

# 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<sup>™</sup> 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**

SubstanceConditionHydrocarbonsDuring CombustionFormaldehydeDuring Combustion

Carbon monoxide Carbon dioxide Oxides of Nitrogen During Combustion During Combustion During Combustion

#### 5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

### **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. 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 °C
Flash Point	1.7 °C [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 °C ]
Vapor Density and/or Relative Vapor Density	3 [Ref Std: AIR=1]
Density	0.94 g/ml
Relative Density	0.94 [ <i>Ref Std</i> :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 °C [Details: Ethyl Alcohol]
Decomposition temperature	No Data Available
Viscosity/Kinematic Viscosity	2,000 mPa-s [@ 27 °C ]
Volatile Organic Compounds	No Data Available
Percent volatile	No Data Available

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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	Professio	No significant irritation
	nal	
	judgemen	
	t	
Acrylonitrile-Butadiene Polymer	Professio	No significant irritation
	nal	
	judgemen	
	t	
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 Eve Damage/Irritation

Name	Species	Value
Ethyl Acetate	Rabbit	Mild irritant
Ethyl Alcohol	Rabbit	Severe irritant
Phenolic Resin	Professio	Mild irritant
	nal	
	judgemen	
	t	
Acrylonitrile-Butadiene Polymer	Professio	No significant irritation
	nal	
	judgemen	
	t	
Methyl Ethyl Ketone	Rabbit	Severe irritant
Phenol	Rabbit	Corrosive
Cresylic Acid	similar	Corrosive
	health	
	hazards	
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	Not classified
	pig	
Ethyl Alcohol	Human	Not classified
Phenol	Guinea	Not classified
	pig	
Methyl Alcohol	Guinea	Not classified
	pig	
Methyl Isobutyl Ketone	Guinea	Not classified
	pig	
2,5-DI-TERT-AMYLHYDROQUINONE	Human	Not classified
DIPHENYLAMINE	Human	Not classified
	and	
	animal	

**Respiratory Sensitization**For the 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	Some positive data exist, but the data are not
		animal	sufficient for classification
		species	
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 classifica tion	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	system depression dizziness		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	

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	Rabbit	LOAEL 124	365 days
Td 141 1 1			data are not sufficient for classification	B :	mg/l	
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	thyl Ethyl Ketone  Inhalation  liver   kidney and/or bladder   heart   endocrine system   gastrointestinal tract   bone, teeth, nails, and/or hair   hematopoietic system   immune system   muscles		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

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				1		
N. 1. 1. 1. 1. 1.	*	4:	N. 1 10 1		mg/l	00.1
Methyl Alcohol	Ingestion	liver   nervous	Not classified	Rat	NOAEL 2.500	90 days
		system			mg/kg/day	
Methyl Isobutyl Ketone	Inhalation	liver	Not classified	Rat	NOAEL 0.41	13 weeks
Methyl Isobutyl Ketolic	Illiaiation	livei	Not classified	Kat	mg/l	13 WEEKS
Methyl Isobutyl Ketone	Inhalation	heart	Not classified	Multiple	NOAEL 0.8	2 weeks
Wiediyi isoodiyi Retoile	Illiaiation	neart	110t classified	animal	mg/l	2 WCCKS
				species	mg i	
Methyl Isobutyl Ketone	Inhalation	kidney and/or	Not classified	Multiple	NOAEL 0.4	90 days
		bladder		animal	mg/l	, ,, .
				species		
Methyl Isobutyl Ketone	Inhalation	respiratory system	Not classified	Multiple	NOAEL 4.1	14 weeks
				animal	mg/l	
				species	-	
Methyl Isobutyl Ketone	Inhalation	endocrine system	Not classified	Multiple	NOAEL 0.41	90 days
		hematopoietic		animal	mg/l	
		system		species		
Methyl Isobutyl Ketone	Inhalation	nervous system	Not classified	Multiple	NOAEL 0.41	13 weeks
				animal	mg/l	
				species		
Methyl Isobutyl Ketone	Ingestion	endocrine system	Not classified	Rat	NOAEL	13 weeks
		hematopoietic			1,000	
		system   liver			mg/kg/day	
		kidney and/or bladder				
Methyl Isobutyl Ketone	Ingestion	heart   immune	Not classified	Rat	NOAEL	120 days
Methyl Isobutyl Ketone	ingestion	system   muscles	Not classified	Kat	1.040	120 days
		nervous system			mg/kg/day	
		respiratory system			mg/kg/day	
DIPHENYLAMINE	Dermal	skin	Not classified	Rat	LOAEL 500	90 days
					mg/kg/day	
DIPHENYLAMINE	Dermal	kidney and/or	Not classified	Rat	NOAEL	90 days
		bladder			2,000	
		hematopoietic			mg/kg/day	
		system				
DIPHENYLAMINE	Ingestion	hematopoietic	Some positive data exist, but the	Rat	NOAEL 333	28 days
		system   kidney	data are not sufficient for		mg/kg/day	
		and/or bladder	classification			
DIPHENYLAMINE	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 333	28 days
				1	mg/kg/day	
DIPHENYLAMINE	Ingestion	liver	Not classified	Rat	NOAEL	28 days
					1,000	
					mg/kg/day	

**Asniration Hazard** 

Spiration mazard							
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	Туре	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  Ethyl Acetate	141-78-6	Water flea	Experimental	21 days	NOEC	2.4 mg/l
Acrylonitrile-	9003-18-3	N/A	Data not available	N/A	N/A	N/A
Butadiene Polymer	9003-18-3	IN/A	or insufficient for classification	IV/A	IV/A	IN/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
DIPHENYLAMIN E	122-39-4	Copepod	Experimental	96 hours	LC50	1.22 mg/l
DIPHENYLAMIN E	122-39-4	Green algae	Experimental	72 hours	ErC50	0.43 mg/l
DIPHENYLAMIN E	122-39-4	Rainbow Trout	Experimental	96 hours	LC50	2.2 mg/l
DIPHENYLAMIN E	122-39-4	Water flea	Experimental	48 hours	EC50	1.2 mg/l
DIPHENYLAMIN E	122-39-4	Green algae	Experimental	72 hours	NOEC	0.027 mg/l
DIPHENYLAMIN E	122-39-4	Midge	Experimental	28 days	NOEC	41 mg/kg (Dry Weight)
DIPHENYLAMIN E	122-39-4	Water flea	Experimental	21 days	NOEC	0.125 mg/l
DIPHENYLAMIN E	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

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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	108-10-1	Green algae	Experimental	96 hours	EC50	400 mg/l
Ketone						
Methyl Isobutyl	108-10-1	Water flea	Experimental	48 hours	EC50	>200 mg/l
Ketone						
Methyl Isobutyl	108-10-1	Zebra Fish	Experimental	96 hours	LC50	>179 mg/l
Ketone						
Methyl Isobutyl	108-10-1	Fathead Minnow	Experimental	32 days	NOEC	56.2 mg/l
Ketone						
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- AMYLHYDROQU INONE	79-74-3	Activated sludge	Experimental	3 hours	EC50	>100 mg/l
2,5-DI-TERT- AMYLHYDROQU INONE	79-74-3	Bluegill	Experimental	96 hours	LC50	0.013 mg/l
2,5-DI-TERT- AMYLHYDROQU INONE	79-74-3	Green algae	Experimental	96 hours	EC50	2.9 mg/l
2,5-DI-TERT- AMYLHYDROQU INONE	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)
DIPHENYLAMIN E	122-39-4	Experimental Biodegradation	28 days	Biological Oxygen Demand	26 %BOD/ThOD	OECD 301D - Closed Bottle Test
DIPHENYLAMIN E	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)	

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E		Photolysis		(in air)		
DIPHENYLAMIN E	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	108-10-1	Experimental	28 days	Biological Oxygen	83 %BOD/ThOD	OECD 301F - Manometric
Ketone		Biodegradation		Demand		Respiro
Methyl Isobutyl	108-10-1	Experimental		Photolytic half-life	2.3 days (t 1/2)	
Ketone		Photolysis		(in air)		
2,5-DI-TERT-	79-74-3	Experimental	38 days		1 %CO2	similar to OECD 301B
AMYLHYDROQU		Biodegradation			evolution/THCO2	
INONE		_			evolution	

# 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	
DIPHENYLAMIN E	122-39-4	Experimental BCF - Fish	56 days	Bioaccumulation Factor	253	OECD305-Bioconcentration
DIPHENYLAMIN E	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- AMYLHYDROQU INONE	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.

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