



## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the South African National Standard SANS 10234:2008.

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Matting Adhesive

#### Product Identification Numbers

61-5000-4187-8

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Adhesive, Urethane-based adhesive for use with 3M matting tape and/or edging materials.

#### 1.3. Supplier's details

<b>Address:</b>	3M South Africa (Pty) Ltd, Private Bag X926, Rivonia 2128
<b>Telephone:</b>	011 806 2000
<b>E Mail:</b>	Not available.
<b>Website:</b>	<a href="http://www.3m.co.za">www.3m.co.za</a>

#### 1.4. Emergency telephone number

011 806 2000

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

Flammable Liquid: Category 2.  
Acute Toxicity (oral): Category 5.  
Acute Toxicity (inhalation): Category 5.  
Skin Corrosion/Irritation: Category 2.  
Serious Eye Damage/Irritation: Category 2A  
Carcinogenicity: Category 2.  
Reproductive Toxicity: Category 1B.  
Specific Target Organ Toxicity (repeated exposure): Category 1.  
Specific Target Organ Toxicity (single exposure): Category 3.  
Acute Aquatic Toxicity: Category 2.  
Chronic Aquatic Toxicity: Category 3.

#### 2.2. Label elements

**Signal word**

Danger

**Symbols**

Flame | Exclamation mark | Health Hazard |

**Pictograms****HAZARD STATEMENTS:**

H225	Highly flammable liquid and vapour.
H303	May be harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H333	May be harmful if inhaled.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H336	May cause drowsiness or dizziness.
H372	Causes damage to organs through prolonged or repeated exposure: cardiovascular system   endocrine system   immune system   kidney/urinary tract   nervous system   sensory organs.
H401	Toxic to aquatic life.
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/vapours/spray.
P280F	Wear respiratory protection.

**Response:**

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P370 + P378	In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

**2.3. Other hazards**

Aspiration classification does not apply due to the viscosity of the product.

**SECTION 3: Composition/information on ingredients**

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Butanone	78-93-3	50 - 80

ADIPATE-BUTANEDIOL-4,4'- DIPHENYLMETHANE DIISOCYANATE- HEXANEDIOL RESIN	30662-91-0	10 - 30
Toluene	108-88-3	10 - 30
Bis(2,6-diisopropylphenyl)carbodiimide	2162-74-5	< 2
Ethylbenzene	100-41-4	< 0.5

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### Inhalation

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

#### Skin contact

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

#### Eye contact

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

#### If swallowed

Rinse mouth. If you feel unwell, get medical attention.

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

Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness). Target organ effects 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

Carbon monoxide.  
Carbon dioxide.

#### Condition

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 dykes 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 authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. 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

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/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (eg. gloves, respirators...) 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 acids. Store away from oxidising 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.

<b>Ingredient</b>	<b>CAS Nbr</b>	<b>Agency</b>	<b>Limit type</b>	<b>Additional comments</b>
Ethylbenzene	100-41-4	ACGIH	TWA:20 ppm	A3: Confirmed animal carcin., Ototoxicant
Ethylbenzene	100-41-4	South Africa RELs	TWA(8 hours):40 ppm	SKIN
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcin, Ototoxicant
Toluene	108-88-3	South Africa RELs	TWA(8 hours):40 ppm	SKIN
Butanone	78-93-3	ACGIH	TWA:200 ppm;STEL:300 ppm	
Butanone	78-93-3	South Africa RELs	TWA(8 hours):400 ppm;STEL(15 minutes):600 ppm	SKIN

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

South Africa CLs : South Africa. Control Limits. Regulations for Hazardous Chemical Substances, Table 1

South Africa RELs : South Africa. Recommended Exposure Limits (RELs) Regulations for Hazardous Chemical Substances, Table 2

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

## 8.2. Exposure controls

### 8.2.1. Engineering controls

Provide ventilated enclosure for curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. 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/vapours/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:

Indirect vented goggles.

#### Skin/hand protection

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

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

#### 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 vapours and particulates

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

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Colour	Colorless
Odor	Solvent
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point	<i>Not applicable.</i>
Boiling point/Initial boiling point/Boiling range	80 °C
Flash point	-1,1 °C [ <i>Test Method:</i> Tagliabue closed cup]
Evaporation rate	2,7 [ <i>Ref Std:</i> ETHER=1]
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	1,37 %
Flammable Limits(UEL)	11,5 %

Vapour pressure	<=9 465,9 Pa [ @ 20 °C ]
Vapor Density and/or Relative Vapor Density	2,5 [Ref Std: AIR=1]
Density	0,95 g/ml
Relative density	0,95 [Ref Std: WATER=1]
Water solubility	Nil
Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	No data available.
Autoignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity/Kinematic Viscosity	2 000 - 3 000 mPa-s [ @ 23 °C ] [Details: MITS data]
Volatile organic compounds (VOC)	No data available.
Percent volatile	95,1 % weight [Details: Test Method: Calculated per SCAQMD]
VOC less H <sub>2</sub> O & exempt solvents	No data available.
Molecular weight	No data available.

## 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 polymerisation will not occur.

### 10.4 Conditions to avoid

Sparks and/or flames.

### 10.5 Incompatible materials

Strong acids.

Strong oxidising agents.

### 10.6 Hazardous decomposition products

#### Substance

None known.

#### Condition

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 labelling, 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**

May be harmful if inhaled. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

**Skin contact**

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

**Eye contact**

Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

**Ingestion**

May be harmful if swallowed.

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

**Additional Health Effects:****Single exposure may cause target organ effects:**

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

**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. Immunological effects: Signs/symptoms may include alterations in the number of circulating immune cells, allergic skin and/or respiratory reaction, and changes in immune function. Endocrine effects:

Signs/symptoms may include disruption of gonadal, thyroid, adrenal, or pancreatic function, changes in hormone production, alterations in circulating hormone levels, and/or changes in tissue response to hormones. 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 by ingestion may cause:

Ocular effects: Signs/symptoms may include blurred or significantly impaired vision. Auditory effects:

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

Signs/symptoms may include decreased ability to detect odours and complete loss of smell. Neurological effects:

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

**Reproductive/Developmental Toxicity:**

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

**Carcinogenicity:**

Contains a chemical or chemicals which can cause cancer.

**Toxicological Data**

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

**Acute Toxicity**

Name	Route	Species	Value
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE >20 - =50 mg/l
Overall product	Ingestion		No data available; calculated ATE >2 000 - =5 000 mg/kg
Butanone	Dermal	Rabbit	LD50 > 8 050 mg/kg
Butanone	Inhalation-Vapor (4 hours)	Rat	LC50 34,5 mg/l

Butanone	Ingestion	Rat	LD50 2 737 mg/kg
Toluene	Dermal	Rat	LD50 12 000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5 550 mg/kg
Bis(2,6-diisopropylphenyl)carbodiimide	Dermal	Rat	LD50 > 2 000 mg/kg
Bis(2,6-diisopropylphenyl)carbodiimide	Ingestion	Rat	LD50 >300, <2000 mg/kg
Ethylbenzene	Dermal	Rabbit	LD50 15 433 mg/kg
Ethylbenzene	Inhalation-Vapor (4 hours)	Rat	LC50 17,4 mg/l
Ethylbenzene	Ingestion	Rat	LD50 4 769 mg/kg

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

Name	Species	Value
Butanone	Rabbit	Minimal irritation
Toluene	Rabbit	Irritant
Bis(2,6-diisopropylphenyl)carbodiimide	Rat	Minimal irritation
Ethylbenzene	Rabbit	Mild irritant

### Serious Eye Damage/Irritation

Name	Species	Value
Butanone	Rabbit	Severe irritant
Toluene	Rabbit	Moderate irritant
Bis(2,6-diisopropylphenyl)carbodiimide	Rabbit	Mild irritant
Ethylbenzene	Rabbit	Moderate irritant

### Sensitization:

#### Skin Sensitisation

Name	Species	Value
Toluene	Guinea pig	Not classified
Bis(2,6-diisopropylphenyl)carbodiimide	Guinea pig	Not classified
Ethylbenzene	Human	Not classified

### Respiratory Sensitisation

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

### Germ Cell Mutagenicity

Name	Route	Value
Butanone	In Vitro	Not mutagenic
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic
Bis(2,6-diisopropylphenyl)carbodiimide	In Vitro	Not mutagenic
Ethylbenzene	In vivo	Not mutagenic
Ethylbenzene	In Vitro	Some positive data exist, but the data are not sufficient for classification

### Carcinogenicity

Name	Route	Species	Value
Butanone	Inhalation	Human	Not carcinogenic
Toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification



Toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
Ethylbenzene	Inhalation	Multiple animal species	Carcinogenic.

## Reproductive Toxicity

### Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Butanone	Inhalation	Not classified for development	Rat	LOAEL 8,8 mg/l	during gestation
Toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2,3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse
Bis(2,6-diisopropylphenyl)carbodiimide	Ingestion	Not classified for development	Rat	NOAEL 3 mg/kg/day	premating into lactation
Bis(2,6-diisopropylphenyl)carbodiimide	Ingestion	Not classified for male reproduction	Rat	NOAEL 3 mg/kg/day	28 days
Bis(2,6-diisopropylphenyl)carbodiimide	Ingestion	Toxic to female reproduction	Rat	NOAEL 1 mg/kg/day	premating into lactation
Ethylbenzene	Inhalation	Not classified for development	Rat	NOAEL 4,3 mg/l	premating & during gestation

## Target Organ(s)

### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Butanone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	official classification	NOAEL Not available	
Butanone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Butanone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Butanone	Ingestion	liver	Not classified	Rat	NOAEL Not available	not applicable
Butanone	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 1 080 mg/kg	not applicable
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0,004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Ethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Ethylbenzene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for	Human and	NOAEL Not available	

			classification	animal		
Ethylbenzene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Butanone	Dermal	nervous system	Not classified	Guinea pig	NOAEL Not available	31 weeks
Butanone	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
Butanone	Ingestion	liver	Not classified	Rat	NOAEL Not available	7 days
Butanone	Ingestion	nervous system	Not classified	Rat	NOAEL 173 mg/kg/day	90 days
Toluene	Inhalation	auditory system   eyes   olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	nervous system	May cause damage to organs though prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2,3 mg/l	15 months
Toluene	Inhalation	heart   liver   kidney and/or bladder	Not classified	Rat	NOAEL 11,3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1,1 mg/l	4 weeks
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1,1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system   vascular system	Not classified	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal species	NOAEL 11,3 mg/l	15 weeks
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Not classified	Rat	NOAEL 2 500 mg/kg/day	13 weeks
Toluene	Ingestion	liver   kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2 500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Not classified	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Not classified	Mouse	NOAEL 105 mg/kg/day	4 weeks
Bis(2,6-diisopropylphenyl)carbodiimide	Ingestion	heart   endocrine system   immune system   kidney and/or bladder	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 4 mg/kg/day	28 days
Bis(2,6-	Ingestion	bone, teeth, nails,	Not classified	Rat	NOAEL 16	28 days

diisopropylphenyl)carbodiimide		and/or hair   hematopoietic system   liver   nervous system			mg/kg/day	
Ethylbenzene	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,1 mg/l	2 years
Ethylbenzene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1,1 mg/l	103 weeks
Ethylbenzene	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 3,4 mg/l	28 days
Ethylbenzene	Inhalation	auditory system	Not classified	Rat	NOAEL 2,4 mg/l	5 days
Ethylbenzene	Inhalation	endocrine system	Not classified	Mouse	NOAEL 3,3 mg/l	103 weeks
Ethylbenzene	Inhalation	gastrointestinal tract	Not classified	Rat	NOAEL 3,3 mg/l	2 years
Ethylbenzene	Inhalation	bone, teeth, nails, and/or hair   muscles	Not classified	Multiple animal species	NOAEL 4,2 mg/l	90 days
Ethylbenzene	Inhalation	heart   immune system   respiratory system	Not classified	Multiple animal species	NOAEL 3,3 mg/l	2 years
Ethylbenzene	Ingestion	liver   kidney and/or bladder	Not classified	Rat	NOAEL 680 mg/kg/day	6 months

**Aspiration Hazard**

Name	Value
Toluene	Aspiration hazard
Ethylbenzene	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

## SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

**12.1. Toxicity****Acute aquatic hazard:**

GHS Acute 2: Toxic to aquatic life.

**Chronic aquatic hazard:**

GHS Chronic 3: Harmful to aquatic life with long lasting effects.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Butanone	78-93-3	Fathead minnow	Experimental	96 hours	LC50	2 993 mg/l
Butanone	78-93-3	Green algae	Experimental	96 hours	ErC50	2 029 mg/l
Butanone	78-93-3	Water flea	Experimental	48 hours	EC50	308 mg/l
Butanone	78-93-3	Green algae	Experimental	96 hours	ErC10	1 289 mg/l
Butanone	78-93-3	Water flea	Experimental	21 days	NOEC	100 mg/l
Butanone	78-93-3	Bacteria	Experimental	16 hours	LOEC	1 150 mg/l
ADIPATE-	30662-91-0	N/A	Data not available	N/A	N/A	N/A

BUTANEDIOL-4,4'-DIPHENYLMETHANE DIISOCYANATE-HEXANEDIOL RESIN			or insufficient for classification			
Toluene	108-88-3	Coho Salmon	Experimental	96 hours	LC50	5,5 mg/l
Toluene	108-88-3	Grass Shrimp	Experimental	96 hours	LC50	9,5 mg/l
Toluene	108-88-3	Green algae	Experimental	72 hours	EC50	12,5 mg/l
Toluene	108-88-3	Leopard frog	Experimental	9 days	LC50	0,39 mg/l
Toluene	108-88-3	Pink Salmon	Experimental	96 hours	LC50	6,41 mg/l
Toluene	108-88-3	Water flea	Experimental	48 hours	EC50	3,78 mg/l
Toluene	108-88-3	Coho Salmon	Experimental	40 days	NOEC	1,39 mg/l
Toluene	108-88-3	Diatom	Experimental	72 hours	NOEC	10 mg/l
Toluene	108-88-3	Water flea	Experimental	7 days	NOEC	0,74 mg/l
Toluene	108-88-3	Activated sludge	Experimental	12 hours	IC50	292 mg/l
Toluene	108-88-3	Bacteria	Experimental	16 hours	NOEC	29 mg/l
Toluene	108-88-3	Bacteria	Experimental	24 hours	EC50	84 mg/l
Toluene	108-88-3	Redworm	Experimental	28 days	LC50	>150 mg per kg of bodyweight
Toluene	108-88-3	Soil microbes	Experimental	28 days	NOEC	<26 mg/kg (Dry Weight)
Bis(2,6-diisopropylphenyl)carbodiimide	2162-74-5	Activated sludge	Experimental	3 hours	EC50	>1 000 mg/l
Bis(2,6-diisopropylphenyl)carbodiimide	2162-74-5	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Bis(2,6-diisopropylphenyl)carbodiimide	2162-74-5	Rainbow trout	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Bis(2,6-diisopropylphenyl)carbodiimide	2162-74-5	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Bis(2,6-diisopropylphenyl)carbodiimide	2162-74-5	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Ethylbenzene	100-41-4	Activated sludge	Experimental	49 hours	EC50	130 mg/l
Ethylbenzene	100-41-4	Atlantic Silverside	Experimental	96 hours	LC50	5,1 mg/l
Ethylbenzene	100-41-4	Green algae	Experimental	96 hours	EC50	3,6 mg/l
Ethylbenzene	100-41-4	Mysid Shrimp	Experimental	96 hours	LC50	2,6 mg/l
Ethylbenzene	100-41-4	Rainbow trout	Experimental	96 hours	LC50	4,2 mg/l
Ethylbenzene	100-41-4	Water flea	Experimental	48 hours	EC50	1,8 mg/l
Ethylbenzene	100-41-4	Water flea	Experimental	7 days	NOEC	0,96 mg/l

## 12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Butanone	78-93-3	Experimental Biodegradation	28 days	BOD	98 %BOD/ThOD	OECD 301D - Closed bottle test
ADIPATE-BUTANEDIOL-4,4'-DIPHENYLMETHANE DIISOCYANATE-HEXANEDIOL RESIN	30662-91-0	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Toluene	108-88-3	Experimental Biodegradation	20 days	BOD	80 %BOD/ThOD	APHA Std Meth Water/Wastewater
Toluene	108-88-3	Experimental Photolysis		Photolytic half-life (in air)	5.2 days (t 1/2)	

Bis(2,6-diisopropylphenyl) carbodiimide	2162-74-5	Experimental Biodegradation	28 days	BOD	1 %BOD/ThOD	
Bis(2,6-diisopropylphenyl) carbodiimide	2162-74-5	Experimental Hydrolysis		Hydrolytic half-life	14.96 days (t 1/2)	
Ethylbenzene	100-41-4	Experimental Biodegradation	28 days	CO2 evolution	70-80 %CO2 evolution/THCO2 evolution	ISO 14593 Inorg C Headspace
Ethylbenzene	100-41-4	Experimental Photolysis		Photolytic half-life (in air)	4.26 days (t 1/2)	

### 12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Butanone	78-93-3	Experimental Bioconcentration		Log Kow	0.3	OECD 117 log Kow HPLC method
ADIPATE-BUTANEDIOL-4,4'-DIPHENYLMETHANE DIISOCYANATE-HEXANEDIOL RESIN	30662-91-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Toluene	108-88-3	Experimental BCF - Other	72 hours	Bioaccumulation factor	90	
Toluene	108-88-3	Experimental Bioconcentration		Log Kow	2.73	
Bis(2,6-diisopropylphenyl) carbodiimide	2162-74-5	Estimated Bioconcentration		Bioaccumulation factor	13	
Ethylbenzene	100-41-4	Experimental BCF - Fish	42 days	Bioaccumulation factor	1	

### 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

Product must only be disposed of by an authorized/permitted waste disposal contractor or incinerated in an industrial or commercial facility in the presence of a combustible material.

## SECTION 14: Transport Information

Compliance is required to South African Transport Information Road Traffic Act & Regulations and Railroad regulations, IATA Standards for airfreight and Maritime standards for ocean freight.

## SECTION 15: Regulatory information

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

#### Global inventory status

Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and

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

## **SECTION 16: Other information**

### **Revision information:**

Label: GHS Classification information was modified.  
Label: GHS Environmental Hazard Statements information was modified.  
Label: GHS Precautionary - Disposal information was deleted.  
Label: GHS Precautionary - Prevention information was modified.  
Label: GHS Precautionary - Response information was modified.  
Label: GHS Target Organ Hazard Statement information was modified.  
Label: Signal Word information was modified.  
Label: Symbol information was modified.  
Section 2: Ingredient table information was modified.  
Section 04: First Aid - Symptoms and Effects (GHS) information was added.  
Section 04: Information on toxicological effects information was deleted.  
Section 6: Accidental release clean-up information information was modified.  
Section 6: Accidental release environmental information information was modified.  
Section 7: Precautions safe handling information information was modified.  
Section 8: Occupational exposure limit table information was modified.  
Section 09: Percent Volatile information was added.  
Section 9: Property description for optional properties information was added.  
Section 9: Property description for optional properties information was deleted.  
Section 09: Vapor Density Value information was added.  
Section 9: Vapour density value information was deleted.  
Section 9: Viscosity information information was deleted.  
Section 09: Viscosity information was added.  
Section 09: VOC Less H<sub>2</sub>O & Exempt Solvents information was added.  
Section 09: Volatile Organic Compounds information was added.  
Section 10.1: Reactivity information information was modified.  
Section 11: Acute Toxicity table information was modified.  
Section 12: Acute aquatic hazard information information was modified.  
Section 12: Chronic aquatic hazard information information was modified.  
Section 12: Component ecotoxicity information information was modified.  
Section 12: Persistence and Degradability information information was modified.  
Section 12: Bioaccumulative potential information information was modified.

**DISCLAIMER:** The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

**3M South Africa SDSs are available at [www.3m.co.za](http://www.3m.co.za)**