



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 555

Product Identification Numbers

87-2500-0152-3 87-2500-0160-6

7000058925 7000058926

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

Identified uses

Structural adhesive.

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.

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

This material has been tested for skin corrosion/irritation and the test results do not meet the criteria for classification.

This material has been tested for skin sensitization and the test results do not meet the criteria for classification.

CLASSIFICATION:

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

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

WARNING.

Symbols

GHS08 (Health Hazard) | GHS09 (Environment) |

Pictograms



Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
Phenol, polymer with 3A,4,7,7A-tetrahydro-4,7-methano-1H-indene, glycidyl ether	119345-05-0		15 - 35

HAZARD STATEMENTS:

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

PRECAUTIONARY STATEMENTS

Prevention:

P273	Avoid release to the environment.
P280E	Wear protective gloves.

Response:

P391	Collect spillage.
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SUPPLEMENTAL INFORMATION:

Supplemental Hazard Statements:

EUH208	Contains Bisphenol A - epichlorhydrin - formaldehyde copolymer. BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700). bis-[4-(2,3-epoxipropoxy)phenyl]propane. May produce an allergic reaction.
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5% of the mixture consists of components of unknown acute oral toxicity.

Contains 40% of components with unknown hazards to the aquatic environment.

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]
bis-[4-(2,3-epoxipropoxy)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5 (REACH-No.) 01-2119456619-26	20 - 40	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Phenol, polymer with 3A,4,7,7A-tetrahydro-4,7-methano-1H-indene, glycidyl ether	(CAS-No.) 119345-05-0	15 - 35	Muta. 2, H341
Methyl methacrylate - butadiene - styrene polymer	(CAS-No.) 25053-09-2	10 - 30	Substance not classified as hazardous
Bisphenol A - epichlorhydrin - formaldehyde copolymer	(CAS-No.) 28906-96-9	1 - 15	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	(CAS-No.) 25036-25-3	5 - 15	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Non-volatile amide	Trade Secret	1 - 10	Substance not classified as hazardous
Dicyandiamide	(CAS-No.) 461-58-5 (EC-No.) 207-312-8	1 - 5	Substance not classified as hazardous
Bisphenol A - bis(p-chlorophenyl)sulfone polymer	(CAS-No.) 25154-01-2	0.1 - 5	Substance not classified as hazardous
Colourant	Trade Secret	1 - 3	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 signs/symptoms develop, get medical attention.

Eye contact

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, 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

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

Substance

Aldehydes.
Carbon monoxide
Carbon dioxide.
Hydrogen Chloride
Oxides of nitrogen.

Condition

During combustion.
During combustion.
During combustion.
During combustion.
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 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 acids. Store away from strong bases. 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**

No occupational exposure limit values exist for any of the components listed in Section 3 of this Safety Data Sheet.

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

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-		Marine water	0.0003 mg/l

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epoxipropoxi)phenyl]propa ne			
bis-[4-(2,3- epoxipropoxi)phenyl]propa ne		Marine water sediments	0.5 mg/kg d.w.
bis-[4-(2,3- epoxipropoxi)phenyl]propa ne		Sewage Treatment Plant	10 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

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

None required.

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. 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 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	Light Yellow
Odor	Slight Epoxy
Odour threshold	<i>No data available.</i>
Melting point/freezing point	<i>No data available.</i>
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>No data available.</i>
Water solubility	Nil
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Vapour pressure	<i>Not applicable.</i>
Density	1.06 g/cm ³ [@ 20 °C]
Relative density	1.06 [@ 20 °C] [Ref Std: WATER=1]
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>No data available.</i>
Molecular weight	<i>No data available.</i>

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

Not determined

10.5 Incompatible materials

Strong acids.
Strong bases.
Amines.

10.6 Hazardous decomposition products**Substance**

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not 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

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

Additional Health Effects:**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	Ingestion		No data available; calculated ATE >5,000 mg/kg
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Dermal	Rat	LD50 > 1,600 mg/kg
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Ingestion	Rat	LD50 > 1,000 mg/kg
Phenol, polymer with 3A,4,7,7A-tetrahydro-4,7-methano-1H-indene, glycidyl ether	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Phenol, polymer with 3A,4,7,7A-tetrahydro-4,7-methano-1H-indene, glycidyl ether	Ingestion	Rat	LD50 > 2,000 mg/kg
Methyl methacrylate - butadiene - styrene polymer	Dermal	Rabbit	LD50 > 5,000 mg/kg
Methyl methacrylate - butadiene - styrene polymer	Ingestion	Rat	LD50 > 5,000 mg/kg

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BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	Dermal	Rat	LD50 > 1,600 mg/kg
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	Ingestion	Rat	LD50 > 1,000 mg/kg
Bisphenol A - epichlorhydrin - formaldehyde copolymer	Dermal	Rat	LD50 > 2,000 mg/kg
Bisphenol A - epichlorhydrin - formaldehyde copolymer	Ingestion	Rat	LD50 > 2,000 mg/kg
Non-volatile amide	Dermal		LD50 estimated to be > 5,000 mg/kg
Non-volatile amide	Ingestion	Rat	LD50 > 5,000 mg/kg
Dicyandiamide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Dicyandiamide	Ingestion	Rat	LD50 > 30,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	Rabbit	No significant irritation
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Rabbit	Mild irritant
Phenol, polymer with 3A,4,7,7A-tetrahydro-4,7-methano-1H-indene, glycidyl ether	In vitro data	No significant irritation
Methyl methacrylate - butadiene - styrene polymer	Professional judgement	Minimal irritation
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	Rabbit	Mild irritant
Bisphenol A - epichlorhydrin - formaldehyde copolymer	Professional judgement	Irritant
Non-volatile amide	Rabbit	No significant irritation
Dicyandiamide	Human and animal	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Rabbit	Moderate irritant
Phenol, polymer with 3A,4,7,7A-tetrahydro-4,7-methano-1H-indene, glycidyl ether	In vitro data	No significant irritation
Methyl methacrylate - butadiene - styrene polymer	Professional judgement	Mild irritant
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	Rabbit	Moderate irritant
Bisphenol A - epichlorhydrin - formaldehyde copolymer	Professional judgement	Severe irritant
Non-volatile amide	Rabbit	Mild irritant
Dicyandiamide	Professional judgement	Mild irritant

Skin Sensitisation

Name	Species	Value
Overall product	Guinea pig	Not classified
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Human and	Sensitising

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	animal	
Phenol, polymer with 3A,4,7,7A-tetrahydro-4,7-methano-1H-indene, glycidyl ether	Guinea pig	Not classified
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	Human and animal	Sensitising
Bisphenol A - epichlorhydrin - formaldehyde copolymer	Professional judgement	Sensitising
Non-volatile amide	Mouse	Not classified
Dicyandiamide	Guinea pig	Not classified

Respiratory Sensitisation

Name	Species	Value
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Human	Not classified
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	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
Phenol, polymer with 3A,4,7,7A-tetrahydro-4,7-methano-1H-indene, glycidyl ether	In Vitro	Some positive data exist, but the data are not sufficient for classification
Phenol, polymer with 3A,4,7,7A-tetrahydro-4,7-methano-1H-indene, glycidyl ether	In vivo	Mutagenic
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	In vivo	Not mutagenic
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	In Vitro	Some positive data exist, but the data are not sufficient for classification
Non-volatile amide	In Vitro	Some positive data exist, but the data are not sufficient for classification
Dicyandiamide	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	Dermal	Mouse	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-epoxypropoxy)phenyl]propane	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation

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BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
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 - epichlorhydrin - formaldehyde copolymer	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Professional judgement	NOAEL not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
bis-[4-(2,3-epoxypropoxy)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 DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	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
Dicyandiamide	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 6,822 mg/kg/day	13 weeks

3M Scotch-Weld Structural Adhesive Film AF 555**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

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
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
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
Phenol, polymer with 3A,4,7,7A-tetrahydro-4,7-methano-1H-indene, glycidyl ether	119345-05-0		Data not available or insufficient for classification			N/A
Methyl methacrylate - butadiene - styrene polymer	25053-09-2		Data not available or insufficient for classification			N/A
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	25036-25-3	Green algae	Estimated	72 hours	EC50	>11 mg/l
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	25036-25-3	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	25036-25-3	Water flea	Estimated	48 hours	EC50	1.8 mg/l

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BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	25036-25-3	Green algae	Estimated	72 hours	NOEC	4.2 mg/l
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	25036-25-3	Water flea	Estimated	21 days	NOEC	0.3 mg/l
Bisphenol A - epichlorhydrin - formaldehyde copolymer	28906-96-9		Data not available or insufficient for classification			N/A
Non-volatile amide	Trade Secret	Green Algae	Experimental	72 hours	EC50	>84 mg/l
Non-volatile amide	Trade Secret	Water flea	Experimental	48 hours	EC50	>100 mg/l
Non-volatile amide	Trade Secret	Green Algae	Experimental	72 hours	Effect Concentration 10%	8.1 mg/l
Bisphenol A - bis(p-chlorophenyl)sulfone polymer	25154-01-2		Data not available or insufficient for classification			N/A
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

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Experimental Hydrolysis		Hydrolytic half-life	117 hours (t 1/2)	Non-standard method
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Experimental Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
Phenol, polymer with 3A,4,7,7A-tetrahydro-4,7-methano-1H-indene, glycidyl ether	119345-05-0	Estimated Biodegradation	28 days	BOD	15 % weight	OECD 301C - MITI test (I)
Methyl methacrylate - butadiene - styrene polymer	25053-09-2	Data not available - insufficient			N/A	
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	25036-25-3	Estimated Hydrolysis		Hydrolytic half-life	117 hours (t 1/2)	Non-standard method
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	25036-25-3	Estimated Biodegradation	28 days	BOD	5 % BOD/ThBOD	OECD 301F - Manometric respirometry
Bisphenol A - epichlorhydrin - formaldehyde copolymer	28906-96-9	Data not available - insufficient			N/A	
Non-volatile amide	Trade Secret	Experimental Biodegradation	28 days	CO2 evolution	5 %CO2 evolution/THC O2 evolution	OECD 301B - Modified sturm or CO2
Bisphenol A - bis(p-chlorophenyl)sulfone	25154-01-2	Data not available - insufficient			N/A	

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polymer						
Dicyandiamide	461-58-5	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	0 % weight	OECD 301E - Modified OECD Scre

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Experimental Bioconcentration		Log Kow	3.242	Non-standard method
Phenol, polymer with 3A,4,7,7A-tetrahydro-4,7-methano-1H-indene, glycidyl ether	119345-05-0	Estimated Bioconcentration		Bioaccumulation factor	<=162	Estimated: Bioconcentration factor
Methyl methacrylate - butadiene - styrene polymer	25053-09-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER (MW unknown or <=700)	25036-25-3	Estimated Bioconcentration		Log Kow	3.242	Non-standard method
Bisphenol A - epichlorhydrin - formaldehyde copolymer	28906-96-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Non-volatile amide	Trade Secret	Experimental Bioconcentration		Log Kow	-1.4	Non-standard method
Bisphenol A - bis(p-chlorophenyl)sulfone polymer	25154-01-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Dicyandiamide	461-58-5	Experimental BCF-Carp	42 days	Bioaccumulation factor	<=3.1	OECD 305C-Bioaccum degree fish

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
Non-volatile amide	Trade Secret	Estimated Mobility in Soil	Koc	10 l/kg	Episuite™

12.5. Results of the PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

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

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. 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

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& 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

87-2500-0152-3, 87-2500-0160-6

ADR/RID: UN1845, CARBON DIOXID, SOLID, AS COOLANT, --.

IMDG-CODE: UN1845, CARBON DIOXIDE, SOLID, (DRY ICE), AS COOLANT(FORBIDDEN FOR SEA EXCEPT FOR SHORT EUROPEAN FERRYCROSSINGS), 9., IMDG-Code segregation code: NONE, longer distance allowed in Reefer Container, EMS: FC,SV.

ICAO/IATA: UN1845, CARBON DIOXIDE, SOLID, 9..

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number	UN1845	UN3077	UN1845
14.2 UN proper shipping name	CARBON DIOXIDE, SOLID, AS COOLANT; EPOXY RESIN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.; EPOXY RESIN	CARBON DIOXIDE, SOLID, AS COOLANT; EPOXY RESIN
14.3 Transport hazard class(es)	Not applicable.	Not Applicable	Not Applicable
14.4 Packing group	Not applicable.	Not Applicable	Not Applicable
14.5 Environmental hazards	Not applicable.	Not applicable	Not Applicable
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	Not applicable.	Not Applicable	Not Applicable
Emergency Temperature	Not applicable.	Not Applicable	Not Applicable

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ADR Tunnel Code	Not applicable.	Not Applicable	Not Applicable
ADR Classification Code	Not applicable.	Not Applicable	Not Applicable
ADR Transport Category	Not applicable.	Not Applicable	Not Applicable
ADR Multiplier	Not applicable.	Not Applicable	Not Applicable
IMDG Segregation Code	Not applicable.	Not Applicable	Not Applicable
Transport not Permitted	Not applicable.	Not Applicable	Not Applicable

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

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Carcinogenicity**

<u>Ingredient</u>	<u>CAS Nbr</u>	<u>Classification</u>	<u>Regulation</u>
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Gr. 3: Not classifiable	International Agency for Research on Cancer

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**

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H341	Suspected of causing genetic defects.
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.
CLP: Ingredient table information was added.
CLP Remark(phrase) information was deleted.

Label: CLP Classification information was added.
Label: CLP Classification 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 added.
Label: Graphic information was modified.
Label: Signal Word information was added.
List of sensitizers 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 04: Information on toxicological effects information was modified.
Section 5: Fire - Advice for fire fighters information 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: DNEL table row information was modified.
Section 8: Eye protection information information was added.
Section 8: Eye/face protection information information was deleted.
Section 8: glove data value information was modified.
Section 8: Personal Protection - Eye information information was deleted.
Section 8: Personal Protection - Respiratory Information information was modified.
Section 8: Personal Protection - Skin/body information information was added.
Section 8: Personal Protection - Skin/hand information information was modified.
Section 8: PNEC table row information was modified.
Section 8: Respiratory protection - recommended respirators guide information was added.
Section 8: Respiratory protection - recommended respirators information information was added.
Section 8: Skin protection - protective clothing information 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 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: Classification disclaimer information was modified.
Section 11: Germ Cell Mutagenicity Table 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: Mutagenicity information information was added.
Section 11: No endocrine disruptor information available warning information was added.
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: Specific Target Organ Toxicity - single exposure text information was deleted.
Section 11: Target Organs - Repeated Table information was modified.

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.
 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 Transport Not Permitted – Main Heading information was added.
 Section 14 Transport Not Permitted – Regulation Data 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.
 Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was modified.
 Section 16: UK disclaimer information was deleted.

Annex

1. Title	
Substance identification	bis-[4-(2,3-epoxypropoxy)phenyl]propane; EC No. 216-823-5; CAS Nbr 1675-54-3;

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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.

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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