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™ Nitrile Plastic Adhesive 826

Product Identification Numbers
62-0826-6530-8 62-0826-6535-7 62-0826-8530-6

1.2. Recommended use and restrictions on use

Recommended use
Adhesive, Industrial use

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
Flammable Liquid: Category 2.
Skin Corrosion/Irritation: Category 1.
Serious Eye Damage/Irritation: Category 1.
Germ Cell Mutagenicity: Category 2.
Carcinogenicity: Category 1B.
Specific Target Organ Toxicity (single exposure): Category 2.
Specific Target Organ Toxicity (repeated exposure): Category 2.
Chronic Aquatic Toxicity: Category 3.

2.2. Label elements
Signal word
Danger

Symbols
Flame |Corrosion |Health Hazard |

Pictograms

Hazard Statements:

H225	Highly flammable liquid and vapor.
H314	Causes severe skin burns and eye damage.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H371	May cause damage to organs: blood or blood-forming organs | cardiovascular system | kidney/urinary tract | nervous system | respiratory system.
H373	May cause damage to organs through prolonged or repeated exposure: blood or blood-forming organs | cardiovascular system | kidney/urinary tract | liver | respiratory system.
H412	Harmful 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.
P280D	Wear protective gloves, protective clothing, and eye/face protection.
P281	Use personal protective equipment as required.

Response:

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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.
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/container in accordance with applicable local/regional/national/international regulations.

2.3. Other hazards
May cause chemical gastrointestinal burns., May cause drowsiness or dizziness.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
Ethyl Acetate	141-78-6	50 - 60
Acrylonitrile-Butadiene Polymer	9003-18-3	10 - 20
Ethyl Alcohol	64-17-5	10 - 20
Phenolic Resin	9039-25-2	10 - 20
Methyl Ethyl Ketone	78-93-3	5 - 10
Phenol	108-95-2	1 - 5
DIPHENYLAMINE	122-39-4	< 1
Cresylic Acid	1319-77-3	< 0.5
Methyl Alcohol	67-56-1	< 0.5
Methyl Isobutyl Ketone	108-10-1	< 0.5
2,5-DI-TERT-AMYLHYDROQUINONE	79-74-3	< 0.15

Any remaining components do not contribute to the hazards of this material.

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 flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

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. Do not induce vomiting. Get immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Skin burns (localized redness, swelling, itching, intense pain, blistering, and tissue destruction). 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). 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
Formaldehyde	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
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. 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
Methyl Isobutyl Ketone	108-10-1	ACGIH	TWA:20 ppm;STEL:75 ppm	A3: Confirmed animal carcin.
Methyl Isobutyl Ketone	108-10-1	Malaysia OELs	TWA(8 hours):205 mg/m3(50 ppm)	
Phenol	108-95-2	ACGIH	TWA:5 ppm	A4: Not class. as human carcin, Danger of cutaneous absorption
Phenol	108-95-2	Malaysia OELs	TWA(8 hours):19 mg/m3(5 ppm)	SKIN
DIPHENYLAMINE	122-39-4	ACGIH	TWA:10 mg/m3	A4: Not class. as human carcin
DIPHENYLAMINE	122-39-4	Malaysia OELs	TWA(8 hours):10 mg/m3	
Cresylic Acid	1319-77-3	ACGIH	TWA(inhalable fraction and vapor):20 mg/m3	A4: Not class. as human carcin, Danger of cutaneous absorption
Cresylic Acid	1319-77-3	Malaysia OELs	TWA(8 hours):22 mg/m3(5 ppm)	SKIN
Ethyl Acetate	141-78-6	ACGIH	TWA:400 ppm	
Ethyl Acetate	141-78-6	Malaysia OELs	TWA(8 hours):1440 mg/m3(400 ppm)	
Ethyl Alcohol	64-17-5	ACGIH	STEL:1000 ppm	A3: Confirmed animal carcin.
Ethyl Alcohol	64-17-5	Malaysia OELs	TWA(8 hours):1880 mg/m3(1000 ppm)	
Methyl Alcohol	67-56-1	ACGIH	TWA:200 ppm;STEL:250 ppm	Danger of cutaneous absorption
Methyl Alcohol	67-56-1	Malaysia OELs	TWA(8 hours):262 mg/m3(200 ppm)	SKIN
Methyl Ethyl Ketone	78-93-3	ACGIH	TWA:200 ppm;STEL:300 ppm	
Methyl Ethyl Ketone	78-93-3	Malaysia OELs	TWA(8 hours):590 mg/m3(200 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
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: Butyl Rubber
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 – Butyl rubber
Apron - polymer laminate
Boots - Rubber

Respiratory protection

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

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Color	Light Amber
Odor	Solvent
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point/Freezing point	*Not Applicable*
Boiling point/Initial boiling point/Boiling range	>=77 ºC
Flash Point	1.7 ºC [*Test Method:*Closed Cup]
Evaporation rate	3 [*Ref Std:*ETHER=1]
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	1.8 % volume
Flammable Limits(UEL)	19 % volume
Vapor Pressure	<=13,332.2 Pa [@ 27.2 ºC]
Vapor Density and/or Relative Vapor Density	3 [*Ref Std:*AIR=1]
Density	0.94 g/ml
Relative Density	0.94 [*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	365 ºC [*Details:*Ethyl Alcohol]
Decomposition temperature	*No Data Available*
Viscosity/Kinematic Viscosity	2,000 mPa-s [@ 27 ºC]
Volatile Organic Compounds	*No Data Available*
Percent volatile	*No Data Available*

VOC Less H2O & Exempt Solvents	<=740 g/l [*Test Method:*calculated SCAQMD rule 443.1]
Molecular weight	*No Data Available*
Solids Content	20 - 40 %

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 acids

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:
Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

May cause additional health effects (see below).

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 Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:
Cardiac Effects: Signs/symptoms may include irregular heartbeat (arrhythmia), changes in heart rate, damage to heart muscle, heart attack, and may be fatal.

Hematopoietic Effects: Signs/symptoms may include generalized weakness, fatigue and alterations in numbers of circulating blood cells.

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

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.

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Prolonged or repeated exposure may cause target organ effects:
Cardiac Effects: Signs/symptoms may include irregular heartbeat (arrhythmia), changes in heart rate, damage to heart muscle, heart attack, and may be fatal.

Hematopoietic Effects: Signs/symptoms may include generalized weakness, fatigue and alterations in numbers of circulating blood cells.

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

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.

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

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.

Additional Information:

This product contains ethanol. Alcoholic beverages and ethanol in alcoholic beverages have been classified by the International Agency for Research on Cancer as carcinogenic to humans. There are also data associating human consumption of alcoholic beverages with developmental toxicity and liver toxicity. Exposure to ethanol during the foreseeable use of this product is not expected to cause cancer, developmental toxicity, or liver toxicity.

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
Ethyl Acetate	Dermal	Rabbit	LD50 > 18,000 mg/kg
Ethyl Acetate	Inhalation-Vapor (4 hours)	Rat	LC50 70.5 mg/l
Ethyl Acetate	Ingestion	Rat	LD50 5,620 mg/kg
Ethyl Alcohol	Dermal	Rabbit	LD50 > 15,800 mg/kg
Ethyl Alcohol	Inhalation-Vapor (4 hours)	Rat	LC50 124.7 mg/l
Ethyl Alcohol	Ingestion	Rat	LD50 17,800 mg/kg
Phenolic Resin	Dermal		LD50 estimated to be > 5,000 mg/kg
Phenolic Resin	Inhalation-Dust/Mist		LC50 estimated to be > 12.5 mg/l
Phenolic Resin	Ingestion		LD50 estimated to be > 5,000 mg/kg
Acrylonitrile-Butadiene Polymer	Dermal	Rabbit	LD50 > 15,000 mg/kg
Acrylonitrile-Butadiene Polymer	Ingestion	Rat	LD50 > 30,000 mg/kg
Methyl Ethyl Ketone	Dermal	Rabbit	LD50 > 8,050 mg/kg
Methyl Ethyl Ketone	Inhalation-Vapor (4 hours)	Rat	LC50 34.5 mg/l
Methyl Ethyl Ketone	Ingestion	Rat	LD50 2,737 mg/kg
Phenol	Inhalation-Vapor		LC50 estimated to be 2 - 10 mg/l
Phenol	Dermal	Rat	LD50 670 mg/kg
Phenol	Ingestion	Rat	LD50 340 mg/kg
Cresylic Acid	Dermal	Rat	LD50 620 mg/kg
Cresylic Acid	Ingestion	Rat	LD50 242 mg/kg
Methyl Alcohol	Dermal		LD50 estimated to be 1,000 - 2,000 mg/kg
Methyl Alcohol	Inhalation-Vapor		LC50 estimated to be 10 - 20 mg/l
Methyl Alcohol	Ingestion		LD50 estimated to be 50 - 300 mg/kg
Methyl Isobutyl Ketone	Dermal	Rabbit	LD50 > 16,000 mg/kg
Methyl Isobutyl Ketone	Inhalation-Vapor (4 hours)	Rat	LC50 11 mg/l
Methyl Isobutyl Ketone	Ingestion	Rat	LD50 3,038 mg/kg
DIPHENYLAMINE	Ingestion	Guinea pig	LD50 300 mg/kg
2,5-DI-TERT-AMYLHYDROQUINONE	Dermal	Rabbit	LD50 > 3,160 mg/kg
DIPHENYLAMINE	Dermal	Rabbit	LD50 > 2,000 mg/kg
2,5-DI-TERT-AMYLHYDROQUINONE	Ingestion	Rat	LD50 1,900 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value

Ethyl Acetate	Rabbit	Minimal irritation
Ethyl Alcohol	Rabbit	No significant irritation
Phenolic Resin	Professional judgement	No significant irritation
Acrylonitrile-Butadiene Polymer	Professional judgement	No significant irritation
Methyl Ethyl Ketone	Rabbit	Minimal irritation
Phenol	Rat	Corrosive
Cresylic Acid	Rabbit	Corrosive
Methyl Alcohol	Rabbit	Mild irritant
Methyl Isobutyl Ketone	Rabbit	Mild irritant
2,5-DI-TERT-AMYLHYDROQUINONE	Rabbit	No significant irritation
DIPHENYLAMINE	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Ethyl Acetate	Rabbit	Mild irritant
Ethyl Alcohol	Rabbit	Severe irritant
Phenolic Resin	Professional judgement	Mild irritant
Acrylonitrile-Butadiene Polymer	Professional judgement	No significant irritation
Methyl Ethyl Ketone	Rabbit	Severe irritant
Phenol	Rabbit	Corrosive
Cresylic Acid	similar health hazards	Corrosive
Methyl Alcohol	Rabbit	Moderate irritant
Methyl Isobutyl Ketone	Rabbit	Mild irritant
2,5-DI-TERT-AMYLHYDROQUINONE	Rabbit	Mild irritant
DIPHENYLAMINE	Rabbit	Corrosive

Sensitization:

Skin Sensitization

Name	Species	Value
Ethyl Acetate	Guinea pig	Not classified
Ethyl Alcohol	Human	Not classified
Phenol	Guinea pig	Not classified
Methyl Alcohol	Guinea pig	Not classified
Methyl Isobutyl Ketone	Guinea pig	Not classified
2,5-DI-TERT-AMYLHYDROQUINONE	Human	Not classified
DIPHENYLAMINE	Human and animal	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
Ethyl Acetate	In Vitro	Not mutagenic
Ethyl Acetate	In vivo	Not mutagenic
Ethyl Alcohol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Ethyl Alcohol	In vivo	Some positive data exist, but the data are not sufficient for classification
Methyl Ethyl Ketone	In Vitro	Not mutagenic
Phenol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Phenol	In vivo	Some positive data exist, but the data are not sufficient for classification
Cresylic Acid	In vivo	Not mutagenic
Cresylic Acid	In Vitro	Some positive data exist, but the data are not sufficient for classification
Methyl Alcohol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Methyl Alcohol	In vivo	Some positive data exist, but the data are not sufficient for classification
Methyl Isobutyl Ketone	In Vitro	Not mutagenic
DIPHENYLAMINE	In vivo	Not mutagenic
DIPHENYLAMINE	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Ethyl Alcohol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Methyl Ethyl Ketone	Inhalation	Human	Not carcinogenic
Phenol	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Phenol	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Cresylic Acid	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Cresylic Acid	Ingestion	Mouse	Some positive data exist, but the data are not sufficient for classification
Methyl Alcohol	Inhalation	Multiple animal species	Not carcinogenic
Methyl Isobutyl Ketone	Inhalation	Multiple animal species	Carcinogenic
DIPHENYLAMINE	Ingestion	Multiple animal species	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Ethyl Alcohol	Inhalation	Not classified for development	Rat	NOAEL 38 mg/l	during gestation
Ethyl Alcohol	Ingestion	Not classified for development	Rat	NOAEL 5,200 mg/kg/day	premating & during gestation
Methyl Ethyl Ketone	Inhalation	Not classified for development	Rat	LOAEL 8.8 mg/l	during gestation
Phenol	Ingestion	Not classified for female reproduction	Rat	NOAEL 321 mg/kg/day	2 generation
Phenol	Ingestion	Not classified for male reproduction	Rat	NOAEL 321	2 generation

				mg/kg/day	
Phenol	Ingestion	Not classified for development	Rat	NOAEL 120 mg/kg/day	during organogenesis
Cresylic Acid	Ingestion	Not classified for female reproduction	Rat	NOAEL 450 mg/kg/day	2 generation
Cresylic Acid	Ingestion	Not classified for male reproduction	Rat	NOAEL 450 mg/kg/day	2 generation
Cresylic Acid	Ingestion	Not classified for development	Rat	NOAEL 175 mg/kg/day	during organogenesis
Methyl Alcohol	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,600 mg/kg/day	21 days
Methyl Alcohol	Ingestion	Toxic to development	Mouse	LOAEL 4,000 mg/kg/day	during organogenesis
Methyl Alcohol	Inhalation	Toxic to development	Mouse	NOAEL 1.3 mg/l	during organogenesis
Methyl Isobutyl Ketone	Inhalation	Not classified for female reproduction	Multiple animal species	NOAEL 8.2 mg/l	2 generation
Methyl Isobutyl Ketone	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Methyl Isobutyl Ketone	Inhalation	Not classified for male reproduction	Multiple animal species	NOAEL 8.2 mg/l	2 generation
Methyl Isobutyl Ketone	Inhalation	Not classified for development	Mouse	NOAEL 12.3 mg/l	during organogenesis
DIPHENYLAMINE	Ingestion	Not classified for female reproduction	Rat	NOAEL 1500 ppm in the diet	2 generation
DIPHENYLAMINE	Ingestion	Not classified for male reproduction	Rat	NOAEL 1500 ppm in the diet	2 generation
DIPHENYLAMINE	Ingestion	Not classified for development	Rat	NOAEL 500 ppm in the diet	2 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Ethyl Acetate	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Ethyl Acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Ethyl Acetate	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Ethyl Alcohol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	LOAEL 9.4 mg/l	not available
Ethyl Alcohol	Inhalation	central nervous system depression	Not classified	Human and animal	NOAEL not available	
Ethyl Alcohol	Ingestion	central nervous system depression	Not classified	Multiple animal species	NOAEL not available	
Ethyl Alcohol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg	
Methyl Ethyl Ketone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	official classification	NOAEL Not available	
Methyl Ethyl Ketone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	

Methyl Ethyl Ketone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Methyl Ethyl Ketone	Ingestion	liver	Not classified	Rat	NOAEL Not available	not applicable
Methyl Ethyl Ketone	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 1,080 mg/kg	not applicable
Phenol	Dermal	hematoppoitic system	Causes damage to organs	Rat	LOAEL 108 mg/kg	not available
Phenol	Dermal	heart | nervous system | kidney and/or bladder	Causes damage to organs	Rat	LOAEL 107 mg/kg	24 hours
Phenol	Dermal	liver	Not classified	Human	NOAEL Not available	not available
Phenol	Inhalation	respiratory irritation	May cause respiratory irritation	Multiple animal species	NOAEL Not available	not available
Phenol	Ingestion	kidney and/or bladder	Causes damage to organs	Rat	NOAEL 120 mg/kg/day	not applicable
Phenol	Ingestion	respiratory system	Causes damage to organs	Human	NOAEL not available	poisoning and/or abuse
Phenol	Ingestion	endocrine system | liver	Not classified	Rat	NOAEL 224 mg/kg	not applicable
Phenol	Ingestion	heart	Not classified	Human	NOAEL Not available	poisoning and/or abuse
Cresylic Acid	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not Available	
Cresylic Acid	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Rat	LOAEL 68 mg/kg	
Methyl Alcohol	Inhalation	blindness	Causes damage to organs	Human	NOAEL Not available	occupational exposure
Methyl Alcohol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	not available
Methyl Alcohol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	6 hours
Methyl Alcohol	Ingestion	blindness	Causes damage to organs	Human	NOAEL Not available	poisoning and/or abuse
Methyl Alcohol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Methyl Isobutyl Ketone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	LOAEL 0.1 mg/l	2 hours
Methyl Isobutyl Ketone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Methyl Isobutyl Ketone	Inhalation	vascular system	Not classified	Dog	NOAEL Not available	not available
Methyl Isobutyl Ketone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Rat	LOAEL 900 mg/kg	not applicable
DIPHENYLAMINE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Ethyl Acetate	Inhalation	endocrine system | liver | nervous system	Not classified	Rat	NOAEL 0.043 mg/l	90 days
Ethyl Acetate	Inhalation	hematopoietic system	Not classified	Rabbit	LOAEL 16 mg/l	40 days
Ethyl Acetate	Ingestion	hematopoietic system | liver | kidney and/or bladder	Not classified	Rat	NOAEL 3,600 mg/kg/day	90 days

Ethyl Alcohol	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rabbit	LOAEL 124 mg/l	365 days
Ethyl Alcohol	Inhalation	hematopoietic system | immune system	Not classified	Rat	NOAEL 25 mg/l	14 days
Ethyl Alcohol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 8,000 mg/kg/day	4 months
Ethyl Alcohol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg/day	7 days
Methyl Ethyl Ketone	Dermal	nervous system	Not classified	Guinea pig	NOAEL Not available	31 weeks
Methyl Ethyl Ketone	Inhalation	liver | kidney and/or bladder | heart | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles	Not classified	Rat	NOAEL 14.7 mg/l	90 days
Methyl Ethyl Ketone	Ingestion	liver	Not classified	Rat	NOAEL Not available	7 days
Methyl Ethyl Ketone	Ingestion	nervous system	Not classified	Rat	NOAEL 173 mg/kg/day	90 days
Phenol	Dermal	nervous system	May cause damage to organs though prolonged or repeated exposure	Rabbit	LOAEL 260 mg/kg/day	18 days
Phenol	Inhalation	heart | liver | kidney and/or bladder | respiratory system	Causes damage to organs through prolonged or repeated exposure	Guinea pig	LOAEL 0.1 mg/l	41 days
Phenol	Inhalation	nervous system	May cause damage to organs though prolonged or repeated exposure	Multiple animal species	LOAEL 0.1 mg/l	14 days
Phenol	Inhalation	hematopoietic system	Not classified	Human	NOAEL Not available	occupational exposure
Phenol	Inhalation	immune system	Not classified	Rat	NOAEL 0.1 mg/l	2 weeks
Phenol	Ingestion	kidney and/or bladder	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 12 mg/kg/day	14 days
Phenol	Ingestion	hematopoietic system	Causes damage to organs through prolonged or repeated exposure	Mouse	LOAEL 1.8 mg/kg/day	28 days
Phenol	Ingestion	nervous system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 308 mg/kg/day	13 weeks
Phenol	Ingestion	liver	Not classified	Rat	NOAEL 40 mg/kg/day	14 days
Phenol	Ingestion	respiratory system	Not classified	Rat	LOAEL 40 mg/kg/day	14 days
Phenol	Ingestion	immune system	Not classified	Mouse	NOAEL 1.8 mg/kg/day	28 days
Phenol	Ingestion	endocrine system	Not classified	Rat	NOAEL 120 mg/kg/day	14 days
Phenol	Ingestion	skin | bone, teeth, nails, and/or hair	Not classified	Multiple animal species	NOAEL 1,204 mg/kg/day	103 weeks
Cresylic Acid	Ingestion	nervous system	Not classified	Rat	NOAEL 450 mg/kg/day	90 days
Cresylic Acid	Ingestion	hematopoietic system | liver | immune system | kidney and/or bladder	Not classified	Rat	NOAEL 2,024 mg/kg/day	90 days
Methyl Alcohol	Inhalation	liver	Not classified	Rat	NOAEL 6.55 mg/l	4 weeks
Methyl Alcohol	Inhalation	respiratory system	Not classified	Rat	NOAEL 13.1	6 weeks

					mg/l	
Methyl Alcohol	Ingestion	liver | nervous system	Not classified	Rat	NOAEL 2,500 mg/kg/day	90 days
Methyl Isobutyl Ketone	Inhalation	liver	Not classified	Rat	NOAEL 0.41 mg/l	13 weeks
Methyl Isobutyl Ketone	Inhalation	heart	Not classified	Multiple animal species	NOAEL 0.8 mg/l	2 weeks
Methyl Isobutyl Ketone	Inhalation	kidney and/or bladder	Not classified	Multiple animal species	NOAEL 0.4 mg/l	90 days
Methyl Isobutyl Ketone	Inhalation	respiratory system	Not classified	Multiple animal species	NOAEL 4.1 mg/l	14 weeks
Methyl Isobutyl Ketone	Inhalation	endocrine system | hematopoietic system	Not classified	Multiple animal species	NOAEL 0.41 mg/l	90 days
Methyl Isobutyl Ketone	Inhalation	nervous system	Not classified	Multiple animal species	NOAEL 0.41 mg/l	13 weeks
Methyl Isobutyl Ketone	Ingestion	endocrine system | hematopoietic system | liver | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Methyl Isobutyl Ketone	Ingestion	heart | immune system | muscles | nervous system | respiratory system	Not classified	Rat	NOAEL 1,040 mg/kg/day	120 days
DIPHENYLAMINE	Dermal	skin	Not classified	Rat	LOAEL 500 mg/kg/day	90 days
DIPHENYLAMINE	Dermal	kidney and/or bladder | hematopoietic system	Not classified	Rat	NOAEL 2,000 mg/kg/day	90 days
DIPHENYLAMINE	Ingestion	hematopoietic system | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 333 mg/kg/day	28 days
DIPHENYLAMINE	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 333 mg/kg/day	28 days
DIPHENYLAMINE	Ingestion	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days

Aspiration Hazard

Name	Value
Methyl Isobutyl Ketone	Some positive data exist, but the data are not sufficient for classification

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 3: Harmful 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
Ethyl Acetate	141-78-6	Bacteria	Experimental	18 hours	EC10	2,900 mg/l
Ethyl Acetate	141-78-6	Fish	Experimental	96 hours	LC50	212.5 mg/l
Ethyl Acetate	141-78-6	Invertebrate	Experimental	48 hours	EC50	165 mg/l
Ethyl Acetate	141-78-6	Green algae	Experimental	72 hours	NOEC	>100 mg/l
Ethyl Acetate	141-78-6	Water flea	Experimental	21 days	NOEC	2.4 mg/l
Acrylonitrile-Butadiene Polymer	9003-18-3	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Ethyl Alcohol	64-17-5	Fathead Minnow	Experimental	96 hours	LC50	14,200 mg/l
Ethyl Alcohol	64-17-5	Fish	Experimental	96 hours	LC50	11,000 mg/l
Ethyl Alcohol	64-17-5	Green algae	Experimental	72 hours	EC50	275 mg/l
Ethyl Alcohol	64-17-5	Water flea	Experimental	48 hours	LC50	5,012 mg/l
Ethyl Alcohol	64-17-5	Green algae	Experimental	72 hours	ErC10	11.5 mg/l
Ethyl Alcohol	64-17-5	Water flea	Experimental	10 days	NOEC	9.6 mg/l
Phenolic Resin	9039-25-2	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Methyl Ethyl Ketone	78-93-3	Fathead Minnow	Experimental	96 hours	LC50	2,993 mg/l
Methyl Ethyl Ketone	78-93-3	Green algae	Experimental	96 hours	ErC50	2,029 mg/l
Methyl Ethyl Ketone	78-93-3	Water flea	Experimental	48 hours	EC50	308 mg/l
Methyl Ethyl Ketone	78-93-3	Green algae	Experimental	96 hours	ErC10	1,289 mg/l
Methyl Ethyl Ketone	78-93-3	Water flea	Experimental	21 days	NOEC	100 mg/l
Methyl Ethyl Ketone	78-93-3	Bacteria	Experimental	16 hours	LOEC	1,150 mg/l
Phenol	108-95-2	Bacteria	Experimental	24 hours	IC50	21 mg/l
Phenol	108-95-2	Green algae	Experimental	96 hours	EC50	61.1 mg/l
Phenol	108-95-2	Rainbow Trout	Experimental	96 hours	LC50	8.9 mg/l
Phenol	108-95-2	Water flea	Experimental	48 hours	EC50	3.1 mg/l
Phenol	108-95-2	Fish	Experimental	60 days	NOEC	0.077 mg/l
Phenol	108-95-2	Water flea	Experimental	16 days	NOEC	0.16 mg/l
DIPHENYLAMINE	122-39-4	Copepod	Experimental	96 hours	LC50	1.22 mg/l
DIPHENYLAMINE	122-39-4	Green algae	Experimental	72 hours	ErC50	0.43 mg/l
DIPHENYLAMINE	122-39-4	Rainbow Trout	Experimental	96 hours	LC50	2.2 mg/l
DIPHENYLAMINE	122-39-4	Water flea	Experimental	48 hours	EC50	1.2 mg/l
DIPHENYLAMINE	122-39-4	Green algae	Experimental	72 hours	NOEC	0.027 mg/l
DIPHENYLAMINE	122-39-4	Midge	Experimental	28 days	NOEC	41 mg/kg (Dry Weight)
DIPHENYLAMINE	122-39-4	Water flea	Experimental	21 days	NOEC	0.125 mg/l
DIPHENYLAMINE	122-39-4	Activated sludge	Experimental	3 hours	EC50	18.7 mg/l
Cresylic Acid	1319-77-3	Activated sludge	Estimated	3 hours	EC50	461.4 mg/l
Cresylic Acid	1319-77-3	Fish	Estimated	96 hours	LC50	3.36 mg/l
Cresylic Acid	1319-77-3	Fish	Estimated	96 hours	LC50	4.4 mg/l
Cresylic Acid	1319-77-3	Water flea	Estimated	48 hours	EC50	7.7 mg/l
Cresylic Acid	1319-77-3	Fathead Minnow	Estimated	32 days	NOEC	1.35 mg/l
Cresylic Acid	1319-77-3	Water flea	Estimated	21 days	NOEC	1 mg/l

Methyl Alcohol	67-56-1	Algae or other aquatic plants	Experimental	96 hours	EC50	16.9 mg/l
Methyl Alcohol	67-56-1	Bay mussel	Experimental	96 hours	LC50	15,900 mg/l
Methyl Alcohol	67-56-1	Bluegill	Experimental	96 hours	LC50	15,400 mg/l
Methyl Alcohol	67-56-1	Green algae	Experimental	96 hours	ErC50	22,000 mg/l
Methyl Alcohol	67-56-1	Sediment organism	Experimental	96 hours	LC50	54,890 mg/l
Methyl Alcohol	67-56-1	Water flea	Experimental	48 hours	LC50	3,289 mg/l
Methyl Alcohol	67-56-1	Green algae	Experimental	96 hours	NOEC	9.96 mg/l
Methyl Alcohol	67-56-1	Medaka	Experimental	8.33 days	NOEC	158,000 mg/l
Methyl Alcohol	67-56-1	Water flea	Experimental	21 days	NOEC	122 mg/l
Methyl Alcohol	67-56-1	Activated sludge	Experimental	3 hours	IC50	>1,000 mg/l
Methyl Alcohol	67-56-1	Barley	Experimental	14 days	EC50	15,492 mg/kg (Dry Weight)
Methyl Alcohol	67-56-1	Redworm	Experimental	63 days	EC50	26,646 mg/kg (Dry Weight)
Methyl Alcohol	67-56-1	Springtail	Experimental	28 days	EC50	5,683 mg/kg (Dry Weight)
Methyl Isobutyl Ketone	108-10-1	Green algae	Experimental	96 hours	EC50	400 mg/l
Methyl Isobutyl Ketone	108-10-1	Water flea	Experimental	48 hours	EC50	>200 mg/l
Methyl Isobutyl Ketone	108-10-1	Zebra Fish	Experimental	96 hours	LC50	>179 mg/l
Methyl Isobutyl Ketone	108-10-1	Fathead Minnow	Experimental	32 days	NOEC	56.2 mg/l
Methyl Isobutyl Ketone	108-10-1	Water flea	Experimental	21 days	NOEC	78 mg/l
Methyl Isobutyl Ketone	108-10-1	Activated sludge	Experimental	30 minutes	EC50	>1,000
2,5-DI-TERT-AMYLHYDROQUINONE	79-74-3	Activated sludge	Experimental	3 hours	EC50	>100 mg/l
2,5-DI-TERT-AMYLHYDROQUINONE	79-74-3	Bluegill	Experimental	96 hours	LC50	0.013 mg/l
2,5-DI-TERT-AMYLHYDROQUINONE	79-74-3	Green algae	Experimental	96 hours	EC50	2.9 mg/l
2,5-DI-TERT-AMYLHYDROQUINONE	79-74-3	Water flea	Experimental	48 hours	LC50	0.9 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Ethyl Acetate	141-78-6	Experimental Biodegradation	14 days	Biological Oxygen Demand	94 %BOD/ThOD	OECD 301C - MITI (I)
Ethyl Acetate	141-78-6	Experimental Photolysis		Photolytic half-life (in air)	20.0 days (t 1/2)	
Acrylonitrile-Butadiene Polymer	9003-18-3	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Ethyl Alcohol	64-17-5	Experimental Biodegradation	14 days	Biological Oxygen Demand	89 %BOD/ThOD	OECD 301C - MITI (I)
Phenolic Resin	9039-25-2	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Methyl Ethyl Ketone	78-93-3	Experimental Biodegradation	28 days	Biological Oxygen Demand	98 %BOD/ThOD	OECD 301D - Closed Bottle Test
Phenol	108-95-2	Experimental Biodegradation	100 hours	Biological Oxygen Demand	62 %BOD/ThOD	OECD 301C - MITI (I)
DIPHENYLAMINE	122-39-4	Experimental Biodegradation	28 days	Biological Oxygen Demand	26 %BOD/ThOD	OECD 301D - Closed Bottle Test
DIPHENYLAMINE	122-39-4	Experimental Aquatic Inherent Biodegrad.	28 days	Biological Oxygen Demand	38 %BOD/ThOD	OECD 302C - Modified MITI (II)
DIPHENYLAMIN	122-39-4	Experimental		Photolytic half-life	2.0 hours (t 1/2)	

E		Photolysis		(in air)		
DIPHENYLAMINE	122-39-4	Experimental Hydrolysis		Hydrolytic half-life	350 days (t 1/2)	
Cresylic Acid	1319-77-3	Estimated Biodegradation	28 days	Biological Oxygen Demand	65 %BOD/ThOD	OECD 301D - Closed Bottle Test
Methyl Alcohol	67-56-1	Experimental Biodegradation	3 days	Percent degraded	91 %degraded	
Methyl Alcohol	67-56-1	Experimental Biodegradation	14 days	Biological Oxygen Demand	92 %BOD/ThOD	OECD 301C - MITI (I)
Methyl Alcohol	67-56-1	Experimental Photolysis		Photolytic half-life (in air)	35 days (t 1/2)	
Methyl Alcohol	67-56-1	Experimental Soil Metabolism Aerobic	5 days	Carbon dioxide evolution	53.4 %CO2 evolution/THCO2 evolution	
Methyl Isobutyl Ketone	108-10-1	Experimental Biodegradation	28 days	Biological Oxygen Demand	83 %BOD/ThOD	OECD 301F - Manometric Respiro
Methyl Isobutyl Ketone	108-10-1	Experimental Photolysis		Photolytic half-life (in air)	2.3 days (t 1/2)	
2,5-DI-TERT-AMYLHYDROQUINONE	79-74-3	Experimental Biodegradation	38 days		1 %CO2 evolution/THCO2 evolution	similar to OECD 301B

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Ethyl Acetate	141-78-6	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	0.68	
Acrylonitrile-Butadiene Polymer	9003-18-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ethyl Alcohol	64-17-5	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	-0.35	
Phenolic Resin	9039-25-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Methyl Ethyl Ketone	78-93-3	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	0.3	OECD 117 log Kow HPLC method
Phenol	108-95-2	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	1.47	
DIPHENYLAMINE	122-39-4	Experimental BCF - Fish	56 days	Bioaccumulation Factor	253	OECD305-Bioconcentration
DIPHENYLAMINE	122-39-4	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	3.82	OECD 107 log Kow shke flsk mtd
Cresylic Acid	1319-77-3	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	1.95	
Methyl Alcohol	67-56-1	Experimental BCF - Fish	3 days	Bioaccumulation Factor	<4.5	
Methyl Alcohol	67-56-1	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	-0.77	
Methyl Isobutyl Ketone	108-10-1	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	1.9	OECD 117 log Kow HPLC method
2,5-DI-TERT-AMYLHYDROQUINONE	79-74-3	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	3.3	OECD 117 log Kow HPLC method

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:UN1133
Proper Shipping Name:ADHESIVES
Technical Name: None assigned.
Hazard Class/Division:3
Subsidiary Risk: None assigned.
Packing Group:II
Limited Quantity: Yes
Marine Pollutant: Yes
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

Air Transport (IATA)

UN Number:UN1133
Proper Shipping Name:ADHESIVES
Technical Name: None assigned.
Hazard Class/Division: None assigned.
Subsidiary Risk: None assigned.
Packing Group:II
Limited Quantity: None assigned.
Marine Pollutant: Yes
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 Japan Chemical Substance 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 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

DISCLAIMER: The information in this Safety Data Sheet (SDS) is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into Malaysia, you are responsible for all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

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