Safety Data Sheet

Document group:	20-7855-8	**Version number:**	13.00
Revision date:	12/12/2023	**Supersedes date:**	20/04/2023
Transportation version number:			

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier
3M Flexible Bumper Patch Kit, 05888

Product Identification Numbers
FS-9100-5022-8

7000080200

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, The Iveagh Building, The Park, Carrickmines, Dublin 18.
Telephone: +353 1 280 3555
E Mail: tox.uk@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

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:

24-2813-4, 34-4427-0

TRANSPORTATION INFORMATION

Refer to section 14 of the kit components for transport information.

KIT LABEL

2.1. Classification of the substance or mixture
CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:
Flammable Liquid, Category 2 - Flam. Liq. 2; H225
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Specific Target Organ Toxicity-Repeated Exposure, Category 2 - STOT RE 2; H373
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335
Hazardous to the Aquatic Environment (Acute), Category 1 - Aquatic Acute 1; H400
Hazardous to the Aquatic Environment (Chronic), Category 1 - Aquatic Chronic 1; H410

For full text of H phrases, see Section 16.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008

SIGNAL WORD
DANGER.

Symbols
GHS02 (Flame) |GHS07 (Exclamation mark) |GHS08 (Health Hazard) |GHS09 (Environment) |

Pictograms

Contains:
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane; bis-[4-(2,3-epoxipropoxi)phenyl]propane; cyclohexane; maleic anhydride; xylene.

HAZARD STATEMENTS:

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure: nervous system | sensory organs.
H410	Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS
General:

P102	Keep out of reach of children.

Prevention:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260A	Do not breathe vapours.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280K	Wear protective gloves and respiratory protection.

Response:

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

Disposal:

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

For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:

<=125 ml Hazard statements

H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure: nervous system | sensory organs.

<=125 ml Precautionary statements

General:

P102	Keep out of reach of children.

Prevention:

P260A	Do not breathe vapours.
P271	Use only outdoors or in a well-ventilated area.
P280K	Wear protective gloves and respiratory protection.

Response:

P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

Disposal:

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

Refer to Safety Data Sheet for component % unknown values (www.3M.com/msds).

Revision information:
Kit Information: CLP Target Organ Hazard Statement information was deleted.
Kit: Component document group number(s) information was modified.
Label: CLP Ingredients - kit components information was modified.
Section 2: <125ml Hazard - Health information was modified.
Section 2: <125ml Precautionary - Prevention information was added.
Section 2: <125ml Precautionary - Response information was added.
Label: CLP Classification information was modified.
Label: CLP Precautionary - Prevention information was modified.
Label: CLP Precautionary - Response information was added.

Label: CLP Target Organ Hazard Statement information was added.

Safety Data Sheet

This product is defined as an article under REACH and does not require a Safety Data Sheet under Article 31 of Regulation (EC) No. 1907/2006. Since an SDS is not required, this document does not contain all of the information that is required for substance and mixture SDSs under REACH.

Document group:	24-2813-4	**Version number:**	4.00
Revision date:	09/01/2024	**Supersedes date:**	19/02/2016

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

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

1.1. Product identifier
3M™ Flexible Bumper Patch PN 05888

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, The Iveagh Building, The Park, Carrickmines, Dublin 18.
Telephone:	+353 1 280 3555
E Mail:	tox.uk@mmm.com
Website:	www.3M.com

1.4. Emergency telephone number
+44 (0)1344 858 000

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:
This material is exempt from hazard classification according to Regulation (EC) No. 1272/2008, as amended, on classification, labelling, and packaging of substances and mixtures.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008

Not applicable

2.3. Other hazards

None known.

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]
Acrylic foam adhesive	Trade Secret	60 - 85	Substance not classified as hazardous
Thermoplastic Polyolefin Backing	Trade Secret	15 - 40	Acute Tox. 3, H311 Acute Tox. 3, H301 Eye Dam. 1, H318

Please see section 16 for the full text of any H statements referred to in this section

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
No need for first aid is anticipated. If symptoms develop, remove the affected person to fresh air. Get medical attention.

Skin contact
No need for first aid is anticipated.

Eye contact
No need for first aid is anticipated. If signs/symptoms persist, get medical attention.

If swallowed
Do not induce vomiting. Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
No critical symptoms or effects. 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. 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. Advice 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
Not applicable.

6.2. Environmental precautions
Not applicable.

6.3. Methods and material for containment and cleaning up
Not applicable.

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
This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat. Store away from acids.

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.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Thermoplastic Polyolefin Backing	Trade Secret	Manufacturer determined	TWA(8 hours):3.2 mg/m3(0.8 ppm)	SKIN

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
Not applicable.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Eye protection not required.

Skin/hand protection
No chemical protective gloves are required.

Respiratory protection

Respiratory protection is not required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Colour	Black, Brown
Odor	Acrylate
Odour threshold	*Not applicable.*
Melting point/freezing point	*Not applicable.*
Boiling point/boiling range	*Not applicable.*
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Flash point	*Not applicable.*
Autoignition temperature	*Not applicable.*
Decomposition temperature	*Not applicable.*
pH	*substance/mixture is non-soluble (in water)*
Kinematic Viscosity	*Not applicable.*
Water solubility	Nil
Solubility- non-water	*Not applicable.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	*Not applicable.*
Density	*Not applicable.*
Relative density	*Not applicable.*
Relative Vapour Density	*Not applicable.*

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	*No data available.*
Evaporation rate	*Not applicable.*
Percent volatile	*Not applicable.*

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

Substance	Condition
Carbon monoxide	Oxidation, heat or reaction
Carbon dioxide.	Oxidation, heat or reaction
Oxides of nitrogen.	Not specified.

Under recommended usage conditions, hazardous decomposition products are not expected. Hazardous decomposition products may occur as a result of oxidation, heating, or reaction with another material.

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
No health effects are expected.

Skin contact
No health effects are expected.

Eye contact
No health effects are expected.

Ingestion
No health effects are expected.

Additional information:
This product, when used under reasonable conditions and in accordance with the 3M directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

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

Thermoplastic Polyolefin Backing	Dermal	Rat	LD50 907 mg/kg
Thermoplastic Polyolefin Backing	Ingestion	Rat	LD50 > 215 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Thermoplastic Polyolefin Backing	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Thermoplastic Polyolefin Backing	In vitro data	Corrosive

Skin Sensitisation

Name	Species	Value
Thermoplastic Polyolefin Backing	Multiple animal species	Not classified

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
Thermoplastic Polyolefin Backing	In vivo	Not mutagenic
Thermoplastic Polyolefin Backing	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

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

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Thermoplastic Polyolefin Backing	Ingestion	Not classified for female reproduction	Rat	NOAEL 30 mg/kg/day	premating into lactation
Thermoplastic Polyolefin Backing	Ingestion	Not classified for male reproduction	Rat	NOAEL 30 mg/kg/day	29 days
Thermoplastic Polyolefin Backing	Ingestion	Not classified for development	Rat	NOAEL 30 mg/kg/day	premating into lactation
Thermoplastic Polyolefin Backing	Dermal	Not classified for male reproduction	Rat	NOAEL 250 mg/kg/day	13 weeks

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Thermoplastic Polyolefin Backing	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	Irritation Positive	
Thermoplastic Polyolefin Backing	Inhalation	central nervous system depression	Not classified		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Thermoplastic Polyolefin Backing	Dermal	heart | endocrine system | hematopoietic system | liver | nervous system | kidney and/or bladder	Not classified	Rat	NOAEL 250 mg/kg/day	13 weeks

Aspiration Hazard
For the component/components, either no data is currently available or the data is 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.

11.2. Information on other hazards

Not applicable.

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
Thermoplastic Polyolefin Backing	Trade Secret	Bacteria	Analogous Compound	16 hours	EC10	>10,000 mg/l
Thermoplastic Polyolefin Backing	Trade Secret	Activated sludge	Experimental	N/A	EC50	>1,000 mg/l
Thermoplastic Polyolefin Backing	Trade Secret	Green algae	Experimental	72 hours	ErC50	>400 mg/l
Thermoplastic Polyolefin Backing	Trade Secret	Rainbow trout	Experimental	96 hours	LC50	>120 mg/l
Thermoplastic Polyolefin Backing	Trade Secret	Water flea	Experimental	48 hours	EC50	>120 mg/l
Thermoplastic Polyolefin Backing	Trade Secret	Green algae	Experimental	72 hours	ErC10	>400 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Thermoplastic Polyolefin Backing	Trade Secret	Experimental Biodegradation	28 days	BOD	3 %BOD/ThOD	OECD 301C - MITI test (I)
Thermoplastic Polyolefin Backing	Trade Secret	Modeled Photolysis		Photolytic half-life(in water)	1.1 days (t 1/2)	

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Thermoplastic Polyolefin Backing	Trade Secret	Experimental Bioconcentration		Log Kow	-0.3	OECD 107 log Kow shke flsk mtd

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
Thermoplastic Polyolefin Backing	Trade Secret	Modeled Mobility in Soil	Koc	6 l/kg	Episuite™

12.5. Results of the PBT and vPvB assessment

Not applicable

12.6. Endocrine disrupting properties

Not applicable

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.

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. 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. If no other disposal options are available, waste product may be placed in a landfill properly designed for industrial waste.

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 10 Waste adhesives and sealants other than those mentioned in 08 04 09

SECTION 14: Transportation information

Not hazardous for transportation.

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number or ID number	No data available.	No data available.	No data available.
14.2 UN proper shipping name	No data available.	No data available.	No data available.
14.3 Transport hazard class(es)	No data available.	No data available.	No data available.
14.4 Packing group	No data available.	No data available.	No data available.

14.5 Environmental hazards	No data available.	No data available.	No data available.
14.6 Special precautions for user	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.
14.7 Marine Transport in bulk according to IMO instruments	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR Classification Code	No data available.	No data available.	No data available.
IMDG Segregation Code	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

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
No chemicals listed

15.2. Chemical Safety Assessment
Not applicable.

SECTION 16: Other information

List of relevant H statements

H301 Toxic if swallowed.

H311	Toxic in contact with skin.
H318	Causes serious eye damage.

Revision information:
EU Section 09: pH information information was added.
Section 1: Product name information was modified.
Section 02: CLP Classification Statements information was added.
Label: CLP Classification information was deleted.
Section 03: Composition table % Column heading information was added.
Section 3: Composition/ Information of ingredients table information was added.
Section 3: Composition/ Information of ingredients table information was deleted.
Section 03: Substance not applicable information was added.
Section 4: First aid for eye contact information information was modified.
Section 4: First aid for ingestion (swallowing) information information was modified.
Section 4: First aid for inhalation information information was modified.
Section 04: Information on toxicological effects information was modified.
Section 5: Fire - Advice for fire fighters information information was modified.
Section 8: Occupational exposure limit table information was added.
Section 8: Occupational exposure limit table information was modified.
OEL Reg Agency Desc information was added.
Section 8: Personal Protection - Skin/hand information information was modified.
Section 8: STEL key information was added.
Section 8: TWA key information was added.
Section 09: Color information was added.
Section 9: Evaporation Rate information information was deleted.
Section 9: Explosive properties information information was deleted.
Section 09: Kinematic Viscosity information information was added.
Section 9: Melting point information information was modified.
Section 09: Odor information was added.
Sections 3 and 9: Odour, colour, grade information information was deleted.
Section 9: Oxidising properties information information was deleted.
Section 9: pH information information was deleted.
Section 9: Property description for optional properties information was modified.
Section 9: Vapour density value information was added.
Section 9: Vapour density value information was deleted.
Section 9: Viscosity information information was deleted.
Section 10: Hazardous decomposition or by-products table information was modified.
Section 11: Acute Toxicity table information was modified.
Section 11: Classification disclaimer information was modified.
Section 11: Germ Cell Mutagenicity Table information was added.
Section 11: Germ Cell Mutagenicity text information was deleted.
Section 11: Health Effects - Eye information information was modified.
Section 11: Health Effects - Ingestion information information was modified.
Section 11: Health Effects - Inhalation information information was modified.
Section 11: Health Effects - Skin information information was modified.
Section 11: No endocrine disruptor information available warning information was added.
Section 11: Reproductive Toxicity Table information was added.
Section 11: Serious Eye Damage/Irritation Table information was added.
Section 11: Serious Eye Damage/Irritation text information was deleted.
Section 11: Skin Corrosion/Irritation Table information was added.
Section 11: Skin Corrosion/Irritation text information was deleted.
Section 11: Skin Sensitization Table information was added.
Section 11: Skin Sensitization text information was deleted.
Section 11: Specific Target Organ Toxicity - repeated exposure text information was deleted.
Section 11: Specific Target Organ Toxicity - single exposure text information was deleted.
Section 11: Target Organs - Repeated Table information was added.

Section 11: Target Organs - Single Table information was added.
Section 12: 12.6. Endocrine Disrupting Properties information was added.
Section 12: 12.7. Other adverse effects information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Contact manufacturer for more detail. information was deleted.
Section 12: Mobility in soil information information was added.
Prints No Data if Bioccumulative potential information is not present information was deleted.
Section 12: No endocrine disruptor information available warning information was added.
Section 12: No PBT/vPvB information available warning information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was added.
Section 13: 13.1. Waste disposal note information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 14 Classification Code – Main Heading information was added.
Section 14 Classification Code – Regulation Data information was added.
Section 14 Control Temperature – Main Heading information was added.
Section 14 Control Temperature – Regulation Data information was added.
Section 14 Disclaimer Information information was added.
Section 14 Emergency Temperature – Main Heading information was added.
Section 14 Emergency Temperature – Regulation Data information was added.
Section 14 Hazard Class + Sub Risk – Main Heading information was added.
Section 14 Hazard Class + Sub Risk – Regulation Data information was added.
Section 14 Hazardous/Not Hazardous for Transportation information was added.
Section 14 Other Dangerous Goods – Main Heading information was added.
Section 14 Other Dangerous Goods – Regulation Data information was added.
Section 14 Packing Group – Main Heading information was added.
Section 14 Packing Group – Regulation Data information was added.
Section 14 Proper Shipping Name information was added.
Section 14 Regulations – Main Headings information was added.
Section 14 Segregation – Regulation Data information was added.
Section 14 Segregation Code – Main Heading information was added.
Section 14 Special Precautions – Main Heading information was added.
Section 14 Special Precautions – Regulation Data information was added.
Section 14 Transport in bulk – Regulation Data information was added.
Section 14 Marine transport in bulk according to IMO instruments – Main Heading information was added.
Section 14 UN Number Column data information was added.
Section 14 UN Number information was added.
Section 14: Transportation classification information was deleted.
Section 15: Chemical Safety Assessment information was modified.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was added.
Sectio 16: UK disclaimer information was deleted.

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

Safety Data Sheet

Document group:	34-4427-0	**Version number:**	7.00
Revision date:	12/12/2023	**Supersedes date:**	20/06/2023

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

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

1.1. Product identifier
3M™ Adhesion Promoter, PN 06396

Product Identification Numbers
FS-9100-4256-3

7000080124

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, The Iveagh Building, The Park, Carrickmines, Dublin 18.
Telephone: +353 1 280 3555
E Mail: tox.uk@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.
The aspiration hazard classification is not required due to the product's viscosity.

CLASSIFICATION:
Flammable Liquid, Category 2 - Flam. Liq. 2; H225

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Specific Target Organ Toxicity-Repeated Exposure, Category 2 - STOT RE 2; H373
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335
Hazardous to the Aquatic Environment (Acute), Category 1 - Aquatic Acute 1; H400
Hazardous to the Aquatic Environment (Chronic), Category 1 - Aquatic Chronic 1; H410

For full text of H phrases, see Section 16.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008

SIGNAL WORD
DANGER.

Symbols
GHS02 (Flame) |GHS07 (Exclamation mark) |GHS08 (Health Hazard) |GHS09 (Environment) |

Pictograms

Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
cyclohexane	110-82-7	203-806-2	30 - 60
xylene	1330-20-7	215-535-7	25 - 45
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	3388-04-3	222-217-1	< 0.5
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	216-823-5	< 0.5
maleic anhydride	108-31-6	203-571-6	< 0.02

HAZARD STATEMENTS:

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure: nervous system | sensory organs.
H410	Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS
General:

P102	Keep out of reach of children.

Prevention:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260A	Do not breathe vapours.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280K	Wear protective gloves and respiratory protection.

Response:

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

Disposal:

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

For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:

<=125 ml Hazard statements

H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure: nervous system | sensory organs.

<=125 ml Precautionary statements

General:

P102	Keep out of reach of children.

Prevention:

P260A	Do not breathe vapours.
P271	Use only outdoors or in a well-ventilated area.
P280K	Wear protective gloves and respiratory protection.

Response:

P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

Disposal:

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

2% of the mixture consists of components of unknown acute oral toxicity.
2% of the mixture consists of components of unknown acute dermal toxicity.

2.3. Other hazards

None known.
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]
cyclohexane	(CAS-No.) 110-82-7 (EC-No.) 203-806-2	30 - 60	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1
xylene	(CAS-No.) 1330-20-7 (EC-No.) 215-535-7 (REACH-No.) 01-2119488216-32	25 - 45	Flam. Liq. 3, H226 Acute Tox. 4, H332 Acute Tox. 4, H312 Skin Irrit. 2, H315 Nota C Asp. Tox. 1, H304 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Aquatic Chronic 3, H412
ethanol	(CAS-No.) 64-17-5 (EC-No.) 200-578-6	5 - 10	Flam. Liq. 2, H225 Eye Irrit. 2, H319
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	(CAS-No.) 3388-04-3 (EC-No.) 222-217-1	< 0.5	Aquatic Chronic 3, H412 Skin Sens. 1, H317
Acrylate Polymer	Trade Secret	1 - 5	Substance not classified as hazardous
2,5-Furandione, reaction products with polypropylene, chlorinated	(CAS-No.) 68609-36-9	1 - 5	Substance not classified as hazardous
bis-[4-(2,3-epoxipropoxi)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5	< 0.5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
methanol	(CAS-No.) 67-56-1 (EC-No.) 200-659-6 (REACH-No.) 01-2119433307-44	< 0.5	Flam. Liq. 2, H225 Acute Tox. 3, H331 Acute Tox. 3, H311 Acute Tox. 3, H301 STOT SE 1, H370
ethyl acetate	(CAS-No.) 141-78-6 (EC-No.) 205-500-4	1 - 5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
toluene	(CAS-No.) 108-88-3 (EC-No.) 203-625-9	< 0.3	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Aquatic Chronic 3, H412
chlorobenzene	(CAS-No.) 108-90-7 (EC-No.) 203-628-5	< 0.2	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Irrit. 2, H315 Aquatic Chronic 2, H411 Aquatic Acute 1, H400,M=1
maleic anhydride	(CAS-No.) 108-31-6 (EC-No.) 203-571-6	< 0.02	EUH071 Acute Tox. 4, H302

			Skin Corr. 1B, H314 Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1A, H317 STOT RE 1, H372

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
bis-[4-(2,3-epoxipropoxi)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5	(C >= 5%) Skin Irrit. 2, H315 (C >= 5%) Eye Irrit. 2, H319
ethanol	(CAS-No.) 64-17-5 (EC-No.) 200-578-6	(C >= 50%) Eye Irrit. 2, H319
maleic anhydride	(CAS-No.) 108-31-6 (EC-No.) 203-571-6	(C >= 0.001%) Skin Sens. 1A, H317
methanol	(CAS-No.) 67-56-1 (EC-No.) 200-659-6 (REACH-No.) 01-2119433307-44	(C >= 10%) STOT SE 1, H370 (3% =< C < 10%) STOT SE 2, H371

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
Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

If swallowed
Rinse mouth. 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:
Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain). Irritation to the skin (localized redness, swelling, itching, and dryness). Allergic skin reaction (redness, swelling, blistering, and itching). Serious irritation to the eyes (significant redness, swelling, pain, tearing, and impaired vision). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness). Target organ effects. See Section 11 for additional details.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Extinguishing media
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Chloride	During combustion.

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Contain spill. Cover spill area with a fire-extinguishing foam. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

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
Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. 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.) Wear low static or properly grounded shoes. Use personal protective equipment (eg. gloves, respirators…) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapour accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from heat. Store away from acids. Store away from oxidising agents.

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.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
maleic anhydride	108-31-6	Ireland OELs	TWA(inhalable fraction and vapour)(8 hours):0.01 ppm	
toluene	108-88-3	Ireland OELs	TWA(8 hours):192 mg/m3(50 ppm);TWA(8 hours):50 ppm(192 mg/m3);STEL(15 minutes):384 mg/m3(100 ppm);STEL(15 minutes):100 ppm(384 mg/m3)	SKIN
chlorobenzene	108-90-7	Ireland OELs	TWA(As monochlorobenzene)(8 hours):5 ppm(23 mg/m3);TWA(8 hours):23 mg/m3(5 ppm);STEL(As monochlorobenzene)(15 minutes):15 ppm(70 mg/m3);STEL(15 minutes):70 mg/m3(15 ppm)	as monochlorobenzene
cyclohexane	110-82-7	Ireland OELs	TWA(8 hours):700 mg/m3(200 ppm);TWA(8 hours):200 ppm(700 mg/m3)	
xylene	1330-20-7	Ireland OELs	TWA(8 hours):221 mg/m3(50 ppm);TWA(8 hours):50 ppm(221 mg/m3);STEL(15 minutes):442 mg/m3(100 ppm);STEL(15 minutes):100 ppm(442 mg/m3)	SKIN
ethyl acetate	141-78-6	Ireland OELs	TWA(8 hours):734 mg/m3(200 ppm);TWA(8 hours):200 ppm(734 mg/m3);STEL(15 minutes):1468 mg/m3(400 ppm);STEL(15 minutes):400 ppm(1468 mg/m3)	
ethanol	64-17-5	Ireland OELs	STEL(15 minutes):1000 ppm	

methanol	67-56-1	Ireland OELs	TWA(8 hours):260 mg/m3(200 ppm);TWA(8 hours):200 ppm(260 mg/m3) SKIN

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.

Derived no effect level (DNEL)

Ingredient	Degradation Product	Population	Human exposure pattern	DNEL
xylene		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	180 mg/kg bw/d
xylene		Worker	Inhalation, Long-term exposure (8 hours), Local effects	77 mg/m³
xylene		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	77 mg/m³
xylene		Worker	Inhalation, Short-term exposure, Local effects	289 mg/m³
xylene		Worker	Inhalation, Short-term exposure, Systemic effects	289 mg/m³

Predicted no effect concentrations (PNEC)

Ingredient	Degradation Product	Compartment	PNEC
xylene		Agricultural soil	2.31 mg/kg d.w.
xylene		Freshwater	0.327 mg/l
xylene		Freshwater sediments	12.46 mg/kg d.w.
xylene		Marine water	0.327 mg/l
xylene		Marine water sediments	12.46 mg/kg d.w.
xylene		Sewage Treatment Plant	6.58 mg/l

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

8.2. Exposure controls

In addition, refer to the annex for more information.

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. Use explosion-proof ventilation 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. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended:

Material	Thickness (mm)	Breakthrough Time
Polymer laminate	No data available	No data available

Applicable Norms/Standards
Use gloves tested to EN 374

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 - polymer laminate

Respiratory protection

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

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

8.2.3. Environmental exposure controls
Refer to Annex

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Sponge holding approximately 2 milliliters of liquid.
Colour	Yellow
Odor	Solvent
Odour threshold	*No data available.*
Melting point/freezing point	*Not applicable.*
Boiling point/boiling range	73.1 ºC [*Test Method:*Tested per ASTM protocol] [*Details:*@760mmHg]
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	1 % [*Test Method:*Estimated]
Flammable Limits(UEL)	6 % [*Test Method:*Estimated]
Flash point	1.1 ºC [*Test Method:*Setaflash]
Autoignition temperature	430 ºC
Decomposition temperature	*No data available.*
pH	4.4 - 5 [*Test Method:*Tested per ASTM protocol] [*Details:*@23°C]
Kinematic Viscosity	30.5 mm²/sec
Water solubility	10 %

Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	11,092.4 Pa [@ 20 ºC] [*Test Method:*Tested per ASTM protocol]
Density	0.82 g/ml
Relative density	0.82 [*Ref Std:*WATER=1]
Relative Vapour Density	1.7 [*Test Method:*Estimated] [*Ref Std:*AIR=1]

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	*No data available.*
Evaporation rate	6.4 [*Test Method:*Estimated] [*Ref Std:*XYLENE=1]
Molecular weight	*Not applicable.*
Percent volatile	approximately 95 %

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
Strong acids.
Strong oxidising agents.

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

Skin contact
May be harmful in contact with skin. Mild Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, and dryness. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching. May cause additional health effects (see below).

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

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:
Auditory effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears. Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure may cause target organ effects:
Auditory effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears. Neurological effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and changes in blood pressure and heart rate.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

Additional information:

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

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >2,000 - =5,000 mg/kg
Overall product	Inhalation-Vapour(4 hr)		No data available; calculated ATE >20 - =50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
cyclohexane	Dermal	Rat	LD50 > 2,000 mg/kg
cyclohexane	Inhalation-Vapour (4	Rat	LC50 > 32.9 mg/l

	hours)		
cyclohexane	Ingestion	Rat	LD50 6,200 mg/kg
xylene	Dermal	Rabbit	LD50 > 4,200 mg/kg
xylene	Inhalation-Vapour (4 hours)	Rat	LC50 29 mg/l
xylene	Ingestion	Rat	LD50 3,523 mg/kg
ethanol	Dermal	Rabbit	LD50 > 15,800 mg/kg
ethanol	Inhalation-Vapour (4 hours)	Rat	LC50 124.7 mg/l
ethanol	Ingestion	Rat	LD50 17,800 mg/kg
ethyl acetate	Dermal	Rabbit	LD50 > 18,000 mg/kg
ethyl acetate	Inhalation-Vapour (4 hours)	Rat	LC50 70.5 mg/l
ethyl acetate	Ingestion	Rat	LD50 5,620 mg/kg
2,5-Furandione, reaction products with polypropylene, chlorinated	Dermal	Guinea pig	LD50 > 1,000 mg/kg
2,5-Furandione, reaction products with polypropylene, chlorinated	Ingestion	Rat	LD50 > 3,200 mg/kg
methanol	Dermal		LD50 estimated to be 1,000 - 2,000 mg/kg
methanol	Inhalation-Vapour		LC50 estimated to be 10 - 20 mg/l
methanol	Ingestion		LD50 estimated to be 50 - 300 mg/kg
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	Dermal	Rabbit	LD50 6,700 mg/kg
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	Inhalation-Vapour (4 hours)	Rat	LC50 > 7 mg/l
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	Ingestion	Rat	LD50 13,100 mg/kg
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	Rat	LD50 > 1,600 mg/kg
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Rat	LD50 > 1,000 mg/kg
toluene	Dermal	Rat	LD50 12,000 mg/kg
toluene	Inhalation-Vapour (4 hours)	Rat	LC50 30 mg/l
toluene	Ingestion	Rat	LD50 5,550 mg/kg
chlorobenzene	Dermal	Rabbit	LD50 2,212 mg/kg
chlorobenzene	Inhalation-Vapour (4 hours)	Rat	LC50 16.7 mg/l
chlorobenzene	Ingestion	Rat	LD50 1,419 mg/kg
maleic anhydride	Dermal	Rabbit	LD50 2,620 mg/kg
maleic anhydride	Ingestion	Rat	LD50 1,030 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
cyclohexane	Rabbit	Mild irritant
xylene	Rabbit	Mild irritant
ethanol	Rabbit	No significant irritation
ethyl acetate	Rabbit	Minimal irritation
2,5-Furandione, reaction products with polypropylene, chlorinated	Guinea pig	No significant irritation
methanol	Rabbit	Mild irritant
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	Rabbit	Minimal irritation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Rabbit	Mild irritant
toluene	Rabbit	Irritant
chlorobenzene	Rabbit	Irritant
maleic anhydride	Human and animal	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
cyclohexane	Rabbit	Mild irritant
xylene	Rabbit	Mild irritant
ethanol	Rabbit	Severe irritant
ethyl acetate	Rabbit	Mild irritant
2,5-Furandione, reaction products with polypropylene, chlorinated	Professional judgement	Mild irritant
methanol	Rabbit	Moderate irritant
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	Rabbit	No significant irritation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Rabbit	Moderate irritant
toluene	Rabbit	Moderate irritant
chlorobenzene	Rabbit	Mild irritant
maleic anhydride	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
ethanol	Human	Not classified
ethyl acetate	Guinea pig	Not classified
methanol	Guinea pig	Not classified
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	similar compounds	Sensitising
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Human and animal	Sensitising
toluene	Guinea pig	Not classified
chlorobenzene	Multiple animal species	Not classified
maleic anhydride	Multiple animal species	Sensitising

Respiratory Sensitisation

Name	Species	Value
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Human	Not classified
maleic anhydride	Human	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
cyclohexane	In Vitro	Not mutagenic
cyclohexane	In vivo	Some positive data exist, but the data are not sufficient for classification
xylene	In Vitro	Not mutagenic
xylene	In vivo	Not mutagenic
ethanol	In Vitro	Some positive data exist, but the data are not sufficient for classification
ethanol	In vivo	Some positive data exist, but the data are not sufficient for classification
ethyl acetate	In Vitro	Not mutagenic
ethyl acetate	In vivo	Not mutagenic
methanol	In Vitro	Some positive data exist, but the data are not sufficient for classification

methanol	In vivo	Some positive data exist, but the data are not sufficient for classification
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	In Vitro	Some positive data exist, but the data are not sufficient for classification
bis-[4-(2,3-epoxipropoxi)phenyl]propane	In vivo	Not mutagenic
bis-[4-(2,3-epoxipropoxi)phenyl]propane	In Vitro	Some positive data exist, but the data are not sufficient for classification
toluene	In Vitro	Not mutagenic
toluene	In vivo	Not mutagenic
chlorobenzene	In Vitro	Not mutagenic
maleic anhydride	In vivo	Not mutagenic
maleic anhydride	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
xylene	Dermal	Rat	Not carcinogenic
xylene	Ingestion	Multiple animal species	Not carcinogenic
xylene	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification
ethanol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
methanol	Inhalation	Multiple animal species	Not carcinogenic
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
chlorobenzene	Ingestion	Multiple animal species	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
cyclohexane	Inhalation	Not classified for female reproduction	Rat	NOAEL 24 mg/l	2 generation
cyclohexane	Inhalation	Not classified for male reproduction	Rat	NOAEL 24 mg/l	2 generation
cyclohexane	Inhalation	Not classified for development	Rat	NOAEL 6.9 mg/l	2 generation
xylene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
xylene	Ingestion	Not classified for development	Mouse	NOAEL Not available	during organogenesis
xylene	Inhalation	Not classified for development	Multiple animal species	NOAEL Not available	during gestation
ethanol	Inhalation	Not classified for development	Rat	NOAEL 38 mg/l	during gestation
ethanol	Ingestion	Not classified for development	Rat	NOAEL 5,200 mg/kg/day	premating & during gestation
methanol	Ingestion	Not classified for male reproduction	Rat	NOAEL	21 days

				1,600 mg/kg/day	
methanol	Ingestion	Toxic to development	Mouse	LOAEL 4,000 mg/kg/day	during organogenesis
methanol	Inhalation	Toxic to development	Mouse	NOAEL 1.3 mg/l	during organogenesis
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	Ingestion	Not classified for development	Rabbit	NOAEL 0.27 mg/kg/day	during organogenesis
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.3 mg/l	1 generation
toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse
chlorobenzene	Inhalation	Not classified for female reproduction	Rat	NOAEL 2.07 mg/l	2 generation
chlorobenzene	Ingestion	Not classified for development	Rat	NOAEL 300 mg/kg/day	during organogenesis
chlorobenzene	Inhalation	Not classified for development	Rat	NOAEL 2.07 mg/l	2 generation
chlorobenzene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.07 mg/l	2 generation
maleic anhydride	Ingestion	Not classified for female reproduction	Rat	NOAEL 55 mg/kg/day	2 generation
maleic anhydride	Ingestion	Not classified for male reproduction	Rat	NOAEL 55 mg/kg/day	2 generation
maleic anhydride	Ingestion	Not classified for development	Rat	NOAEL 140 mg/kg/day	during organogenesis

Lactation

Name	Route	Species	Value
xylene	Ingestion	Mouse	Not classified for effects on or via lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
cyclohexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
cyclohexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
cyclohexane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
xylene	Inhalation	auditory system	Causes damage to organs	Rat	LOAEL 6.3 mg/l	8 hours
xylene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
xylene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for	Human	NOAEL Not available	

			classification			
xylene	Inhalation	eyes	Not classified	Rat	NOAEL 3.5 mg/l	not available
xylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	
xylene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	
xylene	Ingestion	eyes	Not classified	Rat	NOAEL 250 mg/kg	not applicable
ethanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	LOAEL 9.4 mg/l	not available
ethanol	Inhalation	central nervous system depression	Not classified	Human and animal	NOAEL not available	
ethanol	Ingestion	central nervous system depression	Not classified	Multiple animal species	NOAEL not available	
ethanol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg	
ethyl acetate	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
ethyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
ethyl acetate	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
methanol	Inhalation	blindness	Causes damage to organs	Human	NOAEL Not available	occupational exposure
methanol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	not available
methanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	6 hours
methanol	Ingestion	blindness	Causes damage to organs	Human	NOAEL Not available	poisoning and/or abuse
methanol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0.004 mg/l	3 hours
toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
chlorobenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
chlorobenzene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
maleic anhydride	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
cyclohexane	Inhalation	liver	Not classified	Rat	NOAEL 24 mg/l	90 days
cyclohexane	Inhalation	auditory system	Not classified	Rat	NOAEL 1.7 mg/l	90 days
cyclohexane	Inhalation	kidney and/or bladder	Not classified	Rabbit	NOAEL 2.7 mg/l	10 weeks
cyclohexane	Inhalation	hematopoietic	Not classified	Mouse	NOAEL 24	14 weeks

		system			mg/l	
cyclohexane	Inhalation	peripheral nervous system	Not classified	Rat	NOAEL 8.6 mg/l	30 weeks
xylene	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.4 mg/l	4 weeks
xylene	Inhalation	auditory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 7.8 mg/l	5 days
xylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	
xylene	Inhalation	heart | endocrine system | gastrointestinal tract | hematopoietic system | muscles | kidney and/or bladder | respiratory system	Not classified	Multiple animal species	NOAEL 3.5 mg/l	13 weeks
xylene	Ingestion	auditory system	Not classified	Rat	NOAEL 900 mg/kg/day	2 weeks
xylene	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1,500 mg/kg/day	90 days
xylene	Ingestion	liver	Not classified	Multiple animal species	NOAEL Not available	
xylene	Ingestion	heart | skin | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | immune system | nervous system | respiratory system	Not classified	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
ethanol	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rabbit	LOAEL 124 mg/l	365 days
ethanol	Inhalation	hematopoietic system | immune system	Not classified	Rat	NOAEL 25 mg/l	14 days
ethanol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 8,000 mg/kg/day	4 months
ethanol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg/day	7 days
ethyl acetate	Inhalation	endocrine system | liver | nervous system	Not classified	Rat	NOAEL 0.043 mg/l	90 days
ethyl acetate	Inhalation	hematopoietic system	Not classified	Rabbit	LOAEL 16 mg/l	40 days
ethyl acetate	Ingestion	hematopoietic system | liver | kidney and/or bladder	Not classified	Rat	NOAEL 3,600 mg/kg/day	90 days
methanol	Inhalation	liver	Not classified	Rat	NOAEL 6.55 mg/l	4 weeks
methanol	Inhalation	respiratory system	Not classified	Rat	NOAEL 13.1 mg/l	6 weeks
methanol	Ingestion	liver | nervous system	Not classified	Rat	NOAEL 2,500 mg/kg/day	90 days
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
bis-[4-(2,3-	Dermal	nervous system	Not classified	Rat	NOAEL	13 weeks

epoxipropoxi)phenyl]propane					1,000 mg/kg/day	
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	auditory system | heart | endocrine system | hematopoietic system | liver | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
toluene	Inhalation	auditory system | nervous system | eyes | olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
toluene	Inhalation	heart | liver | kidney and/or bladder	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1.1 mg/l	4 weeks
toluene	Inhalation	immune system	Not classified	Mouse	NOAEL Not available	20 days
toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1.1 mg/l	8 weeks
toluene	Inhalation	hematopoietic system | vascular system	Not classified	Human	NOAEL Not available	occupational exposure
toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal species	NOAEL 11.3 mg/l	15 weeks
toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
toluene	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
toluene	Ingestion	liver | kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
toluene	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 600 mg/kg/day	14 days
toluene	Ingestion	endocrine system	Not classified	Mouse	NOAEL 105 mg/kg/day	28 days
toluene	Ingestion	immune system	Not classified	Mouse	NOAEL 105 mg/kg/day	4 weeks
chlorobenzene	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.69 mg/l	2 generation
chlorobenzene	Inhalation	liver	Not classified	Rat	NOAEL 2.1 mg/l	2 generation
chlorobenzene	Inhalation	blood	Not classified	Rat	NOAEL 0.35 mg/l	24 weeks
chlorobenzene	Ingestion	bone marrow	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg/day	13 weeks
chlorobenzene	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 188 mg/kg/day	192 days
chlorobenzene	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 125 mg/kg/day	13 weeks
chlorobenzene	Ingestion	immune system	Not classified	Rat	NOAEL 750 mg/kg/day	13 weeks
maleic anhydride	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.0011 mg/l	6 months
maleic anhydride	Inhalation	endocrine system | hematopoietic system | nervous	Not classified	Rat	NOAEL 0.0098 mg/l	6 months

		system | kidney and/or bladder | heart | liver | eyes				
maleic anhydride	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 55 mg/kg/day	80 days
maleic anhydride	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 250 mg/kg/day	183 days
maleic anhydride	Ingestion	heart | nervous system	Not classified	Rat	NOAEL 600 mg/kg/day	183 days
maleic anhydride	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 150 mg/kg/day	80 days
maleic anhydride	Ingestion	hematopoietic system	Not classified	Dog	NOAEL 60 mg/kg/day	90 days
maleic anhydride	Ingestion	skin | endocrine system | immune system | eyes | respiratory system	Not classified	Rat	NOAEL 150 mg/kg/day	80 days

Aspiration Hazard

Name	Value
cyclohexane	Aspiration hazard
xylene	Aspiration hazard
toluene	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
cyclohexane	110-82-7	Bacteria	Experimental	24 hours	IC50	97 mg/l
cyclohexane	110-82-7	Fathead minnow	Experimental	96 hours	LC50	4.53 mg/l
cyclohexane	110-82-7	Water flea	Experimental	48 hours	EC50	0.9 mg/l
xylene	1330-20-7	Activated sludge	Estimated	3 hours	NOEC	157 mg/l
xylene	1330-20-7	Green algae	Estimated	72 hours	EC50	4.36 mg/l
xylene	1330-20-7	Rainbow trout	Estimated	96 hours	LC50	2.6 mg/l
xylene	1330-20-7	Water flea	Estimated	48 hours	EC50	3.82 mg/l
xylene	1330-20-7	Green algae	Estimated	72 hours	NOEC	0.44 mg/l

xylene	1330-20-7	Water flea	Estimated	7 days	NOEC	0.96 mg/l
xylene	1330-20-7	Rainbow trout	Experimental	56 days	NOEC	>1.3 mg/l
ethanol	64-17-5	Fathead minnow	Experimental	96 hours	LC50	14,200 mg/l
ethanol	64-17-5	Fish	Experimental	96 hours	LC50	11,000 mg/l
ethanol	64-17-5	Green algae	Experimental	72 hours	EC50	275 mg/l
ethanol	64-17-5	Water flea	Experimental	48 hours	LC50	5,012 mg/l
ethanol	64-17-5	Green algae	Experimental	72 hours	ErC10	11.5 mg/l
ethanol	64-17-5	Water flea	Experimental	10 days	NOEC	9.6 mg/l
2,5-Furandione, reaction products with polypropylene, chlorinated	68609-36-9	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Acrylate Polymer	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	3388-04-3	Activated sludge	Estimated	30 minutes	IC50	>100 mg/l
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	3388-04-3	Green algae	Estimated	72 hours	EC50	280 mg/l
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	3388-04-3	Rainbow trout	Estimated	96 hours	LC50	180 mg/l
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	3388-04-3	Water flea	Estimated	48 hours	EC50	20 mg/l
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	3388-04-3	Green algae	Estimated	72 hours	NOEC	1 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Activated sludge	Analogous Compound	3 hours	IC50	>100 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Water flea	Estimated	48 hours	EC50	1.8 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Green algae	Experimental	72 hours	ErC50	>11 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Green algae	Experimental	72 hours	NOEC	4.2 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Water flea	Experimental	21 days	NOEC	0.3 mg/l
ethyl acetate	141-78-6	Bacteria	Experimental	18 hours	EC10	2,900 mg/l
ethyl acetate	141-78-6	Fish	Experimental	96 hours	LC50	212.5 mg/l
ethyl acetate	141-78-6	Invertebrate	Experimental	48 hours	EC50	165 mg/l
ethyl acetate	141-78-6	Green algae	Experimental	72 hours	NOEC	>100 mg/l
ethyl acetate	141-78-6	Water flea	Experimental	21 days	NOEC	2.4 mg/l
methanol	67-56-1	Algae or other aquatic plants	Experimental	96 hours	EC50	16.9 mg/l

methanol	67-56-1	Bay mussel	Experimental	96 hours	LC50	15,900 mg/l
methanol	67-56-1	Bluegill	Experimental	96 hours	LC50	15,400 mg/l
methanol	67-56-1	Green algae	Experimental	96 hours	ErC50	22,000 mg/l
methanol	67-56-1	Sediment organism	Experimental	96 hours	LC50	54,890 mg/l
methanol	67-56-1	Water flea	Experimental	48 hours	LC50	3,289 mg/l
methanol	67-56-1	Green algae	Experimental	96 hours	NOEC	9.96 mg/l
methanol	67-56-1	Medaka	Experimental	8.33 days	NOEC	158,000 mg/l
methanol	67-56-1	Water flea	Experimental	21 days	NOEC	122 mg/l
methanol	67-56-1	Activated sludge	Experimental	3 hours	IC50	>1,000 mg/l
methanol	67-56-1	Barley	Experimental	14 days	EC50	15,492 mg/kg (Dry Weight)
methanol	67-56-1	Redworm	Experimental	63 days	EC50	26,646 mg/kg (Dry Weight)
methanol	67-56-1	Springtail	Experimental	28 days	EC50	5,683 mg/kg (Dry Weight)
toluene	108-88-3	Coho Salmon	Experimental	96 hours	LC50	5.5 mg/l
toluene	108-88-3	Grass Shrimp	Experimental	96 hours	LC50	9.5 mg/l
toluene	108-88-3	Green algae	Experimental	72 hours	EC50	12.5 mg/l
toluene	108-88-3	Leopard frog	Experimental	9 days	LC50	0.39 mg/l
toluene	108-88-3	Pink Salmon	Experimental	96 hours	LC50	6.41 mg/l
toluene	108-88-3	Water flea	Experimental	48 hours	EC50	3.78 mg/l
toluene	108-88-3	Coho Salmon	Experimental	40 days	NOEC	1.39 mg/l
toluene	108-88-3	Diatom	Experimental	72 hours	NOEC	10 mg/l
toluene	108-88-3	Water flea	Experimental	7 days	NOEC	0.74 mg/l
toluene	108-88-3	Activated sludge	Experimental	12 hours	IC50	292 mg/l
toluene	108-88-3	Bacteria	Experimental	16 hours	NOEC	29 mg/l
toluene	108-88-3	Bacteria	Experimental	24 hours	EC50	84 mg/l
toluene	108-88-3	Redworm	Experimental	28 days	LC50	>150 mg per kg of bodyweight
toluene	108-88-3	Soil microbes	Experimental	28 days	NOEC	<26 mg/kg (Dry Weight)
chlorobenzene	108-90-7	Bluegill	Experimental	96 hours	LC50	4.5 mg/l
chlorobenzene	108-90-7	Green algae	Experimental	72 hours	ErC50	11.4 mg/l
chlorobenzene	108-90-7	Midge	Experimental	96 hours	NOEC	0.7 mg/l
chlorobenzene	108-90-7	Water flea	Experimental	48 hours	EC50	0.59 mg/l
chlorobenzene	108-90-7	Green algae	Experimental	72 hours	ErC10	5.8 mg/l
chlorobenzene	108-90-7	Medaka	Experimental	43 days	NOEC	0.247 mg/l
chlorobenzene	108-90-7	Water flea	Experimental	8 days	NOEC	0.084 mg/l

chlorobenzene	108-90-7	Bacteria	Experimental	24 hours	IC50	0.71 mg/l
chlorobenzene	108-90-7	Lettuce	Experimental	14 days	EC50	>1,000 mg/kg (Dry Weight)
maleic anhydride	108-31-6	Bacteria	Experimental	18 hours	EC10	44.6 mg/l
maleic anhydride	108-31-6	Rainbow trout	Experimental	96 hours	LC50	75 mg/l
maleic anhydride	108-31-6	Green algae	Hydrolysis Product	72 hours	ErC50	74.4 mg/l
maleic anhydride	108-31-6	Water flea	Hydrolysis Product	48 hours	EC50	93.8 mg/l
maleic anhydride	108-31-6	Water flea	Experimental	21 days	NOEC	10 mg/l
maleic anhydride	108-31-6	Green algae	Hydrolysis Product	72 hours	ErC10	11.8 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
cyclohexane	110-82-7	Experimental Biodegradation	28 days	BOD	77 %BOD/ThOD	OECD 301F - Manometric respirometry
cyclohexane	110-82-7	Experimental Photolysis		Photolytic half-life (in air)	4.1 days (t 1/2)	
xylene	1330-20-7	Experimental Biodegradation	28 days	BOD	90-98 %BOD/ThOD	OECD 301F - Manometric respirometry
xylene	1330-20-7	Experimental Photolysis		Photolytic half-life (in air)	1.4 days (t 1/2)	
ethanol	64-17-5	Experimental Biodegradation	14 days	BOD	89 %BOD/ThOD	OECD 301C - MITI test (I)
2,5-Furandione, reaction products with polypropylene, chlorinated	68609-36-9	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Acrylate Polymer	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	3388-04-3	Estimated Biodegradation	28 days	BOD	28 %BOD/ThOD	OECD 301D - Closed bottle test
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	3388-04-3	Estimated Hydrolysis		Hydrolytic half-life	6.5 hours (t 1/2)	
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Experimental Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	117 hours (t 1/2)	OECD 111 Hydrolysis func of pH
ethyl acetate	141-78-6	Experimental Biodegradation	14 days	BOD	94 %BOD/ThOD	OECD 301C - MITI test (I)
ethyl acetate	141-78-6	Experimental Photolysis		Photolytic half-life (in air)	20.0 days (t 1/2)	
methanol	67-56-1	Experimental Biodegradation	3 days	Percent degraded	91 %degraded	
methanol	67-56-1	Experimental Biodegradation	14 days	BOD	92 %BOD/ThOD	OECD 301C - MITI test (I)
methanol	67-56-1	Experimental Photolysis		Photolytic half-life (in air)	35 days (t 1/2)	
methanol	67-56-1	Experimental Soil Metabolism Aerobic	5 days	CO2 evolution	53.4 %CO2 evolution/THCO2 evolution	
toluene	108-88-3	Experimental Biodegradation	20 days	BOD	80 %BOD/ThOD	APHA Std Meth Water/Wastewater
toluene	108-88-3	Experimental Photolysis		Photolytic half-life (in air)	5.2 days (t 1/2)	
chlorobenzene	108-90-7	Experimental	28 days	BOD	15 %BOD/ThO	OECD 301F - Manometric

		Biodegradation			D	respirometry
chlorobenzene	108-90-7	Experimental Photolysis		Photolytic half-life (in air)	42 days (t 1/2)	
chlorobenzene	108-90-7	Experimental Biodegradation		Half-life (t 1/2)	46.2 days (t 1/2)	
maleic anhydride	108-31-6	Hydrolysis product Biodegradation	25 days	CO2 evolution	>90 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
maleic anhydride	108-31-6	Experimental Hydrolysis		Hydrolytic half-life	0.37 minutes (t 1/2)	

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
cyclohexane	110-82-7	Experimental BCF - Fish	56 days	Bioaccumulation factor	129	OECD305-Bioconcentration
cyclohexane	110-82-7	Experimental Bioconcentration		Log Kow	3.44	
xylene	1330-20-7	Experimental BCF - Fish	56 days	Bioaccumulation factor	25.9	
ethanol	64-17-5	Experimental Bioconcentration		Log Kow	-0.35	
2,5-Furandione, reaction products with polypropylene, chlorinated	68609-36-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Acrylate Polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	3388-04-3	Estimated Bioconcentration		Bioaccumulation factor	2.3	
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Experimental Bioconcentration		Log Kow	3.242	OECD 117 log Kow HPLC method
ethyl acetate	141-78-6	Experimental Bioconcentration		Log Kow	0.68	
methanol	67-56-1	Experimental BCF - Fish	3 days	Bioaccumulation factor	<4.5	
methanol	67-56-1	Experimental Bioconcentration		Log Kow	-0.77	
toluene	108-88-3	Experimental BCF - Other	72 hours	Bioaccumulation factor	90	
toluene	108-88-3	Experimental Bioconcentration		Log Kow	2.73	
chlorobenzene	108-90-7	Experimental BCF - Fish	56 days	Bioaccumulation factor	39.6	OECD305-Bioconcentration
chlorobenzene	108-90-7	Experimental Bioconcentration		Log Kow	2.84	
maleic anhydride	108-31-6	Experimental Bioconcentration		Log Kow	-2.61	OECD 107 log Kow shke flsk mtd

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
cyclohexane	110-82-7	Modeled Mobility in Soil	Koc	770 l/kg	
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	3388-04-3	Estimated Mobility in Soil	Koc	20 l/kg	Episuite™
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Modeled Mobility in Soil	Koc	450 l/kg	Episuite™
methanol	67-56-1	Experimental Mobility in Soil	Koc	0.13 l/kg	
toluene	108-88-3	Experimental	Koc	37-160 l/kg	

		Mobility in Soil			
chlorobenzene	108-90-7	Experimental Mobility in Soil	Koc	140 l/kg	

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. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. 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)
15 02 02* Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances

SECTION 14: Transportation information

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number or ID number	UN3175	UN3175	UN3175
14.2 UN proper shipping name	SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S.(CYCLOHEXANE)	SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S.(CYCLOHEXANE)	SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S.(CYCLOHEXANE)
14.3 Transport hazard class(es)	4.1	4.1	4.1
14.4 Packing group	II	II	II

14.5 Environmental hazards	Not Environmentally Hazardous	Not applicable	Not a Marine Pollutant
14.6 Special precautions for user	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.
14.7 Marine Transport in bulk according to IMO instruments	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR Classification Code	F1	Not applicable.	Not applicable.
IMDG Segregation Code	Not applicable.	Not applicable.	NONE

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

Ingredient	CAS Nbr	Classification	Regulation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Gr. 3: Not classifiable	International Agency for Research on Cancer
toluene	108-88-3	Gr. 3: Not classifiable	International Agency for Research on Cancer
xylene	1330-20-7	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.

Ingredient	CAS Nbr
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3
cyclohexane	110-82-7
methanol	67-56-1
toluene	108-88-3
xylene	1330-20-7

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

Global inventory status
Contact 3M for more 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. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

DIRECTIVE 2012/18/EU
Seveso hazard categories, Annex 1, Part 1

Hazard Categories	Qualifying quantity (tonnes) for the application of	
	Lower-tier requirements	Upper-tier requirements
E1 Hazardous to the Aquatic environment	100	200
P5c FLAMMABLE LIQUIDS*	5000	50000

*If maintained at a temperature above its boiling point or if particular processing conditions, such as high pressure or high temperature, may create major-accident hazards, P5a or P5b FLAMMABLE LIQUIDS may apply

Seveso named dangerous substances, Annex 1, Part 2

Dangerous Substances	Identifier(s)	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
chlorobenzene	108-90-7	10	50
cyclohexane	110-82-7	10	50
ethyl acetate	141-78-6	10	50
ethanol	64-17-5	10	50
methanol	67-56-1	500	5000
toluene	108-88-3	10	50
xylene	1330-20-7	10	50

Regulation (EU) No 649/2012
No chemicals listed

15.2. Chemical Safety Assessment
A chemical safety assessment has not been carried out for this mixture. Chemical safety assessments for the contained substances may have been carried out by the registrants of the substances 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.
EUH071	Corrosive to the respiratory tract.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful 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.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging 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.
H373	May cause damage to organs through prolonged or repeated exposure: nervous system | sensory organs.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Revision information:
Section 2: <125ml Hazard - Health information was modified.
Section 2: <125ml Precautionary - Prevention information was modified.
Section 2: <125ml Precautionary - Response information was modified.
CLP: Ingredient table information was modified.
Label: CLP Classification information was modified.
Label: CLP Precautionary - Prevention information was modified.
Label: CLP Precautionary - Response information was modified.
Section 02: SDS Elements: CLP Supplemental Precautionary Statements information was deleted.
Section 3: Composition/ Information of ingredients table information was modified.
Section 8: Eye protection information information was added.
Section 8: Eye/face protection information information was deleted.
Section 8: Occupational exposure limit table information was modified.
Section 8: Personal Protection - Eye information information was deleted.
Section 8: Respiratory protection - recommended respirators information information was modified.
Section 11: Acute Toxicity table information was modified.
Section 11: Aspiration Hazard Table information was modified.
Section 11: Carcinogenicity Table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Eye information information was modified.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 11: Target Organs - Single Table information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Mobility in soil information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.
Section 15: Carcinogenicity information information was modified.
Section 15: Seveso Substance Text information was modified.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was modified.

Annex

1. Title	
Substance identification	xylene; EC No. 215-535-7; CAS Nbr 1330-20-7;
Exposure Scenario Name	Professional Use of Coatings
Lifecycle Stage	Widespread use by professional workers
Contributing activities	PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC 10 -Roller application or brushing ERC 08a -Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC 08d -Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
Processes, tasks and activities covered	Application of product with a roller or brush. Application of product with applicator gun. Transfers without dedicated controls, including loading, filling, dumping, bagging.
2. Operational conditions and risk management measures	
Operating Conditions	**Physical state:**Liquid. **General operating conditions:** Assumes use at not more than 20°C above ambient temperature; Duration of use: 8 hours/day; Indoors with enhanced general ventilation; **Task: Transferring Material**; Duration of use: 4 hours/day;
Risk management measures	Under the operational conditions described above the following risk management measures apply: **General risk management measures:** **Human health:** Half-facepiece air-purifying respirator; **Environmental:** Municipal Sewage Treatment Plant;
Waste management measures	Do not apply industrial sludge to natural soils;
3. Prediction of exposure	
Prediction of exposure	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.

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.

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