



Safety Data Sheet

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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™ Scotch-Weld™ Structural Adhesive Film AF 163-3

Product Identification Numbers

62-0167-5309-7

7000046317

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

Identified uses

Industrial use.

1.3. Details of the supplier of the safety data sheet

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

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.

A similar mixture has been tested for skin corrosion/irritation and the test results do not meet the criteria for classification.

A similar mixture has been tested for skin sensitization and the test results do not meet the criteria for classification.

The eye damage/irritation classification is not applied due to the nature of this product (adhesive film).

CLASSIFICATION:

Germ Cell Mutagenicity, Category 2 - Muta. 2; H341

Reproductive Toxicity, Category 1B - Repr. 1B; H360

Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER.

Symbols

GHS08 (Health Hazard) | GHS09 (Environment) |

Pictograms



Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
bisphenol A	80-05-7	201-245-8	3 - 7
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	225-716-2	1 - 5

HAZARD STATEMENTS:

H341	Suspected of causing genetic defects.
H360F	May damage fertility.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P201	Obtain special instructions before use.
P273	Avoid release to the environment.
P280K	Wear protective gloves and respiratory protection.

Response:

P308 + P313	IF exposed or concerned: Get medical advice/attention.
P391	Collect spillage.

SUPPLEMENTAL INFORMATION:

Supplemental Hazard Statements:

EUH208	Contains p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline. bis-[4-(2,3-epoxypropoxy)phenyl]propane. bisphenol A. May produce an allergic reaction.
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Supplemental Precautionary Statements:

Restricted to professional users.

61% of the mixture consists of components of unknown acute oral toxicity.

Contains 61% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

Contains a substance identified as an endocrine disrupter in the list established in accordance with REACH Article 59(1)

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]
Polyether Polymer	Trade Secret	40 - 70	Substance not classified as hazardous
bis-[4-(2,3-epoxipropoxy)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5 (REACH-No.) 01-2119456619-26	20 - 30	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
bisphenol A	(CAS-No.) 80-05-7 (EC-No.) 201-245-8 (REACH-No.) 01-2119457856-23	3 - 7	Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 1B, H360F STOT SE 3, H335 Aquatic Chronic 2, H411
Dicyandiamide	(CAS-No.) 461-58-5 (EC-No.) 207-312-8	1 - 5	Substance not classified as hazardous
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	(CAS-No.) 5026-74-4 (EC-No.) 225-716-2 (REACH-No.) 01-2119954405-36	1 - 5	Aquatic Chronic 2, H411 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Muta. 2, H341
N,N'-(4-Methyl-m-phenylene)bis[N,N'-dimethylurea]	(CAS-No.) 17526-94-2 (EC-No.) 241-523-6	1 - 5	Substance not classified as hazardous

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-epoxipropoxy)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5	(C >= 5%) Skin Irrit. 2, H315 (C >= 5%) Eye Irrit. 2, H319

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

Wash with soap and water. If you are concerned, get medical advice.

Eye contact

No need for first aid is anticipated.

If swallowed

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.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Bromide	During combustion.
Hydrogen Chloride	During combustion.
Hydrogen cyanide.	During combustion.
Ammonia	During combustion.
Oxides of nitrogen.	During combustion.

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

Evacuate area. Ventilate the area with fresh air. 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

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. 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**

For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from amines.

7.3. Specific end use(s)

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

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Occupational exposure limits**

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
bisphenol A	80-05-7	UK HSC	TWA:2 mg/m ³	

UK HSC : UK Health and Safety Commission

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
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	8.3 mg/kg bw/d
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Worker	Dermal, Short-term exposure, Systemic effects	8.3 mg/kg bw/d
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	12.3 mg/m ³
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Worker	Inhalation, Short-term exposure, Systemic effects	12.3 mg/m ³
bisphenol A		Worker	Dermal, Long-term	49 mg/kg bw/d

			exposure (8 hours), Systemic effects	
bisphenol A		Worker	Dermal, Short-term exposure, Systemic effects	49 mg/kg bw/d
bisphenol A		Worker	Inhalation, Long-term exposure (8 hours), Local effects	10 mg/m ³
bisphenol A		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	10 mg/m ³
bisphenol A		Worker	Inhalation, Short-term exposure, Local effects	10 mg/m ³
bisphenol A		Worker	Inhalation, Short-term exposure, Systemic effects	10 mg/m ³

Predicted no effect concentrations (PNEC)

Ingredient	Degradation Product	Compartment	PNEC
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Freshwater	0.003 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Freshwater sediments	0.5 mg/kg d.w.
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Intermittent releases to water	0.013 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Marine water	0.0003 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Marine water sediments	0.5 mg/kg d.w.
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Sewage Treatment Plant	10 mg/l
bisphenol A		Agricultural soil	3.7 mg/kg d.w.
bisphenol A		Freshwater	0.018 mg/l
bisphenol A		Freshwater sediments	2.2 mg/kg d.w.
bisphenol A		Intermittent releases to water	0.01 mg/l
bisphenol A		Marine water	0.016 mg/l
bisphenol A		Marine water sediments	0.44 mg/kg d.w.
bisphenol A		Sewage Treatment Plant	320 mg/l

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from UK HSC

8.2. Exposure controls

In addition, refer to the annex for more information.

8.2.1. Engineering controls

Curing enclosures must be exhausted to outdoors or to a suitable emission control device. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety glasses with side shields.

Applicable Norms/Standards

Use eye protection conforming to EN 166

Skin/hand protection

No protective gloves required. 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

Respiratory protection

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

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

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

Applicable Norms/Standards

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

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	Solid.
Specific Physical Form:	Film
Colour	Green
Odor	Odourless
Odour threshold	No data available.
Melting point/freezing point	No data available.

Boiling point/boiling range	<i>Not applicable.</i>
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Flash point	No flash point
Autoignition temperature	<i>Not applicable.</i>
Decomposition temperature	<i>No data available.</i>
pH	<i>substance/mixture is non-soluble (in water)</i>
Kinematic Viscosity	<i>Not applicable.</i>
Water solubility	Nil
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>Not applicable.</i>
Vapour pressure	<i>Not applicable.</i>
Density	<i>No data available.</i>
Relative density	<i>No data available.</i>
Relative Vapor Density	<i>Not applicable.</i>

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	<i>No data available.</i>
Evaporation rate	<i>Not applicable.</i>
Percent volatile	Nil

SECTION 10: Stability and reactivity

10.1 Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

Amines.

10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
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

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

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

May be harmful if swallowed.

Physical Blockage: Signs/symptoms may include cramping, abdominal pain, and constipation. May cause additional health effects (see below).

Additional Health Effects:**Reproductive/Developmental Toxicity:**

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

Genotoxicity:

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

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE 2,000 - 5,000 mg/kg
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Dermal	Rat	LD50 > 1,600 mg/kg
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Ingestion	Rat	LD50 > 1,000 mg/kg
bisphenol A	Dermal	Rabbit	LD50 > 2,000 mg/kg
bisphenol A	Ingestion	Rat	LD50 3,200 mg/kg
Dicyandiamide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Dicyandiamide	Ingestion	Rat	LD50 > 30,000 mg/kg
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	Dermal	Rabbit	LD50 > 4,000 mg/kg
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	Ingestion	Rat	LD50 500-5000 mg/kg
N,N''-(4-Methyl-m-phenylene)bis[N',N'-dimethylurea]	Dermal	Rat	LD50 > 2,000 mg/kg
N,N''-(4-Methyl-m-phenylene)bis[N',N'-dimethylurea]	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	Multiple animal species	No significant irritation
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Rabbit	Mild irritant

bisphenol A	Rabbit	No significant irritation
Dicyandiamide	Human and animal	Minimal irritation
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	Rabbit	Irritant
N,N''-(4-Methyl-m-phenylene)bis[N',N'-dimethylurea]	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Rabbit	Moderate irritant
bisphenol A	Rabbit	Corrosive
Dicyandiamide	Professional judgement	Mild irritant
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	Rabbit	Severe irritant
N,N''-(4-Methyl-m-phenylene)bis[N',N'-dimethylurea]	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Overall product	Guinea pig	Not classified
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Human and animal	Sensitising
bisphenol A	official classification	Sensitising
Dicyandiamide	Guinea pig	Not classified
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	Guinea pig	Sensitising

Photosensitisation

Name	Species	Value
bisphenol A	Human and animal	Sensitising

Respiratory Sensitisation

Name	Species	Value
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
bis-[4-(2,3-epoxypropoxy)phenyl]propane	In vivo	Not mutagenic
bis-[4-(2,3-epoxypropoxy)phenyl]propane	In Vitro	Some positive data exist, but the data are not sufficient for classification
bisphenol A	In vivo	Not mutagenic
bisphenol A	In Vitro	Some positive data exist, but the data are not sufficient for classification
Dicyandiamide	In Vitro	Not mutagenic
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	In Vitro	Some positive data exist, but the data are not sufficient for classification
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	In vivo	Mutagenic

Carcinogenicity

Name	Route	Species	Value
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
bisphenol A	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Dicyandiamide	Ingestion	Rat	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
bisphenol A	Ingestion	Not classified for female reproduction	Multiple animal species	NOAEL 50 mg/kg/day	
bisphenol A	Ingestion	Not classified for male reproduction	Multiple animal species	NOAEL 50 mg/kg/day	
bisphenol A	Ingestion	Toxic to development	Multiple animal species	NOAEL 50 mg/kg/day	
Dicyandiamide	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
Dicyandiamide	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	44 days
Dicyandiamide	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
bisphenol A	Inhalation	respiratory irritation	May cause respiratory irritation	Multiple animal species	LOAEL 0.152 mg/l	15 minutes

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
bis-[4-(2,3-epoxipropoxy)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

bisphenol A	Inhalation	liver kidney and/or bladder hematopoietic system	Not classified	Rat	NOAEL 0.15 mg/l	13 weeks
bisphenol A	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 50 mg/kg/day	3 generation
bisphenol A	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 370 mg/kg/day	13 weeks
bisphenol A	Ingestion	endocrine system hematopoietic system	Not classified	Rat	NOAEL 500 mg/kg/day	3 generation
bisphenol A	Ingestion	nervous system	Not classified	Rat	NOAEL 185 mg/kg/day	90 days
bisphenol A	Ingestion	heart bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 2,400 mg/kg/day	13 weeks
Dicyandiamide	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 6,822 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

Ingredient	CAS Nbr	Human health endocrine disruptor information
bisphenol A	80-05-7	The European Chemicals Agency has concluded that in experimental animals this substance affects the reproductive cycle, mammary gland development, learning and memory, and metabolism by disrupting the endocrine system.

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
Polyether Polymer	Trade Secret		Data not available or insufficient for classification			N/A
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Activated sludge	Estimated	3 hours	IC50	>100 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Water flea	Estimated	48 hours	EC50	1.8 mg/l

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bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Green Algae	Experimental	72 hours	EC50	>11 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Green Algae	Experimental	72 hours	NOEC	4.2 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Water flea	Experimental	21 days	NOEC	0.3 mg/l
bisphenol A	80-05-7	Activated sludge	Experimental	3 hours	EC50	58.4 mg/l
bisphenol A	80-05-7	Atlantic Silverside	Experimental	96 hours	LC50	9.4 mg/l
bisphenol A	80-05-7	Bacteria	Experimental	18 hours	EC10	>320 mg/l
bisphenol A	80-05-7	Diatom	Experimental	96 hours	EC50	1.1 mg/l
bisphenol A	80-05-7	Fathead minnow	Experimental	96 hours	LC50	4.6 mg/l
bisphenol A	80-05-7	Green Algae	Experimental	96 hours	EC50	2.73 mg/l
bisphenol A	80-05-7	Mysid Shrimp	Experimental	96 hours	LC50	1.1 mg/l
bisphenol A	80-05-7	Water flea	Experimental	48 hours	EC50	10.2 mg/l
bisphenol A	80-05-7	Crustacea other	Experimental	328 days	NOEC	0.025 mg/l
bisphenol A	80-05-7	Diatom	Experimental	96 hours	EC10	0.4 mg/l
bisphenol A	80-05-7	Fathead minnow	Experimental	444 days	NOEC	0.016 mg/l
bisphenol A	80-05-7	Green Algae	Experimental	96 hours	EC10	1.36 mg/l
bisphenol A	80-05-7	Mysid Shrimp	Experimental	28 days	NOEC	0.17 mg/l
bisphenol A	80-05-7	Sheepshead Minnow	Experimental	116 days	NOEC	0.066 mg/l
N,N"-(4-Methyl-m-phenylene)bis[N',N'-dimethylurea]	17526-94-2	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
N,N"-(4-Methyl-m-phenylene)bis[N',N'-dimethylurea]	17526-94-2	Common Carp	Experimental	96 hours	LC50	>100 mg/l
N,N"-(4-Methyl-m-phenylene)bis[N',N'-dimethylurea]	17526-94-2	Green Algae	Experimental	72 hours	EC50	>100 mg/l
N,N"-(4-Methyl-m-phenylene)bis[N',N'-dimethylurea]	17526-94-2	Water flea	Experimental	48 hours	EC50	>100 mg/l
N,N"-(4-Methyl-m-phenylene)bis[N',N'-dimethylurea]	17526-94-2	Green Algae	Experimental	72 hours	NOEC	100 mg/l
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Water flea	Estimated	48 hours	EC50	18 mg/l
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Bacteria	Experimental	16 hours	EC50	>=10 mg/l
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Common Carp	Experimental	96 hours	LC50	4.2 mg/l
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Green algae	Experimental	96 hours	EC50	13 mg/l
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Green algae	Experimental	96 hours	NOEC	4.2 mg/l

p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Water flea	Experimental	21 days	NOEC	0.42 mg/l
Dicyandiamide	461-58-5	Bluegill	Experimental	96 hours	LC50	>1,000 mg/l
Dicyandiamide	461-58-5	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
Dicyandiamide	461-58-5	Water flea	Experimental	48 hours	EC50	3,177 mg/l
Dicyandiamide	461-58-5	Green algae	Experimental	72 hours	NOEC	310 mg/l
Dicyandiamide	461-58-5	Water flea	Experimental	21 days	NOEC	25 mg/l
Dicyandiamide	461-58-5	Redworm	Experimental	14 days	LC50	>3,200 mg/kg (Dry Weight)

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Polyether Polymer	Trade Secret	Data not availbl-insufficient			N/A	
bis-[4-(2,3-epoxipropoxy)phenyl]propa ne	1675-54-3	Experimental Hydrolysis		Hydrolytic half-life	117 hours (t 1/2)	Non-standard method
bis-[4-(2,3-epoxipropoxy)phenyl]propa ne	1675-54-3	Experimental Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
bisphenol A	80-05-7	Experimental Biodegradation	28 days	BOD	81.4 % BOD/ThBOD	OECD 301F - Manometric respirometry
N,N"-(4-Methyl-m-phenylene)bis[N',N'-dimethylurea]	17526-94-2	Estimated Biodegradation	28 days	BOD	3 % BOD/ThBOD	OECD 301C - MITI test (I)
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Experimental Hydrolysis		Hydrolytic half-life	4.1 days (t 1/2)	Non-standard method
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Experimental Biodegradation	29 days	CO2 evolution	≤10 % weight	OECD 301B - Modified sturm or CO2
Dicyandiamide	461-58-5	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	0 %removal of DOC	OECD 301E - Modif. OECD Screen
Dicyandiamide	461-58-5	Experimental Aquatic Inherent Biodegrad.	14 days	Dissolv. Organic Carbon Deplet	0 %removal of DOC	OECD 302B Zahn-Wellens/EVPA
Dicyandiamide	461-58-5	Experimental Biodegradation	61 days	CO2 evolution	1.1 %CO2 evolution/THC O2 evolution	OECD 309 Aero Sim Biod Water

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Polyether Polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
bis-[4-(2,3-epoxipropoxy)phenyl]propa ne	1675-54-3	Experimental Bioconcentration		Log Kow	3.242	Non-standard method
bisphenol A	80-05-7	Experimental BCF-Carp	42 days	Bioaccumulation factor	≤67	Non-standard method
N,N"-(4-Methyl-m-phenylene)bis[N',N'-dimethylurea]	17526-94-2	Estimated Bioconcentration		Bioaccumulation factor	4.3	Estimated: Bioconcentration factor
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Estimated Bioconcentration		Log Kow	0.87	Non-standard method
Dicyandiamide	461-58-5	Experimental BCF-Carp	42 days	Bioaccumulation factor	<=3.1	OECD305-Bioconcentration
Dicyandiamide	461-58-5	Experimental		Log Kow	-0.52	OECD 107 log Kow shke

	Bioconcentration			flsk mtd
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12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
Dicyandiamide	461-58-5	Modeled Mobility in Soil	Koc	ERROR: Length cannot be greater than the length of the string.	Episuite™

12.5. Results of the PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

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

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

EU waste code (product as sold)

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

SECTION 14: Transportation information

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number	UN3077	UN3077	UN3077
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(EPOXY RESIN)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(EPOXY RESIN)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(EPOXY RESIN)

14.3 Transport hazard class(es)	9	9	9
14.4 Packing group	III	III	III
14.5 Environmental hazards	Environmentally Hazardous	Not applicable	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 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code	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 Tunnel Code	(-)	Not applicable.	Not applicable.
ADR Classification Code	M7	Not applicable.	Not applicable.
ADR Transport Category	3	Not applicable.	Not applicable.
ADR Multiplier	1	0	0
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

bis-[4-(2,3-epoxipropoxy)phenyl]propane

CAS Nbr

1675-54-3

Classification

Gr. 3: Not classifiable

Regulation

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

bisphenol A

CAS Nbr

80-05-7

Restriction status: listed in REACH Annex XVII

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

Authorization status under REACH:

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

Ingredient

bisphenol A

CAS Nbr

80-05-7

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

Global inventory status

Contact 3M for more information. 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.

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

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H360F	May damage fertility.
H411	Toxic to aquatic life with long lasting effects.

Revision information:

EU Section 09: pH information information was added.
Industrial Use of Adhesives: Section 16: Annex information was modified.
Label: CLP Percent Unknown information was modified.
Label: CLP Precautionary - Disposal information was deleted.
Label: CLP Precautionary - Prevention information was modified.
Label: CLP Precautionary - Response information was modified.
List of sensitizers information was modified.
Section 2: Other hazards phrase information was modified.
Section 03: Composition table % Column heading information was added.
Section 3: Composition/ Information of ingredients table information was modified.
Section 03: SCL table information was added.
Section 03: Substance not applicable information was added.
Section 4: First aid for eye contact information information was modified.
Section 04: Information on toxicological effects information was modified.
Section 5: Hazardous combustion products table information was modified.
Section 6: Accidental release personal information information was modified.
Section 7: Precautions safe handling information information was modified.
Section 8: Appropriate Engineering controls information information was modified.
Section 8: DNEL table row information was modified.

Section 8: Personal Protection - Skin/hand information information was modified.
Section 8: PNEC table row information was modified.
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 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 11: Acute Toxicity table information was modified.
Section 11: Carcinogenicity Table information was modified.
Section 11: Endocrine disruptor table column headers information was added.
Section 11: Endocrine disruptor table row information was added.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Respiratory Sensitization 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 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.
Section 12: No endocrine disruptor information available warning information was added.
Section 12: Persistence and Degradability information information was modified.
Section 12: Bioaccumulative potential information 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 Multiplier – Main Heading information was added.
Section 14 Multiplier – Regulation Data 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 Category – Main Heading information was added.
Section 14 Transport Category – Regulation Data information was added.

Section 14 Transport in bulk – Regulation Data information was added.
 Section 14 Transport in bulk according to Annex II of Marpol and the IBC Code – Main Heading information was added.
 Section 14 Tunnel Code – Main Heading information was added.
 Section 14 Tunnel Code – Regulation Data information was added.
 Section 14 UN Number Column data information was added.
 Section 14 UN Number information was added.
 Section 15: Carcinogenicity information information was added.
 Section 15: Label remarks and EU Detergent information was deleted.
 Section 15: Regulations - Inventories information was added.

Annex

1. Title	
Substance identification	bisphenol A; EC No. 201-245-8; CAS Nbr 80-05-7;
Exposure Scenario Name	Industrial Use of Adhesives
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 21 -Low energy manipulation and handling of substances bound in/on materials or articles ERC 05 -Use at industrial site leading to inclusion into/onto article
Processes, tasks and activities covered	Application of product. Cutting and laminating of adhesive films and tapes.
2. Operational conditions and risk management measures	
Operating Conditions	Physical state: Solid. General operating conditions: Duration of exposure per day at workplace [for one worker]: 8 hours/day; Emission days per year: 20 days per year; Indoors with good general ventilation;
Risk management measures	Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.; Environmental: None needed;
Waste management measures	Incinerate in a permitted hazardous waste incinerator;
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.Contact 3M at the address or phone number listed on the first page of the SDS for information on exposure estimation.

1. Title	
Substance identification	
Exposure Scenario Name	Industrial Use of Adhesives
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 13 -Treatment of articles by dipping and pouring ERC 05 -Use at industrial site leading to inclusion into/onto article
Processes, tasks and activities covered	Bonding process for adhesive films, which involves defreezing, cutting, laminating, curing and potentially milling.
2. Operational conditions and risk management measures	
Operating Conditions	Physical state: Liquid. General operating conditions:

	Duration of use: 8 hours/day; Emission days per year: 220 days/year;
Risk management measures	Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training. Refer to Section 8 of the SDS for specific glove material.; Environmental: None needed;
Waste management measures	No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:
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. Contact 3M at the address or phone number listed on the first page of the SDS for information on exposure estimation.

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