



## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the GHS guidelines & India Hazardous substances (Classification, Labeling & Packaging) Draft Rules 2011.

## IDENTIFICATION

### 1.1. Product identifier

3M™ Flexible Foam Adhesive PN 08463

### Product Identification Numbers

60-9800-3647-3

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### Recommended use

Automotive.

### 1.3. Supplier's details

**Address:** 3M India Limited, plot-48-51, Electronic city, Hosur road, Bangalore-560100  
**Telephone:** 080-45543000, contact Product EHS team  
**E Mail:** productehs.in@mmm.com  
**Website:** <http://solutions.3mindia.co.in>

### 1.4. Emergency telephone number

080-45543000 (Contact hours: 8:00 AM to 5:00 PM)

**This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet for each of these components is included. Please do not separate the component Safety Data Sheets from this cover page. The document numbers of the MSDSs for components of this product are:**

07-3378-2, 07-5569-4

## TRANSPORT INFORMATION

### Air Transport (IATA)Regulations

**UN No** Not applicable

**Proper Shipping Name** Not applicable

**Hazard Class/Division** Not applicable

**Subsidiary Risk** Not applicable

**Packing Group:** Not applicable

**Marine Transport (IMDG)**

**UN No** Not applicable

**Proper Shipping Name** Not applicable

**Hazard Class/Division** Not applicable

**Subsidiary Risk** Not applicable

**Packing Group:** Not applicable

**Environmental Hazards:** Not applicable

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**3M India SDSs are available at <http://solutions.3mindia.co.in>**



## Safety Data Sheet

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<b>Document group:</b>	07-3378-2	<b>Version number:</b>	1.00
<b>Issue Date:</b>	05/11/2020	<b>Supersedes date:</b>	Initial issue.

This Safety Data Sheet has been prepared in accordance with the GHS guidelines & India Hazardous substances (Classification, Labeling & Packaging) Draft Rules 2011.

### SECTION 1: Identification

#### 1.1. Product identifier

3M Flexible Foam/Part A, 08463

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

##### Recommended use

Automotive., Two Component Flexible Foam

#### 1.3. Supplier's details

**Address:** 3M India Limited, plot-48-51, Electronic city, Hosur road, Bangalore-560100  
**Telephone:** 080-45543000, contact Product EHS team  
**E Mail:** productehs.in@mmm.com  
**Website:** <http://solutions.3mindia.co.in>

#### 1.4. Emergency telephone number

080-45543000 (Contact hours: 8:00 AM to 5:00 PM)

### SECTION 2: Hazard identification

Under MSIHC Rules, information is noted below on flammability, acute toxicity and explosivity relevant to this product. In line with international standards, information on other hazard classes and associated precautionary statements relevant to this product are included as well.

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

Serious Eye Damage/Irritation: Category 2A  
Skin Corrosion/Irritation: Category 2.  
Respiratory Sensitizer: Category 1.  
Skin Sensitizer: Category 1.  
Specific Target Organ Toxicity (single exposure): Category 3.  
Specific Target Organ Toxicity (repeated exposure): Category 1.

#### 2.2. Label elements

##### Signal Word

DANGER!

##### Symbols

Exclamation mark | Health Hazard | Environment |

**Pictograms**



**HAZARD STATEMENTS:**

H319 Causes serious eye irritation.  
 H315 Causes skin irritation.  
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H317 May cause an allergic skin reaction.  
 H335 May cause respiratory irritation.  
  
 H372 Causes damage to organs through prolonged or repeated exposure: respiratory system

**PRECAUTIONARY STATEMENTS**

**Prevention:**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
 P284A In case of inadequate ventilation wear respiratory protection.  
 P280E Wear protective gloves.

**Response:**

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.  
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

**Storage:**

P405 Store locked up.

**Disposal:**

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

**2.3. Other hazards**

Persons previously sensitised to isocyanates may develop a cross-sensitisation reaction to other isocyanates.

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

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Urethane Prepolymer NJTSRN 04499600-6306	Trade Secret	30 - 60
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	10 - 30
Polymethylene Polyphenylene Isocyanate	9016-87-9	10 - 30
Methylenediphenyl diisocyanate	26447-40-5	< 15
Dimethyl Siloxane, Reaction Product With	67762-90-7	1 - 5

Silica

## 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

See Section 11.1 Information on toxicological effects

### 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 ordinary combustible material such as water or foam to extinguish.

### 5.2. Special hazards arising from the substance or mixture

None inherent in this product.

### Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Isocyanates	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Hydrogen cyanide.	During combustion.
Oxides of nitrogen.	During combustion.

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

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. 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. 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

Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. 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. Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. 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. 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 use in a confined area with minimal air exchange. 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. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from heat. Store away from amines.

## 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	CAS Nbr	Agency	Limit type	Additional comments
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	ACGIH	TWA:0.005 ppm	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

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/vapours/spray. If ventilation is not adequate, use respiratory protection 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.

Gloves made from the following material(s) are recommended: Butyl rubber.

Neoprene.

Nitrile rubber.

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

Neoprene apron.

Apron – Nitrile

**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**

<b>Physical state</b>	Liquid.
<b>Specific Physical Form:</b>	Paste
<b>Color</b>	Brown
<b>Odor</b>	Odourless
<b>Odour threshold</b>	<i>No data available.</i>
<b>pH</b>	<i>Not applicable.</i>
<b>Melting point/Freezing point: NA</b>	<i>Not applicable.</i>
<b>Boiling point/Initial boiling point/Boiling range</b>	$\geq 148.9$ °C
<b>Flash point</b>	$\geq 148.9$ °C [ <i>Test Method: Closed Cup</i> ]
<b>Evaporation rate</b>	<i>Not applicable.</i>
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Flammable Limits(LEL)</b>	<i>No data available.</i>
<b>Flammable Limits(UEL)</b>	<i>No data available.</i>
<b>Vapour pressure</b>	$\leq 186,158.4$ Pa [ <i>@ 55 °C</i> ] [ <i>Details: MITS data</i> ]
<b>Vapor Density and/or Relative Vapor Density</b>	8.5 [ <i>Ref Std: AIR=1</i> ]
<b>Density</b>	1.135 - 1.16 g/ml
<b>Relative density</b>	1.135 - 1.16 [ <i>Ref Std: WATER=1</i> ]
<b>Water solubility</b>	<i>Not applicable.</i>
<b>Solubility- non-water</b>	<i>No data available.</i>
<b>Partition coefficient: n-octanol/water</b>	<i>No data available.</i>
<b>Autoignition temperature</b>	<i>No data available.</i>
<b>Decomposition temperature</b>	<i>No data available.</i>
<b>Viscosity/Kinematic Viscosity</b>	<i>No data available.</i>
<b>Volatile organic compounds (VOC)</b>	0.1 % weight [ <i>Test Method: calculated per CARB title 2</i> ]

<b>Volatile organic compounds (VOC)</b>	1 g/l [ <i>Test Method</i> :calculated SCAQMD rule 443.1]
<b>Percent volatile</b>	0.1 % weight
<b>VOC less H2O &amp; exempt solvents</b>	1 g/l [ <i>Test Method</i> :calculated SCAQMD rule 443.1]
<b>Molecular weight</b>	<i>No data available.</i>

**Nanoparticles**

This material contains nanoparticles.

**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**

Heat.

**10.5 Incompatible materials**

Amines.

Alcohols.

Water

Reaction with water, alcohols, and amines is not hazardous if container can vent to the atmosphere to prevent pressure buildup.

**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 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**

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest. May cause additional health effects (see below).



**Skin contact**

Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.  
Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye contact**

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

**Ingestion**

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea.

**Additional Health Effects:****Prolonged or repeated exposure may cause target organ effects:**

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

**Additional information:**

Persons previously sensitised to isocyanates may develop a cross-sensitisation reaction to other isocyanates.

**Toxicological Data**

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

**Acute Toxicity**

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
P,P'-Methylenebis(phenyl isocyanate)	Dermal	Rabbit	LD50 > 5,000 mg/kg
Polymethylene Polyphenylene Isocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
P,P'-Methylenebis(phenyl isocyanate)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
P,P'-Methylenebis(phenyl isocyanate)	Ingestion	Rat	LD50 31,600 mg/kg
Polymethylene Polyphenylene Isocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
Polymethylene Polyphenylene Isocyanate	Ingestion	Rat	LD50 31,600 mg/kg
Methylenediphenyl diisocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Methylenediphenyl diisocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
Methylenediphenyl diisocyanate	Ingestion	Rat	LD50 31,600 mg/kg
Dimethyl Siloxane, Reaction Product With Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Dimethyl Siloxane, Reaction Product With Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Rat	LD50 > 5,110 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
P,P'-Methylenebis(phenyl isocyanate)	official classification	Irritant
Polymethylene Polyphenylene Isocyanate	official classification	Irritant
Methylenediphenyl diisocyanate	official classification	Irritant

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Dimethyl Siloxane, Reaction Product With Silica	Rabbit	No significant irritation
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**Serious Eye Damage/Irritation**

Name	Species	Value
P,P'-Methylenebis(phenyl isocyanate)	official classification	Severe irritant
Polymethylene Polyphenylene Isocyanate	official classification	Severe irritant
Methylenediphenyl diisocyanate	official classification	Severe irritant
Dimethyl Siloxane, Reaction Product With Silica	Rabbit	No significant irritation

**Sensitization:****Skin Sensitisation**

Name	Species	Value
P,P'-Methylenebis(phenyl isocyanate)	official classification	Sensitising
Polymethylene Polyphenylene Isocyanate	official classification	Sensitising
Methylenediphenyl diisocyanate	official classification	Sensitising
Dimethyl Siloxane, Reaction Product With Silica	Human and animal	Not classified

**Respiratory Sensitisation**

Name	Species	Value
P,P'-Methylenebis(phenyl isocyanate)	Human	Sensitising
Polymethylene Polyphenylene Isocyanate	Human	Sensitising
Methylenediphenyl diisocyanate	Human	Sensitising

**Germ Cell Mutagenicity**

Name	Route	Value
P,P'-Methylenebis(phenyl isocyanate)	In Vitro	Some positive data exist, but the data are not sufficient for classification
Polymethylene Polyphenylene Isocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Methylenediphenyl diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Dimethyl Siloxane, Reaction Product With Silica	In Vitro	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Polymethylene Polyphenylene Isocyanate	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Methylenediphenyl diisocyanate	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Dimethyl Siloxane, Reaction Product With Silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification

## Reproductive Toxicity

### Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
Polymethylene Polyphenylene Isocyanate	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
Methylenediphenyl diisocyanate	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

## Target Organ(s)

### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Polymethylene Polyphenylene Isocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Methylenediphenyl diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	

### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
Polymethylene Polyphenylene Isocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
Methylenediphenyl diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
Dimethyl Siloxane, Reaction Product With Silica	Inhalation	respiratory system   silicosis	Not classified	Human	NOAEL Not available	occupational exposure

## Aspiration Hazard

For the component/components, either no data are currently available or 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 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:**

Not acutely toxic to aquatic life by GHS criteria.

**Chronic aquatic hazard:**

Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Urethane Prepolymer NJTSRN 04499600-6306	Trade Secret		Data not available or insufficient for classification			
P,P'-Methylenebis(p henyl isocyanate)	101-68-8	Water flea	Estimated	24 hours	EC50	>1,000 mg/l
P,P'-Methylenebis(p henyl isocyanate)	101-68-8	Zebra Fish	Estimated	96 hours	LC50	>1,000 mg/l
P,P'-Methylenebis(p henyl isocyanate)	101-68-8	Water flea	Estimated	21 days	NOEC	>=10 mg/l
Polymethylene Polyphenylene Isocyanate	9016-87-9	Water flea	Estimated	24 hours	EC50	>100 mg/l
Methylenediph enyl diisocyanate	26447-40-5	Green algae	Estimated	72 hours	EC50	>1,640 mg/l
Methylenediph enyl diisocyanate	26447-40-5	Water flea	Estimated	24 hours	EC50	>1,000 mg/l
Methylenediph enyl diisocyanate	26447-40-5	Zebra Fish	Estimated	96 hours	LC50	>1,000 mg/l
Methylenediph enyl diisocyanate	26447-40-5	Green algae	Estimated	72 hours	No obs Effect Level	1,640 mg/l
Methylenediph enyl diisocyanate	26447-40-5	Water flea	Estimated	21 days	NOEC	>=10 mg/l
Dimethyl Siloxane, Reaction Product With Silica	67762-90-7		Data not available or insufficient for classification			

**12.2. Persistence and degradability**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Urethane Prepolymer	Trade Secret	Data not available-			N/A	

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NJTSRN 04499600-6306		insufficient				
P,P'- Methylenebis(p henyl isocyanate)	101-68-8	Estimated Hydrolysis		Hydrolytic half-life	<2 hours (t 1/2)	Other methods
Polymethylene Polyphenylene Isocyanate	9016-87-9	Experimental Hydrolysis		Hydrolytic half-life	<2 hours (t 1/2)	Other methods
Polymethylene Polyphenylene Isocyanate	9016-87-9	Estimated Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
Methylenediph enyl diisocyanate	26447-40-5	Data not available- insufficient			N/A	
Dimethyl Siloxane, Reaction Product With Silica	67762-90-7	Data not available- insufficient			N/A	

**12.3 : Bioaccumulative potential**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Urethane Prepolymer NJTSRN 04499600-6306	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
P,P'- Methylenebis(p henyl isocyanate)	101-68-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polymethylene Polyphenylene Isocyanate	9016-87-9	Estimated BCF-Carp	28 days	Bioaccumulatio n factor	200	Other methods
Methylenediph enyl diisocyanate	26447-40-5	Estimated BCF-Carp	28 days	Bioaccumulatio n factor	200	Other methods
Dimethyl Siloxane, Reaction Product With Silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

**12.4. Mobility in soil**

Please contact manufacturer for more details

**12.5 Other Adverse effects**

No information available.

**SECTION 13: Disposal considerations**

**13.1. Disposal methods**

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

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

## SECTION 14: Transport Information

Not hazardous for transportation.

### Air Transport (IATA) Regulations

**UN No** Not applicable

**Proper Shipping Name** Not applicable

**Hazard Class/Division** Not applicable

**Subsidiary Risk** Not applicable

**Packing Group:** Not applicable

### Marine Transport (IMDG)

**UN No** Not applicable

**Proper Shipping Name** Not applicable

**Hazard Class/Division** Not applicable

**Subsidiary Risk** Not applicable

**Packing Group:** Not applicable

**Environmental Hazards:** Not applicable

## 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 chemical notification requirements of TSCA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

#### Applicable Environmental, Health and Safety Regulations

The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989

Hazardous Waste (Management, Handling & Transboundary) Rules, 2008

Hazardous Chemicals (Classification, Packaging and Labelling Draft Rules), 2011

The following ingredients are listed as hazardous on Part II of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules

P,P'-Methylenebis(phenyl isocyanate)

The following ingredients are classified as hazardous based on the criteria listed under Part I of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules:

The product is classified as Non-Hazardous as per MSIHC Rules, 1989.

## SECTION 16: Other information

### NFPA Hazard Classification

**Health:** 2    **Flammability:** 1    **Instability:** 0    **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

### Revision information:

No revision information

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 India SDSs are available at <http://solutions.3mindia.co.in>**



## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the GHS guidelines & India Hazardous substances (Classification, Labeling & Packaging) Draft Rules 2011.

### SECTION 1: Identification

#### 1.1. Product identifier

3M Flexible Foam Adhesive PN 08463, Part B

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

##### Recommended use

Automotive., Two Component Flexible Foam

#### 1.3. Supplier's details

**Address:** 3M India Limited, plot-48-51, Electronic city, Hosur road, Bangalore-560100  
**Telephone:** 080-45543000, contact Product EHS team  
**E Mail:** productehs.in@mmm.com  
**Website:** <http://solutions.3mindia.co.in>

#### 1.4. Emergency telephone number

080-45543000 (Contact hours: 8:00 AM to 5:00 PM)

### SECTION 2: Hazard identification

Under MSIHC Rules, information is noted below on flammability, acute toxicity and explosivity relevant to this product. In line with international standards, information on other hazard classes and associated precautionary statements relevant to this product are included as well.

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

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

#### 2.2. Label elements

**Signal Word**



DANGER!

**Symbols**

Exclamation mark | Health Hazard |

**Pictograms**



**HAZARD STATEMENTS:**

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H360	May damage fertility or the unborn child.
H341	Suspected of causing genetic defects.
H370	Causes damage to organs: immune system   liver nervous system kidney/urinary tract
H372	Causes damage to organs through prolonged or repeated exposure: immune system   liver
H412	Harmful to aquatic life with long lasting effects.

**PRECAUTIONARY STATEMENTS**

**Prevention:**

P201	Obtain special instructions before use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280E	Wear protective gloves.

**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.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P308 + P313	IF exposed or concerned: Get medical advice/attention.

**Disposal:**

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

None known.

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

This material is a mixture.

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<b>Ingredient</b>	<b>CAS Nbr</b>	<b>% by Wt</b>
Glycerol Poly(Oxyethylene, Oxypropylene) Ether	9082-00-2	30 - 60
Polypropylene Glycol Glycerol Triether	25791-96-2	30 - 60
Dimethyl Siloxane, Reaction Product with Silica	67762-90-7	3 - 7
Dibutyltin Dilaurate	77-58-7	< 5
Diethylene glycol	111-46-6	1 - 5
Oxydipropanol	25265-71-8	1 - 5
Water	7732-18-5	1 - 5
1,4-diazabicyclooctane	280-57-9	0.5 - 1.5

**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**

See Section 11.1 Information on toxicological effects

**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 ordinary combustible material such as water or foam to extinguish.

**5.2. Special hazards arising from the substance or mixture**

None inherent in this product.

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

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. 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. 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. 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. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with detergent and water. 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 use in a confined area with minimal air exchange. Do not handle until all safety precautions have been read and understood. 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. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Use personal protective equipment (eg. gloves, respirators...) as required.

**7.2. Conditions for safe storage including any incompatibilities**

Store in a well-ventilated place. Store away from heat. Store away from areas where product may come into contact with food or pharmaceuticals.

**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>
Diethylene glycol	111-46-6	AIHA	TWA:10 mg/m <sup>3</sup>	
TIN, ORGANIC COMPOUNDS	77-58-7	ACGIH	TWA(as Sn):0.1 mg/m <sup>3</sup> ;STEL(as Sn):0.2 mg/m <sup>3</sup>	A4: Not class. as human carcin, Danger of cutaneous absorption

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

**8.2. Exposure controls****8.2.1. Engineering controls**

Provide appropriate local exhaust ventilation on open containers. 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. Provide appropriate local exhaust ventilation for cutting, grinding, sanding or machining.

**8.2.2. Personal protective equipment (PPE)****Eye/face protection**

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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.

Gloves made from the following material(s) are recommended: Neoprene.

Nitrile rubber.

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: Neoprene apron.

Apron – Nitrile

### 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

<b>Physical state</b>	Liquid.
<b>Specific Physical Form:</b>	Flexible Foam
<b>Color</b>	Black
<b>Odor</b>	Odourless
<b>Odour threshold</b>	<i>No data available.</i>
<b>pH</b>	<i>Not applicable.</i>
<b>Melting point/Freezing point: NA</b>	<i>Not applicable.</i>
<b>Boiling point/Initial boiling point/Boiling range</b>	<i>Not applicable.</i>
<b>Flash point</b>	$\geq 121.1$ °C [ <i>Test Method: Tagliabue closed cup</i> ]
<b>Evaporation rate</b>	<i>Not applicable.</i>
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Flammable Limits(LEL)</b>	<i>No data available.</i>
<b>Flammable Limits(UEL)</b>	<i>No data available.</i>
<b>Vapour pressure</b>	$\leq 186,158.4$ Pa [ <i>@ 55 °C</i> ] [ <i>Details: MITS data</i> ]
<b>Vapor Density and/or Relative Vapor Density</b>	<i>Not applicable.</i>
<b>Density</b>	0.96 - 1.03 g/ml
<b>Relative density</b>	0.96 - 1.03 [ <i>Ref Std: WATER=1</i> ]
<b>Water solubility</b>	Moderate
<b>Solubility- non-water</b>	<i>No data available.</i>
<b>Partition coefficient: n-octanol/water</b>	<i>No data available.</i>
<b>Autoignition temperature</b>	<i>No data available.</i>
<b>Decomposition temperature</b>	<i>No data available.</i>

Viscosity/Kinematic Viscosity	No data available.
Volatile organic compounds (VOC)	45 g/l [ <i>Test Method</i> :calculated SCAQMD rule 443.1]
Volatile organic compounds (VOC)	1.9 % weight [ <i>Test Method</i> :calculated per CARB title 2]
Percent volatile	26.3 % weight
VOC less H2O & exempt solvents	57 g/l [ <i>Test Method</i> :calculated SCAQMD rule 443.1]
Molecular weight	No data available.

**Nanoparticles**

This material contains nanoparticles.

**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

This material is considered to be non reactive under normal use conditions

**10.2 Chemical stability**

Stable.

**10.3 Possibility of hazardous reactions**

Hazardous polymerisation will not occur.

**10.4 Conditions to avoid**

None known.

**10.5 Incompatible materials**

None known.

**10.6 Hazardous decomposition products**

<u>Substance</u>	<u>Condition</u>
Carbon monoxide.	Not specified.
Carbon dioxide.	Not specified.
Toxic vapour, gas, particulate.	Not specified.

**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**

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

**Skin contact**

Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.  
Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye contact**

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

**Ingestion**

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:**

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

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

**Reproductive/Developmental Toxicity:**

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

**Genotoxicity:**

Genotoxicity and Mutagenicity: May interact with genetic material and possibly alter gene expression.

**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
Glycerol Poly(Oxyethylene, Oxypropylene) Ether	Dermal	Rabbit	LD50 > 5,000 mg/kg
Glycerol Poly(Oxyethylene, Oxypropylene) Ether	Ingestion	Rat	LD50 > 10,000 mg/kg
Polypropylene Glycol Glycerol Triether	Dermal	Rat	LD50 > 2,000 mg/kg
Polypropylene Glycol Glycerol Triether	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 50 mg/l
Polypropylene Glycol Glycerol Triether	Ingestion	Rat	LD50 4,600 mg/kg
Dimethyl Siloxane, Reaction Product with Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Dimethyl Siloxane, Reaction Product with Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Oxydipropanol	Dermal	Rabbit	LD50 > 5,010 mg/kg
Oxydipropanol	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.34 mg/l
Oxydipropanol	Ingestion	Rat	LD50 > 5,010 mg/kg
Dibutyltin Dilaurate	Dermal	Rat	LD50 > 2,000 mg/kg

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Dibutyltin Dilaurate	Ingestion	Rat	LD50 1,290 mg/kg
Diethylene glycol	Ingestion	Human	LD50 estimated to be 300 - 2,000 mg/kg
Diethylene glycol	Dermal	Rabbit	LD50 13,300 mg/kg
Diethylene glycol	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 4.6 mg/l
1,4-diazabicyclooctane	Dermal	Rabbit	LD50 > 3,200 mg/kg
1,4-diazabicyclooctane	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.05 mg/l
1,4-diazabicyclooctane	Ingestion	Rat	LD50 1,870 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Polypropylene Glycol Glycerol Triether	Rabbit	No significant irritation
Dimethyl Siloxane, Reaction Product with Silica	Rabbit	No significant irritation
Oxydipropanol	Rabbit	No significant irritation
Dibutyltin Dilaurate	Rabbit	Corrosive
Diethylene glycol	Rabbit	No significant irritation
1,4-diazabicyclooctane	Rabbit	Mild irritant

**Serious Eye Damage/Irritation**

Name	Species	Value
Polypropylene Glycol Glycerol Triether	Rabbit	Mild irritant
Dimethyl Siloxane, Reaction Product with Silica	Rabbit	No significant irritation
Oxydipropanol	Rabbit	No significant irritation
Dibutyltin Dilaurate	Rabbit	Corrosive
Diethylene glycol	Rabbit	Mild irritant
1,4-diazabicyclooctane	Rabbit	Corrosive

**Sensitization:****Skin Sensitisation**

Name	Species	Value
Dimethyl Siloxane, Reaction Product with Silica	Human and animal	Not classified
Oxydipropanol	Guinea pig	Not classified
Dibutyltin Dilaurate	Guinea pig	Sensitising

**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
Dimethyl Siloxane, Reaction Product with Silica	In Vitro	Not mutagenic
Oxydipropanol	In Vitro	Not mutagenic
Oxydipropanol	In vivo	Not mutagenic
Dibutyltin Dilaurate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Dibutyltin Dilaurate	In vivo	Mutagenic

**Carcinogenicity**

Name	Route	Species	Value
Dimethyl Siloxane, Reaction Product with Silica	Not	Mouse	Some positive data exist, but the data are not

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	specified.		sufficient for classification
Oxydipropanol	Ingestion	Multiple animal species	Not carcinogenic

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Oxydipropanol	Ingestion	Not classified for development	Rat	NOAEL 5,000 mg/kg/day	during organogenesis
Dibutyltin Dilaurate	Ingestion	Toxic to female reproduction	Rat	NOAEL 2 mg/kg/day	premating into lactation
Dibutyltin Dilaurate	Ingestion	Toxic to development	Rat	NOAEL 2.5 mg/kg/day	during gestation

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Dibutyltin Dilaurate	Ingestion	immune system	Causes damage to organs	Rat	LOAEL 5 mg/kg	
Diethylene glycol	Ingestion	liver   nervous system   kidney and/or bladder	Causes damage to organs	Human	NOAEL Not available	poisoning and/or abuse
Diethylene glycol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Dimethyl Siloxane, Reaction Product with Silica	Inhalation	respiratory system   silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Oxydipropanol	Ingestion	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 470 mg/kg/day	105 weeks
Oxydipropanol	Ingestion	heart	Not classified	Rat	NOAEL 470 mg/kg/day	105 weeks
Oxydipropanol	Ingestion	endocrine system   liver	Not classified	Rat	NOAEL 3,040 mg/kg/day	105 weeks
Oxydipropanol	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 115 mg/kg/day	105 weeks
Oxydipropanol	Ingestion	skin   bone, teeth, nails, and/or hair   hematopoietic system   immune system   nervous system   vascular system	Not classified	Rat	NOAEL 3,040 mg/kg/day	105 weeks
Dibutyltin Dilaurate	Ingestion	liver	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 2 mg/kg/day	2 weeks
Dibutyltin Dilaurate	Ingestion	immune system	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.3 mg/kg/day	28 days



**Aspiration Hazard**

For the component/components, either no data are currently available or 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 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****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
Glycerol Poly(Oxyethylene, Oxypropylene) Ether	9082-00-2	Inland Silverside	Estimated	96 hours	LC50	650 mg/l
Polypropylene Glycol Glycerol Triether	25791-96-2	Golden Orfe	Experimental	96 hours	LC50	>1,000 mg/l
Polypropylene Glycol Glycerol Triether	25791-96-2	Green Algae	Experimental	72 hours	EC50	>100 mg/l
Polypropylene Glycol Glycerol Triether	25791-96-2	Water flea	Experimental	48 hours	EC50	>100 mg/l
Polypropylene Glycol Glycerol Triether	25791-96-2	Green Algae	Experimental	72 hours	NOEC	>=100 mg/l
Dimethyl Siloxane, Reaction Product with Silica	67762-90-7		Data not available or insufficient for classification			
Dibutyltin Dilaurate	77-58-7	Water flea	Experimental	48 hours	IC50	0.17 mg/l
Diethylene glycol	111-46-6	Fathead minnow	Experimental	96 hours	LC50	75,200 mg/l
Diethylene glycol	111-46-6	Water flea	Experimental	48 hours	LC50	48,900 mg/l

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Diethylene glycol	111-46-6	Green Algae	Estimated	72 hours	NOEC	>100 mg/l
Diethylene glycol	111-46-6	Water flea	Experimental	7 days	NOEC	8,590 mg/l
Oxydipropanol	25265-71-8	Goldfish	Experimental	96 hours	LC50	>5,000 mg/l
Oxydipropanol	25265-71-8	Green algae	Experimental	72 hours	EC50	>100 mg/l
Oxydipropanol	25265-71-8	Water flea	Experimental	48 hours	EC50	>100 mg/l
Oxydipropanol	25265-71-8	Green algae	Experimental	72 hours	NOEC	100 mg/l
1,4-diazabicyclooctane	280-57-9	Common Carp	Experimental	96 hours	LC50	>100 mg/l
1,4-diazabicyclooctane	280-57-9	Green Algae	Experimental	72 hours	EC50	180 mg/l
1,4-diazabicyclooctane	280-57-9	Water flea	Experimental	48 hours	EC50	>100 mg/l
1,4-diazabicyclooctane	280-57-9	Green Algae	Experimental	72 hours	Effect Concentration 10%	79 mg/l

**12.2. Persistence and degradability**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Glycerol Poly(Oxyethylene, Oxypropylene) Ether	9082-00-2	Data not available- insufficient			N/A	
Polypropylene Glycol Glycerol Triether	25791-96-2	Experimental Biodegradation	28 days	CO2 evolution	38 % weight	OECD 301B - Modified sturm or CO2
Dimethyl Siloxane, Reaction Product with Silica	67762-90-7	Data not available- insufficient			N/A	
Dibutyltin Dilaurate	77-58-7	Experimental Biodegradation	39 days	BOD	23 % weight	OECD 301F - Manometric respirometry
Diethylene glycol	111-46-6	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	91.8 % weight	OECD 301A - DOC Die Away Test
Oxydipropanol	25265-71-8	Experimental Biodegradation	28 days	BOD	84.4 % BOD/ThBOD	OECD 301F - Manometric respirometry
1,4- diazabicyclooctane	280-57-9	Experimental Biodegradation	28 days	CO2 evolution	7 % weight	OECD 301B - Modified sturm or CO2

**12.3 : Bioaccumulative potential**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
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**3M Flexible Foam Adhesive PN 08463, Part B**

Glycerol Poly(Oxyethylene, Oxypropylene) Ether	9082-00-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polypropylene Glycol Glycerol Triether	25791-96-2	Experimental BCF-Carp	42 days	Bioaccumulation factor	≤7	Other methods
Dimethyl Siloxane, Reaction Product with Silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Dibutyltin Dilaurate	77-58-7	Experimental BCF-Carp	56 days	Bioaccumulation factor	110	Other methods
Diethylene glycol	111-46-6	Experimental Bioconcentration		Log Kow	-1.98	Other methods
Oxydipropanol	25265-71-8	Experimental BCF-Carp	42 days	Bioaccumulation factor	4.6	OECD 305E - Bioaccumulation flow-through fish test
1,4-diazabicyclooctane	280-57-9	Experimental BCF-Carp	42 days	Bioaccumulation factor	<13	OECD 305E - Bioaccumulation flow-through fish test

**12.4. Mobility in soil**

Please contact manufacturer for more details

**12.5 Other Adverse effects**

No information available.

**SECTION 13: Disposal considerations****13.1. Disposal methods**

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

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

**SECTION 14: Transport Information**

Not hazardous for transportation.

**Air Transport (IATA) Regulations**

**UN No** Not applicable

**Proper Shipping Name** Not applicable

**Hazard Class/Division** Not applicable

**Subsidiary Risk** Not applicable

**Packing Group:** Not applicable

**Marine Transport (IMDG)**

**UN No** Not applicable

**Proper Shipping Name** Not applicable

**Hazard Class/Division** Not applicable

**Subsidiary Risk** Not applicable

**Packing Group:** Not applicable

**Environmental Hazards:** Not applicable

## **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. The components of this product are in compliance with the chemical notification requirements of TSCA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

#### **Applicable Environmental, Health and Safety Regulations**

The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989

Hazardous Waste(Management , Handling & Transboundary) Rules, 2008

Hazardous Chemicals (Classification, Packaging and Labelling Draft Rules), 2011

The following ingredients are listed as hazardous on Part II of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules

Diethylene glycol

The following ingredients are classified as hazardous based on the criteria listed under Part I of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules:

The product is classified as Non-Hazardous as per MSIHC Rules, 1989.

## **SECTION 16: Other information**

#### **NFPA Hazard Classification**

**Health:** 2    **Flammability:** 1    **Instability:** 0    **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

#### **Revision information:**

No revision information

**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 India SDSs are available at <http://solutions.3mindia.co.in>**