	0.21 mg/l
Zinc Oxide	1314-13-2	Water flea	Estimated	48 hours	EC50	0.07 mg/l
Zinc Oxide	1314-13-2	Green algae	Estimated	72 hours	NOEC	0.006 mg/l
Zinc Oxide	1314-13-2	Water flea	Estimated	7 days	NOEC	0.02 mg/l
p-Tert-Butylphenol	98-54-4	Ciliated protozoa	Experimental	60 hours	IC50	18.4 mg/l
p-Tert-Butylphenol	98-54-4	Green algae	Experimental	72 hours	ErC50	14 mg/l
p-Tert-Butylphenol	98-54-4	Invertebrate	Experimental	96 hours	LC50	1.9 mg/l
p-Tert-Butylphenol	98-54-4	Medaka	Experimental	96 hours	LC50	5.1 mg/l
p-Tert-Butylphenol	98-54-4	Water flea	Experimental	48 hours	EC50	3.9 mg/l
p-Tert-Butylphenol	98-54-4	Fathead Minnow	Experimental	128 days	NOEC	0.01 mg/l
p-Tert-Butylphenol	98-54-4	Green algae	Experimental	72 hours	NOEC	0.32 mg/l
p-Tert-Butylphenol	98-54-4	Water flea	Experimental	21 days	NOEC	0.73 mg/l
Toluene	108-88-3	Coho Salmon	Experimental	96 hours	LC50	5.5 mg/l
Toluene	108-88-3	Grass Shrimp	Experimental	96 hours	LC50	9.5 mg/l
Toluene	108-88-3	Green algae	Experimental	72 hours	EC50	12.5 mg/l
Toluene	108-88-3	Leopard frog	Experimental	9 days	LC50	0.39 mg/l
Toluene	108-88-3	Pink Salmon	Experimental	96 hours	LC50	6.41 mg/l
Toluene	108-88-3	Water flea	Experimental	48 hours	EC50	3.78 mg/l
Toluene	108-88-3	Coho Salmon	Experimental	40 days	NOEC	1.39 mg/l
Toluene	108-88-3	Diatom	Experimental	72 hours	NOEC	10 mg/l
Toluene	108-88-3	Water flea	Experimental	7 days	NOEC	0.74 mg/l
Toluene	108-88-3	Activated sludge	Experimental	12 hours	IC50	292 mg/l
Toluene	108-88-3	Bacteria	Experimental	16 hours	NOEC	29 mg/l
Toluene	108-88-3	Bacteria	Experimental	24 hours	EC50	84 mg/l
Toluene	108-88-3	Redworm	Experimental	28 days	LC50	>150 mg per kg of bodyweight
Toluene	108-88-3	Soil microbes	Experimental	28 days	NOEC	<26 mg/kg (Dry Weight)

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Acetone	67-64-1	Experimental Biodegradation	28 days	Biological Oxygen Demand	78 %BOD/ThOD	OECD 301D - Closed Bottle Test
Acetone	67-64-1	Experimental Photolysis		Photolytic half-life (in air)	147 days (t 1/2)	
Acrylonitrile-Butadiene Polymer	9003-18-3	Data not availbl-insufficient	N/A	N/A	N/A	N/A
FUMARATED ROSIN	65997-04-8	Experimental Biodegradation	28 days	Biological Oxygen Demand	15 %BOD/ThOD	OECD 301D - Closed Bottle Test
Phenol-Formaldehyde	25085-50-1	Experimental Biodegradation	28 days	Carbon dioxide evolution	0 %CO2 evolution/THCO2	

Polymer					evolution	
Salicylic Acid	69-72-7	Experimental Biodegradation	14 days	Biological Oxygen Demand	88.1 %BOD/ThOD	OECD 301C - MITI (I)
Zinc Oxide	1314-13-2	Data not availbl-insufficient	N/A	N/A	N/A	N/A
p-Tert-Butylphenol	98-54-4	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	98 %removal of DOC	EC C.4.A. DOC Die-Away Test
Toluene	108-88-3	Experimental Biodegradation	20 days	Biological Oxygen Demand	80 %BOD/ThOD	APHA Std Meth Water/Wastewater
Toluene	108-88-3	Experimental Photolysis		Photolytic half-life (in air)	5.2 days (t 1/2)	

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Acetone	67-64-1	Experimental BCF - Other		Bioaccumulation Factor	0.65	
Acetone	67-64-1	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	-0.24	
Acrylonitrile-Butadiene Polymer	9003-18-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
FUMARATED ROSIN	65997-04-8	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	≥4.4	OECD 117 log Kow HPLC method
Phenol-Formaldehyde Polymer	25085-50-1	Estimated Bioconcentration		Bioaccumulation Factor	7.4	
Salicylic Acid	69-72-7	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	2.26	
Zinc Oxide	1314-13-2	Experimental BCF - Fish	56 days	Bioaccumulation Factor	≤217	OECD305-Bioconcentration
p-Tert-Butylphenol	98-54-4	Experimental BCF - Fish	56 days	Bioaccumulation Factor	88	OECD305-Bioconcentration
p-Tert-Butylphenol	98-54-4	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	3	OECD 117 log Kow HPLC method
Toluene	108-88-3	Experimental BCF - Other	72 hours	Bioaccumulation Factor	90	
Toluene	108-88-3	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	2.73	

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

Marine Transport (IMDG)

UN Number:UN1866
Proper Shipping Name:RESIN SOLUTION
Technical Name: None assigned.
Hazard Class/Division:3
Subsidiary Risk: None assigned.
Packing Group:II
Limited Quantity: Yes
Marine Pollutant: None assigned.
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

Air Transport (IATA)

UN Number:UN1866
Proper Shipping Name:RESIN SOLUTION
Technical Name: None assigned.
Hazard Class/Division:3
Subsidiary Risk: None assigned.
Packing Group:II
Limited Quantity: None assigned.
Marine Pollutant: None assigned.
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Global inventory status
Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

SECTION 16: Other information

Revision information:
Section 02: PH GHS Classification information was modified.
Section 02: PH Hazard - Environmental information was modified.
Section 03: Ingredient table information was modified.
Section 03: Material is a mixture standard phrase information was added.
Section 08: Respiratory protection - recommended respirators information information was modified.
Section 09: Vapor Density Value information was modified.
Section 11: Acute Toxicity table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
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.

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