



## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (1907/2006) as amended by Regulation (EU) 2020/878

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

3M(TM) Fast Cure Glass Adhesive P/N 08613, 08628, 08629

#### Product Identification Numbers

FI-3000-0025-9

7000077198

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

##### Identified uses

Automotive.

#### 1.3. Details of the supplier of the safety data sheet

**Address:** 3M Ireland Limited, 70 SIR JOHN ROGERSON'S QUAY, D02R296 DUBLIN 2  
**Telephone:** +353 1 280 3555  
**E Mail:** ner-productstewardship@mmm.com  
**Website:** www.3M.com

#### 1.4. Emergency telephone number

Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

### SECTION 2: Hazard identification

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

CLP REGULATION (EC) No 1272/2008

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

##### CLASSIFICATION:

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315

Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319  
Respiratory Sensitization, Category 1 - Resp. Sens. 1; H334  
Hazardous to the Aquatic Environment (Chronic), Category 3 - Aquatic Chronic 3; H412

For full text of H phrases, see Section 16.

**2.2. Label elements**

**CLP REGULATION (EC) No 1272/2008**

**SIGNAL WORD**

DANGER.

**Symbols**

GHS08 (Health Hazard) |

**Pictograms**



**Ingredients:**

Ingredient	CAS Nbr	EC No.	% by Wt
4,4'-methylenediphenyl diisocyanate	101-68-8	202-966-0	< 1

**HAZARD STATEMENTS:**

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H412	Harmful to aquatic life with long lasting effects.

**PRECAUTIONARY STATEMENTS**

**Prevention:**

P261A Avoid breathing vapours.

**Response:**

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

**Information required per Regulation (EU) 2020/1149 as regards diisocyanates:**

As from 24 August 2023 adequate training is required before industrial or professional use. Further information can be found at [feica.eu/Puinfo](http://feica.eu/Puinfo)

**2.3. Other hazards**

Persons previously sensitised to isocyanates may develop a cross-sensitisation reaction to other isocyanates.  
This material does not contain any substances that are assessed to be a PBT or vPvB

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

**3.1. Substances**

Not applicable

**3.2. Mixtures**

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Polyurethane prepolymer	Trade Secret	15 - 40	Substance not classified as hazardous
Carbon black	(CAS-No.) 1333-86-4 (EC-No.) 215-609-9 (REACH-No.) 01-2119384822-32	10 - 30	Substance with a national occupational exposure limit
C14-17 alkanes, sec-mono- and disulfonic acids, phenyl esters	(EC-No.) 701-257-8	20 - 30	Substance not classified as hazardous
Kaolin, calcined	(CAS-No.) 92704-41-1 (EC-No.) 296-473-8	7 - 13	Substance not classified as hazardous
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	(EC-No.) 926-141-6	1 - 5	Asp. Tox. 1, H304 EUH066
4,4'-methylenediphenyl diisocyanate	(CAS-No.) 101-68-8 (EC-No.) 202-966-0	< 1	Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373 Nota 2,C
dibutyltin dichloride	(CAS-No.) 683-18-1 (EC-No.) 211-670-0	< 0.1	Acute Tox. 2, H330 Acute Tox. 3, H301 Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Muta. 2, H341 Repr. 1B, H360FD STOT RE 1, H372 Aquatic Acute 1, H400,M=10 Aquatic Chronic 1, H410,M=10 Skin Sens. 1B, H317 STOT SE 1, H370
TRIBUTYL TIN CHLORIDE (T; R:21-25-36/38-48/23/25)	(CAS-No.) 1461-22-9 (EC-No.) 215-958-7	< 0.001	Acute Tox. 3, H311 Acute Tox. 3, H301 Skin Irrit. 2, H315 Repr. 1B, H360FD STOT RE 1, H372 Acute Tox. 1, H330 Eye Dam. 1, H318 Skin Sens. 1A, H317 STOT SE 1, H370 Aquatic Acute 1, H400,M=1000 Aquatic Chronic 1, H410,M=1000

Any entry in the Identifier(s) column that begins with the numbers 6, 7, 8, or 9 are a Provisional List Number provided by

ECHA pending publication of the official EC Inventory Number for the substance.  
Please see section 16 for the full text of any H statements referred to in this section

### Specific Concentration Limits

Ingredient	Identifier(s)	Specific Concentration Limits
dibutyltin dichloride	(CAS-No.) 683-18-1 (EC-No.) 211-670-0	(C >= 5%) Skin Corr. 1B, H314 (0.01% <= C < 5%) Skin Irrit. 2, H315 (C >= 3%) Eye Dam. 1, H318 (0.01% <= C < 3%) Eye Irrit. 2, H319
4,4'-methylenediphenyl diisocyanate	(CAS-No.) 101-68-8 (EC-No.) 202-966-0	(C >= 5%) Skin Irrit. 2, H315 (C >= 5%) Eye Irrit. 2, H319 (C >= 0.1%) Resp. Sens. 1, H334 (C >= 5%) STOT SE 3, H335
TRIBUTYL TIN CHLORIDE (T; R:21-25-36/38-48/23/25)	(CAS-No.) 1461-22-9 (EC-No.) 215-958-7	(C >= 1%) Skin Irrit. 2, H315 (C >= 1%) STOT RE 1, H372 (0.25% <= C < 1%) STOT RE 2, H373

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

## 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

If exposed, flush eyes with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms develop, 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

The most important symptoms and effects based on the CLP classification include:

Allergic respiratory reaction (difficulty breathing, wheezing, cough, and tightness of chest). Irritation to the skin (localized redness, swelling, itching, and dryness). Serious irritation to the eyes (significant redness, swelling, pain, tearing, and impaired vision).

### 4.3. Indication of any immediate medical attention and special treatment required

Not applicable

## SECTION 5: Fire-fighting measures

### 5.1. 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

Closed containers exposed to heat from fire may build pressure and explode.

### 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. Advice for fire-fighters

When fire fighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, tunic and trousers (leggings), bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head. 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

Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS. Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

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. Dispose of collected material as soon as possible.

### 6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Avoid breathing of vapours created during the cure cycle. Do not use in a confined area with minimal air exchange. Avoid breathing 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. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

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

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 acids. Store away from strong bases. Store away from oxidising agents. Store away from amines.

**7.3. Specific end use(s)**

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

**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>
4,4'-methylenediphenyl diisocyanate	101-68-8	Ireland OELs	TWA(as NCO)(8 hours):0.005 ppm;TWA(8 hours):0.005 ppm	as NCO, Respiratory/Dermal Sensitizer
Carbon black	1333-86-4	Ireland OELs	TWA(inhalable fraction)(8 hours):3 mg/m <sup>3</sup>	

Ireland OELs : Ireland. OELs  
TWA: Time-Weighted-Average  
STEL: Short Term Exposure Limit  
CEIL: Ceiling

**Biological limit values**

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

**Recommended monitoring procedures:**Information on recommended monitoring procedures can be obtained from Indust. Inspect./Ministry (IE)

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

Provide ventilated enclosure for heat 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.

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

None required.

**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:

<b>Material</b>	<b>Thickness (mm)</b>	<b>Breakthrough Time</b>
Neoprene.	0.5	=>8 hours
Nitrile rubber.	0.35	=>8 hours
Natural rubber.	0.5	=>8 hours

The glove data presented are based on the substance driving dermal toxicity and the conditions present at the time of testing.

Breakthrough time may be altered when the glove is subjected to use conditions that place additional stress on the glove.

#### Applicable Norms/Standards

Use gloves tested to EN 374

If this product is used in a manner that presents a higher potential for exposure (e.g., spraying, high splash potential, etc.), then use of a protective apron may be necessary. See recommended glove material(s) for determining appropriate apron material(s). If a glove material is not available as an apron, polymer laminate is a suitable option.

#### 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.

#### Applicable Norms/Standards

Use a respirator conforming to EN 140 or EN 136: filter types A & P

## SECTION 9: Physical and chemical properties

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

<b>Physical state</b>	Solid.
<b>Specific Physical Form:</b>	Paste
<b>Colour</b>	Black
<b>Odor</b>	Slight Odorless
<b>Odour threshold</b>	<i>No data available.</i>
<b>Melting point/freezing point</b>	<i>No data available.</i>
<b>Boiling point/boiling range</b>	>= 192 °C
<b>Flammability</b>	Not applicable.
<b>Flammable Limits(LEL)</b>	0.6 % volume
<b>Flammable Limits(UEL)</b>	7 % volume
<b>Flash point</b>	>= 70 °C [Test Method:Closed Cup]
<b>Autoignition temperature</b>	>= 200 °C
<b>Decomposition temperature</b>	140 °C
<b>pH</b>	<i>substance/mixture is non-soluble (in water)</i>
<b>Kinematic Viscosity</b>	<i>No data available.</i>
<b>Water solubility</b>	Immiscible
<b>Solubility- non-water</b>	<i>No data available.</i>
<b>Partition coefficient: n-octanol/water</b>	<i>No data available.</i>
<b>Vapour pressure</b>	<i>No data available.</i>
<b>Density</b>	1.2 g/cm <sup>3</sup> [ @ 20 °C ]
<b>Relative density</b>	1.23 [Ref Std: WATER=1]
<b>Relative Vapour Density</b>	6 [Ref Std: AIR=1]
<b>Particle Characteristics</b>	
<b>Primary particle dia-median</b>	18 - 61 nm (Carbon black )
<b>Shape of Primary particle</b>	Other (see details) (Carbon black )
<b>Specific surface area</b>	21 - 1,200 m <sup>2</sup> /g (Carbon black )

## 9.2. Other information

### 9.2.2 Other safety characteristics

EU Volatile Organic Compounds

*No data available.*

Evaporation rate

*No data available.*

Percent volatile

2.5 %

## 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.

Sparks and/or flames.

### 10.5 Incompatible materials

Accelerators

Aluminium or magnesium powder and high/shear temperature conditions.

Alcohols.

Alkali and alkaline earth metals.

Amines.

Strong acids.

Strong bases.

Strong oxidising agents.

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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Signs and Symptoms of Exposure

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

**Inhalation**

Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

**Skin contact**

Contact with the skin during product use is not expected to result in significant irritation. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye contact**

Contact with the eyes during product use is not expected to result in significant irritation.

**Ingestion**

No known health effects.

**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	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapour(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
C14-17 alkanes, sec-mono- and disulfonic acids, phenyl esters	Dermal	Rat	LD50 > 1,000 mg/kg
C14-17 alkanes, sec-mono- and disulfonic acids, phenyl esters	Ingestion	Rat	LD50 > 5,000 mg/kg
Carbon black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon black	Ingestion	Rat	LD50 > 8,000 mg/kg
Kaolin, calcined	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.07 mg/l
Kaolin, calcined	Dermal	similar compounds	LD50 > 5,000 mg/kg
Kaolin, calcined	Ingestion	similar compounds	LD50 > 5,000 mg/kg
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Ingestion	Rat	LD50 > 15,000 mg/kg
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Dermal	similar compounds	LD50 > 5,000 mg/kg
4,4'-methylenediphenyl diisocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
4,4'-methylenediphenyl diisocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
4,4'-methylenediphenyl diisocyanate	Ingestion	Rat	LD50 31,600 mg/kg
dibutyltin dichloride	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.059 mg/l
dibutyltin dichloride	Ingestion	Rat	LD50 219 mg/kg
TRIBUTYL TIN CHLORIDE (T; R:21-25-36/38-48/23/25)	Dermal	Rabbit	LD50 500 mg/kg
TRIBUTYL TIN CHLORIDE (T; R:21-25-36/38-48/23/25)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 Not available.
TRIBUTYL TIN CHLORIDE (T; R:21-25-36/38-48/23/25)	Ingestion	Rat	LD50 101 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Carbon black	Rabbit	No significant irritation
Kaolin, calcined	Rabbit	No significant irritation
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	similar compounds	Mild irritant
4,4'-methylenediphenyl diisocyanate	official classification	Irritant
dibutyltin dichloride	Multiple animal species	Corrosive
TRIBUTYLTIN CHLORIDE (T; R:21-25-36/38-48/23/25)	Rabbit	Irritant

**Serious Eye Damage/Irritation**

Name	Species	Value
Carbon black	Rabbit	No significant irritation
Kaolin, calcined	Rabbit	No significant irritation
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	similar compounds	No significant irritation
4,4'-methylenediphenyl diisocyanate	official classification	Severe irritant
dibutyltin dichloride	Rabbit	Corrosive
TRIBUTYLTIN CHLORIDE (T; R:21-25-36/38-48/23/25)	Rabbit	Corrosive

**Skin Sensitisation**

Name	Species	Value
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	similar compounds	Not classified
4,4'-methylenediphenyl diisocyanate	Mouse	Sensitising
dibutyltin dichloride	similar compounds	Sensitising
TRIBUTYLTIN CHLORIDE (T; R:21-25-36/38-48/23/25)	Mouse	Sensitising

**Respiratory Sensitisation**

Name	Species	Value
4,4'-methylenediphenyl diisocyanate	Human	Sensitising

**Germ Cell Mutagenicity**

Name	Route	Value
Carbon black	In Vitro	Not mutagenic
Carbon black	In vivo	Some positive data exist, but the data are not sufficient for classification
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	In Vitro	Not mutagenic
4,4'-methylenediphenyl diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
dibutyltin dichloride	In Vitro	Some positive data exist, but the data are not sufficient for classification
dibutyltin dichloride	In vivo	Mutagenic
TRIBUTYLTIN CHLORIDE (T; R:21-25-36/38-48/23/25)	In Vitro	Not mutagenic
TRIBUTYLTIN CHLORIDE (T; R:21-25-36/38-48/23/25)	In vivo	Some positive data exist, but the data are not

		sufficient for classification
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**Carcinogenicity**

Name	Route	Species	Value
Carbon black	Dermal	Mouse	Not carcinogenic
Carbon black	Ingestion	Mouse	Not carcinogenic
Carbon black	Inhalation	Rat	Carcinogenic.
4,4'-methylenediphenyl diisocyanate	Inhalation	Rat	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
4,4'-methylenediphenyl diisocyanate	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
dibutyltin dichloride	Ingestion	Not classified for male reproduction	Rat	NOAEL 12 mg/kg/day	28 days
dibutyltin dichloride	Ingestion	Toxic to female reproduction	Rat	NOAEL 1.7 mg/kg/day	prematuring into lactation
dibutyltin dichloride	Ingestion	Toxic to development	Rat	NOAEL 1.7 mg/kg/day	prematuring into lactation
TRIBUTYL TIN CHLORIDE (T; R:21-25-36/38-48/23/25)	Ingestion	Not classified for male reproduction	Rat	NOAEL 10 mg/kg/day	2 generation
TRIBUTYL TIN CHLORIDE (T; R:21-25-36/38-48/23/25)	Ingestion	Toxic to female reproduction	Rat	NOAEL 2 mg/kg/day	2 generation
TRIBUTYL TIN CHLORIDE (T; R:21-25-36/38-48/23/25)	Ingestion	Toxic to development	Rat	LOAEL 0.025 mg/kg/day	weeks

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
4,4'-methylenediphenyl diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
dibutyltin dichloride	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	
dibutyltin dichloride	Ingestion	immune system	Causes damage to organs	Rat	LOAEL 5 mg/kg	
TRIBUTYL TIN CHLORIDE (T; R:21-25-36/38-48/23/25)	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available.	
TRIBUTYL TIN CHLORIDE (T; R:21-25-36/38-48/23/25)	Ingestion	immune system	Causes damage to organs	Rat	NOAEL 5 mg/kg	

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Carbon black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
Kaolin, calcined	Inhalation	pneumoconiosis	Not classified	similar compounds	NOAEL not available	occupational exposure
Hydrocarbons, C11-C14, n-alkanes, isoalkanes,	Inhalation	liver	Not classified	Rat	NOAEL 6 mg/l	13 weeks

cyclics, <2% aromatics						
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Inhalation	kidney and/or bladder	Not classified	Rat	LOAEL 1.5 mg/l	13 weeks
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 6 mg/l	13 weeks
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Ingestion	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 100 mg/kg/day	13 weeks
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Ingestion	hematopoietic system   eyes	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4,4'-methylenediphenyl diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
dibutyltin dichloride	Ingestion	immune system	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.3 mg/kg/day	28 days
dibutyltin dichloride	Ingestion	hematopoietic system   liver   nervous system   kidney and/or bladder	Not classified	Rat	NOAEL 12 mg/kg/day	28 days
TRIBUTYL TIN CHLORIDE (T; R:21-25-36/38-48/23/25)	Ingestion	liver   immune system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.36 mg/kg/day	28 days
TRIBUTYL TIN CHLORIDE (T; R:21-25-36/38-48/23/25)	Ingestion	kidney and/or bladder   hematopoietic system	Not classified	Rat	NOAEL 1.5 mg/kg/day	28 days

**Aspiration Hazard**

Name	Value
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	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.

**11.2. Information on other hazards**

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

**SECTION 12: Ecological information**

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

**12.1. Toxicity**

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
Polyurethane prepolymer	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	NA
C14-17 alkanes, sec-mono- and disulfonic acids, phenyl esters	701-257-8	N/A	Data not available or insufficient for classification	N/A	N/A	N/A

**3M(TM) Fast Cure Glass Adhesive P/N 08613, 08628, 08629**

Carbon black	1333-86-4	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Carbon black	1333-86-4	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Carbon black	1333-86-4	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	100 mg/l
Carbon black	1333-86-4	Activated sludge	Experimental	3 hours	NOEC	>800 mg/l
Kaolin, calcined	92704-41-1	Bacteria	Estimated	16 hours	EC10	1,400 mg/l
Kaolin, calcined	92704-41-1	Green algae	Estimated	72 hours	EC50	2,500 mg/l
Kaolin, calcined	92704-41-1	Water flea	Estimated	48 hours	EC50	>100 mg/l
Kaolin, calcined	92704-41-1	Zebra Fish	Estimated	96 hours	LC50	>100 mg/l
Kaolin, calcined	92704-41-1	Green algae	Estimated	72 hours	EC10	41 mg/l
Kaolin, calcined	92704-41-1	Rainbow trout	Estimated	30 days	NOEC	100 mg/l
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	926-141-6	Green algae	Experimental	72 hours	EL50	>1,000 mg/l
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	926-141-6	Rainbow trout	Experimental	96 hours	LL50	>1,000 mg/l
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	926-141-6	Water flea	Experimental	48 hours	EL50	>1,000 mg/l
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	926-141-6	Green algae	Experimental	72 hours	NOEL	1,000 mg/l
4,4'-methylenediphenyl diisocyanate	101-68-8	Activated sludge	Estimated	3 hours	EC50	>100 mg/l
4,4'-methylenediphenyl diisocyanate	101-68-8	Green algae	Estimated	72 hours	EC50	>1,640 mg/l
4,4'-methylenediphenyl diisocyanate	101-68-8	Water flea	Estimated	24 hours	EC50	>1,000 mg/l
4,4'-methylenediphenyl diisocyanate	101-68-8	Zebra Fish	Estimated	96 hours	LC50	>1,000 mg/l
4,4'-methylenediphenyl diisocyanate	101-68-8	Green algae	Estimated	72 hours	NOEC	1,640 mg/l
4,4'-methylenediphenyl diisocyanate	101-68-8	Water flea	Estimated	21 days	NOEC	10 mg/l
dibutyltin dichloride	683-18-1	Algae or other aquatic plants	Experimental	96 hours	ErC50	0.0427 mg/l
dibutyltin dichloride	683-18-1	Water flea	Experimental	48 hours	EC50	0.843 mg/l
dibutyltin dichloride	683-18-1	Medaka	Experimental	28 days	NOEC	1.8 mg/l
dibutyltin dichloride	683-18-1	Water flea	Experimental	21 days	NOEC	0.0105 mg/l
dibutyltin dichloride	683-18-1	Activated sludge	Experimental	24 hours	IC50	11.5 mg/l
TRIBUTYL TIN CHLORIDE (T; R:21-25-36/38-48/23/25)	1461-22-9	Copepod	Estimated	48 hours	LC50	0.0012 mg/l
TRIBUTYL TIN CHLORIDE (T; R:21-25-36/38-48/23/25)	1461-22-9	Diatom	Experimental	72 hours	ErC50	0.000987 mg/l
TRIBUTYL TIN CHLORIDE (T; R:21-25-36/38-48/23/25)	1461-22-9	Green algae	Experimental	96 hours	ErC50	0.0124 mg/l

TRIBUTYLTIN CHLORIDE (T; R:21-25-36/38-48/23/25)	1461-22-9	Inland Silverside	Experimental	96 hours	LC50	0.003 mg/l
TRIBUTYLTIN CHLORIDE (T; R:21-25-36/38-48/23/25)	1461-22-9	Water flea	Experimental	48 hours	EC50	0.0098 mg/l
TRIBUTYLTIN CHLORIDE (T; R:21-25-36/38-48/23/25)	1461-22-9	Zebra Fish	Experimental	96 hours	LC50	0.0079 mg/l
TRIBUTYLTIN CHLORIDE (T; R:21-25-36/38-48/23/25)	1461-22-9	Green algae	Experimental	96 hours	NOEC	0.0012 mg/l
TRIBUTYLTIN CHLORIDE (T; R:21-25-36/38-48/23/25)	1461-22-9	Rainbow trout	Experimental	110 days	NOEC	.00004 mg/l
TRIBUTYLTIN CHLORIDE (T; R:21-25-36/38-48/23/25)	1461-22-9	Redworm	Experimental	N/A	EC50	1.3 mg/kg (Dry Weight)
TRIBUTYLTIN CHLORIDE (T; R:21-25-36/38-48/23/25)	1461-22-9	Soil microbes	Experimental	6 hours	EC50	11 mg/l
TRIBUTYLTIN CHLORIDE (T; R:21-25-36/38-48/23/25)	1461-22-9	Springtail	Experimental	N/A	EC50	11 mg/kg (Dry Weight)

## 12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Polyurethane prepolymer	Trade Secret	Data not available or insufficient	N/A	N/A	N/A	N/A
C14-17 alkanes, sec-mono- and disulfonic acids, phenyl esters	701-257-8	Data not available or insufficient	N/A	N/A	N/A	N/A
Carbon black	1333-86-4	Data not available or insufficient	N/A	N/A	N/A	N/A
Kaolin, calcined	92704-41-1	Data not available or insufficient	N/A	N/A	N/A	N/A
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	926-141-6	Experimental Biodegradation	28 days	BOD	69 %BOD/ThOD	OECD 301F - Manometric respirometry
4,4'-methylenebis(phenyl diisocyanate)	101-68-8	Estimated Hydrolysis		Hydrolytic half-life	20 hours (t 1/2)	
dibutyltin dichloride	683-18-1	Experimental Biodegradation	28 days	CO2 evolution	6 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
TRIBUTYLTIN CHLORIDE (T; R:21-25-36/38-48/23/25)	1461-22-9	Experimental Biodegradation	28 days	BOD	0 %BOD/ThOD	OECD 301F - Manometric respirometry

## 12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Polyurethane prepolymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
C14-17 alkanes, sec-mono- and disulfonic acids, phenyl esters	701-257-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Carbon black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Kaolin, calcined	92704-41-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrocarbons, C11-C14, n-alkanes, isoalkanes,	926-141-6	Data not available or insufficient for	N/A	N/A	N/A	N/A

cyclics, <2% aromatics		classification				
4,4'-methylenediphenyl diisocyanate	101-68-8	Experimental BCF - Fish	28 days	Bioaccumulation factor	200	OECD305-Bioconcentration
dibutyltin dichloride	683-18-1	Analogous Compound BCF - Fish	56 days	Bioaccumulation factor	≤110	similar to OECD 305
dibutyltin dichloride	683-18-1	Experimental Bioconcentration		Log Kow	0.97	OECD 107 log Kow shke flask mtd
TRIBUTYLTIN CHLORIDE (T; R:21-25-36/38-48/23/25)	1461-22-9	Experimental BCF - Fish	10 days	Bioaccumulation factor	24000	
TRIBUTYLTIN CHLORIDE (T; R:21-25-36/38-48/23/25)	1461-22-9	Experimental Bioconcentration		Log Kow	4.76	

#### 12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
4,4'-methylenediphenyl diisocyanate	101-68-8	Estimated Mobility in Soil	Koc	34,000 l/kg	Episuite™
TRIBUTYLTIN CHLORIDE (T; R:21-25-36/38-48/23/25)	1461-22-9	Modeled Mobility in Soil	Koc	13,500 l/kg	Episuite™

#### 12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

#### 12.6. Endocrine disrupting properties

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

#### 12.7. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

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

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

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

#### EU waste code (product as sold)

- 08 04 09\* Waste adhesives and sealants containing organic solvents or other dangerous substances
- 20 01 27\* Paint, inks, adhesives and resins containing dangerous substances

## SECTION 14: Transportation information

Not hazardous for transportation.

	<b>Ground Transport (ADR)</b>	<b>Air Transport (IATA)</b>	<b>Marine Transport (IMDG)</b>
<b>14.1 - UN Number or ID number</b>	No data available.	No data available.	No data available.
<b>14.2 UN proper shipping name</b>	No data available.	No data available.	No data available.
<b>14.3 Transport hazard class(es)</b>	No data available.	No data available.	No data available.
<b>14.4 Packing group</b>	No data available.	No data available.	No data available.
<b>14.5 Environmental hazards</b>	No data available.	No data available.	No data available.
<b>14.6 Special precautions for user</b>	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
<b>14.7 Marine Transport in bulk according to IMO instruments</b>	No data available.	No data available.	No data available.
<b>Control Temperature</b>	No data available.	No data available.	No data available.
<b>Emergency Temperature</b>	No data available.	No data available.	No data available.
<b>ADR Classification Code</b>	No data available.	No data available.	No data available.
<b>IMDG Segregation Code</b>	No data available.	No data available.	No data available.

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

## SECTION 15: Regulatory information

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

#### Carcinogenicity

<u>Ingredient</u>	<u>CAS Nbr</u>	<u>Classification</u>	<u>Regulation</u>
Carbon black	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer Regulation (EC) No. 1272/2008, Table 3.1
4,4'-methylenediphenyl diisocyanate	101-68-8	Carc. 2	
4,4'-methylenediphenyl diisocyanate	101-68-8	Gr. 3: Not classifiable	International Agency for Research on Cancer

**Restrictions on the manufacture, placing on the market and use:**

The following substance(s) contained in this product is/are subject through Annex XVII of REACH regulation to restrictions on the manufacture, placing on the market and use when present in certain dangerous substances, mixtures and articles. Users of this product are required to comply with the restrictions placed upon it by the aforementioned provision.

<u>Ingredient</u>	<u>CAS Nbr</u>
4,4'-methylenediphenyl diisocyanate	101-68-8

Restriction status: listed in REACH Annex XVII

Restricted uses: See Annex XVII to Regulation (EC) No 1907/2006 for Conditions of Restriction

**Authorization status under REACH:**

The following substance/s contained in this product might be or is/are subject to authorization in accordance with REACH:

<u>Ingredient</u>	<u>CAS Nbr</u>
dibutyltin dichloride	683-18-1

Authorization status: listed in the Candidate List of Substances of Very High Concern for Authorization

**Global inventory status**

Contact 3M for more information.

**DIRECTIVE 2012/18/EU**

Seveso hazard categories, Annex 1, Part 1

None

Seveso named dangerous substances, Annex 1, Part 2

None

**Regulation (EU) No 649/2012**

Chemical	Identifier(s)	Annex I
dibutyltin dichloride	683-18-1	Part 1
TRIBUTYLTIN CHLORIDE (T; R:21-25-36/38-48/23/25)	1461-22-9	Part 1 and Part 3

**15.2. Chemical Safety Assessment**

A chemical safety assessment has not been carried out for this substance/mixture in accordance with Regulation (EC) No 1907/2006, as amended.

**SECTION 16: Other information****List of relevant H statements**

EUH066	Repeated exposure may cause skin dryness or cracking.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.

H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H360FD	May damage fertility. May damage the unborn child.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

**List of Relevant Notas**

Nota 2	The concentration of isocyanate stated is the percentage by weight of the free monomer calculated with reference to the total weight of the mixture.
Nota C	Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

**Revision information:**

EU Section 14 - Table Data information was added.  
 EU Section 14 - Table Headers information was added.  
 Label: Graphic information was modified.  
 Section 14 Classification Code – Main Heading information was deleted.  
 Section 14 Classification Code – Regulation Data information was deleted.  
 Section 14 Control Temperature – Main Heading information was deleted.  
 Section 14 Control Temperature – Regulation Data information was deleted.  
 Section 14 Emergency Temperature – Main Heading information was deleted.  
 Section 14 Emergency Temperature – Regulation Data information was deleted.  
 Section 14 Hazard Class + Sub Risk – Main Heading information was deleted.  
 Section 14 Hazard Class + Sub Risk – Regulation Data information was deleted.  
 Section 14 Other Dangerous Goods – Main Heading information was deleted.  
 Section 14 Other Dangerous Goods – Regulation Data information was deleted.  
 Section 14 Packing Group – Main Heading information was deleted.  
 Section 14 Packing Group – Regulation Data information was deleted.  
 Section 14 Proper Shipping Name information was deleted.  
 Section 14 Regulations – Main Headings information was deleted.  
 Section 14 Segregation – Regulation Data information was deleted.  
 Section 14 Segregation Code – Main Heading information was deleted.  
 Section 14 Special Precautions – Main Heading information was deleted.  
 Section 14 Special Precautions – Regulation Data information was deleted.  
 Section 14 Transport in bulk – Regulation Data information was deleted.  
 Section 14 Marine transport in bulk according to IMO instruments – Main Heading information was deleted.  
 Section 14 UN Number Column data information was deleted.  
 Section 14 UN Number information was deleted.  
 Section 16: Two-column table displaying the unique list of Notas for all components of the given material. information was added.

**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. In addition, this SDS is being

provided to convey health and safety information. If you are the importer of record of this product into the European Union, you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration.

**3M Ireland MSDSs are available at [www.3M.com](http://www.3M.com)**