



Safety Data Sheet

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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

62-0167-5305-5 62-0167-5309-7

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 Israel, 91 Medinat Ha'Yehudim Street, Herzeliya 46120
Telephone: 09-961 5000
E Mail: innovation.il@mmm.com
Website: www.3M.com/il

1.4. Emergency telephone number

09-961 5000

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:

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

Ingredients:

Ingredient	C.A.S. No.	EC No.	% by Wt
4,4'-ISOPROPYLIDENEDIPHENOL	80-05-7	201-245-8	3 - 7
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	225-716-2	1 - 5

SUPPLEMENTAL INFORMATION:

Contains 4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER. | 4,4'-ISOPROPYLIDENEDIPHENOL. | Epoxy Resin.

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
Epoxy Resin	(CAS-No.) 25068-38-6	10 - 30	**Skin Irrit. 2**, H315 **Eye Irrit. 2**, H319 **Skin Sens. 1**, H317 **Aquatic Chronic 2**, H411
4,4'-ISOPROPYLIDENEDIPHENOL (REACH Reg. No.:01-2119457856-23)	(CAS-No.) 80-05-7 (EC-No.) 201-245-8	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
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER (REACH Reg. No.:01-2119954405-36)	(CAS-No.) 5026-74-4 (EC-No.) 225-716-2	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
1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA)	(CAS-No.) 17526-94-2 (EC-No.) 241-523-6	1 - 5	Substance not classified as hazardous
3-(TRIMETHOXYSILYL)PROPYL	(CAS-No.) 2530-	0.1 - 1	**Eye Dam. 1**, H318

GLYCIDYL ETHER	83-8 (EC-No.) 219-784-2		
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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
3-(TRIMETHOXY-SILYL)PROPYL GLYCIDYL ETHER	(CAS-No.) 2530-83-8 (EC-No.) 219-784-2	(C >= 5%) **Eye Dam. 1**, H318
Epoxy Resin	(CAS-No.) 25068-38-6	(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

Substance

Aldehydes
Carbon monoxide
Carbon dioxide
Hydrogen Bromide
Hydrogen Chloride
Hydrogen Cyanide

Condition

During Combustion
During Combustion
During Combustion
During Combustion
During Combustion
During Combustion

Ammonia
Oxides of Nitrogen

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 in accordance with applicable local/regional/national/international regulations.

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/vapors/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 (gloves, respirators, etc.) 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

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

8.2. Exposure controls

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/vapors/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

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: 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 vapors and particulates

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Specific Physical Form:	Film
Color	Green
Odor	Odorless
Odor 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>Not Applicable</i>
Water solubility	Nil
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>Not Applicable</i>
Vapor 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 polymerization 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
Epoxy Resin	Dermal	Rat	LD50 > 1,600 mg/kg
Epoxy Resin	Ingestion	Rat	LD50 > 1,000 mg/kg
4,4'-ISOPROPYLDENEDIPHENOL	Dermal	Rabbit	LD50 > 2,000 mg/kg
4,4'-ISOPROPYLDENEDIPHENOL	Ingestion	Rat	LD50 3,200 mg/kg
Dicyandiamide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Dicyandiamide	Ingestion	Rat	LD50 > 30,000 mg/kg
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	Dermal	Rabbit	LD50 > 4,000 mg/kg
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	Ingestion	Rat	LD50 500-5000 mg/kg
1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA)	Dermal	Rat	LD50 > 2,000 mg/kg
1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA)	Ingestion	Rat	LD50 > 2,000 mg/kg
3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER	Dermal	Rabbit	LD50 4,000 mg/kg
3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.3 mg/l
3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER	Ingestion	Rat	LD50 7,010 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	Multiple animal species	No significant irritation
Epoxy Resin	Rabbit	Mild irritant
4,4'-ISOPROPYLDENEDIPHENOL	Rabbit	No significant irritation
Dicyandiamide	Human and animal	Minimal irritation
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	Rabbit	Irritant
1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA)	Rabbit	No significant irritation
3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Epoxy Resin	Rabbit	Moderate irritant
4,4'-ISOPROPYLDENEDIPHENOL	Rabbit	Corrosive
Dicyandiamide	Professional	Mild irritant

	judgement	
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	Rabbit	Severe irritant
1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA)	Rabbit	No significant irritation
3-(TRIMETHOXSILYL)PROPYL GLYCIDYL ETHER	Rabbit	Corrosive

Skin Sensitization

Name	Species	Value
Overall product	Guinea pig	Not classified
Epoxy Resin	Human and animal	Sensitizing
4,4'-ISOPROPYLIDENEDIPHENOL	official classification	Sensitizing
Dicyandiamide	Guinea pig	Not classified
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	Guinea pig	Sensitizing
3-(TRIMETHOXSILYL)PROPYL GLYCIDYL ETHER	Guinea pig	Not classified

Photosensitization

Name	Species	Value
4,4'-ISOPROPYLIDENEDIPHENOL	Human and animal	Sensitizing

Respiratory Sensitization

Name	Species	Value
Epoxy Resin	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
Epoxy Resin	In vivo	Not mutagenic
Epoxy Resin	In Vitro	Some positive data exist, but the data are not sufficient for classification
4,4'-ISOPROPYLIDENEDIPHENOL	In vivo	Not mutagenic
4,4'-ISOPROPYLIDENEDIPHENOL	In Vitro	Some positive data exist, but the data are not sufficient for classification
Dicyandiamide	In Vitro	Not mutagenic
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	In Vitro	Some positive data exist, but the data are not sufficient for classification
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	In vivo	Mutagenic
3-(TRIMETHOXSILYL)PROPYL GLYCIDYL ETHER	In vivo	Not mutagenic
3-(TRIMETHOXSILYL)PROPYL GLYCIDYL ETHER	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Epoxy Resin	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
4,4'-ISOPROPYLIDENEDIPHENOL	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Dicyandiamide	Ingestion	Rat	Not carcinogenic
3-(TRIMETHOXSILYL)PROPYL GLYCIDYL ETHER	Dermal	Mouse	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Epoxy Resin	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy Resin	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy Resin	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
Epoxy Resin	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-ISOPROPYLIDENEDIPHENOL	Ingestion	Not classified for female reproduction	Multiple animal species	NOAEL 50 mg/kg/day	
4,4'-ISOPROPYLIDENEDIPHENOL	Ingestion	Not classified for male reproduction	Multiple animal species	NOAEL 50 mg/kg/day	
4,4'-ISOPROPYLIDENEDIPHENOL	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
3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER	Ingestion	Not classified for development	Rat	NOAEL 3,000 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
4,4'-ISOPROPYLIDENEDIPHENOL	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
Epoxy Resin	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
Epoxy Resin	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Epoxy Resin	Ingestion	auditory system heart endocrine system hematopoietic system liver eyes	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days

		kidney and/or bladder				
4,4'-ISOPROPYLIDENEDIPHENOL	Inhalation	liver kidney and/or bladder hematopoietic system	Not classified	Rat	NOAEL 0.15 mg/l	13 weeks
4,4'-ISOPROPYLIDENEDIPHENOL	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
4,4'-ISOPROPYLIDENEDIPHENOL	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 370 mg/kg/day	13 weeks
4,4'-ISOPROPYLIDENEDIPHENOL	Ingestion	endocrine system hematopoietic system	Not classified	Rat	NOAEL 500 mg/kg/day	3 generation
4,4'-ISOPROPYLIDENEDIPHENOL	Ingestion	nervous system	Not classified	Rat	NOAEL 185 mg/kg/day	90 days
4,4'-ISOPROPYLIDENEDIPHENOL	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
3-(TRIMETHOXSILYL)PROPYL GLYCIDYL ETHER	Ingestion	heart endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system nervous system kidney and/or bladder respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days

Aspiration Hazard

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

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

11.2. Information on other hazards

Ingredient	C.A.S. No.	Human health endocrine disruptor information
4,4'-ISOPROPYLIDENEDIPHENOL	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
Epoxy Resin	25068-38-6	Activated sludge	Estimated	3 hours	IC50	>100 mg/l
Epoxy Resin	25068-38-6	Green Algae	Estimated	72 hours	EC50	>11 mg/l
Epoxy Resin	25068-38-6	Rainbow Trout	Estimated	96 hours	LC50	2 mg/l
Epoxy Resin	25068-38-6	Water flea	Estimated	48 hours	EC50	1.8 mg/l
Epoxy Resin	25068-38-6	Green Algae	Estimated	72 hours	NOEC	4.2 mg/l
Epoxy Resin	25068-38-6	Water flea	Estimated	21 days	NOEC	0.3 mg/l
4,4'-ISOPROPYLIDENEDI PHENOL	80-05-7	Activated sludge	Experimental	3 hours	EC50	58.4 mg/l
4,4'-ISOPROPYLIDENEDI PHENOL	80-05-7	Atlantic Silverside	Experimental	96 hours	LC50	9.4 mg/l
4,4'-ISOPROPYLIDENEDI PHENOL	80-05-7	Bacteria	Experimental	18 hours	EC10	>320 mg/l
4,4'-ISOPROPYLIDENEDI PHENOL	80-05-7	Diatom	Experimental	96 hours	EC50	1.1 mg/l
4,4'-ISOPROPYLIDENEDI PHENOL	80-05-7	Fathead Minnow	Experimental	96 hours	LC50	4.6 mg/l
4,4'-ISOPROPYLIDENEDI PHENOL	80-05-7	Green Algae	Experimental	96 hours	EC50	2.73 mg/l
4,4'-ISOPROPYLIDENEDI PHENOL	80-05-7	Mysid Shrimp	Experimental	96 hours	LC50	1.1 mg/l
4,4'-ISOPROPYLIDENEDI PHENOL	80-05-7	Water flea	Experimental	48 hours	EC50	10.2 mg/l
4,4'-ISOPROPYLIDENEDI PHENOL	80-05-7	Crustacea other	Experimental	328 days	NOEC	0.025 mg/l
4,4'-ISOPROPYLIDENEDI PHENOL	80-05-7	Diatom	Experimental	96 hours	EC10	0.4 mg/l
4,4'-ISOPROPYLIDENEDI PHENOL	80-05-7	Fathead Minnow	Experimental	444 days	NOEC	0.016 mg/l
4,4'-ISOPROPYLIDENEDI PHENOL	80-05-7	Green Algae	Experimental	96 hours	EC10	1.36 mg/l
4,4'-ISOPROPYLIDENEDI PHENOL	80-05-7	Mysid Shrimp	Experimental	28 days	NOEC	0.17 mg/l
4,4'-ISOPROPYLIDENEDI PHENOL	80-05-7	Sheepshead Minnow	Experimental	116 days	NOEC	0.066 mg/l
1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA)	17526-94-2	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA)	17526-94-2	Common Carp	Experimental	96 hours	LC50	>100 mg/l
1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA)	17526-94-2	Green Algae	Experimental	72 hours	EC50	>100 mg/l

1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA)	17526-94-2	Water flea	Experimental	48 hours	EC50	>100 mg/l
1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA)	17526-94-2	Green Algae	Experimental	72 hours	NOEC	100 mg/l
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	Water flea	Estimated	48 hours	EC50	18 mg/l
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	Bacteria	Experimental	16 hours	EC50	>=10 mg/l
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	Common Carp	Experimental	96 hours	LC50	4.2 mg/l
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	Green algae	Experimental	96 hours	EC50	13 mg/l
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	Green algae	Experimental	96 hours	NOEC	4.2 mg/l
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	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)
3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER	2530-83-8	Bacteria	Experimental	5 hours	EC10	1,520 mg/l
3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER	2530-83-8	Common Carp	Experimental	96 hours	LC50	55 mg/l
3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER	2530-83-8	Crustacea other	Experimental	48 hours	LC50	324 mg/l
3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER	2530-83-8	Green algae	Experimental	96 hours	EC50	350 mg/l
3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER	2530-83-8	Green Algae	Experimental	96 hours	NOEC	130 mg/l
3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER	2530-83-8	Water flea	Experimental	21 days	NOEC	>=100 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Polyether Polymer	Trade Secret	Data not available or insufficient			N/A	
Epoxy Resin	25068-38-6	Estimated Hydrolysis		Hydrolytic half-life	117 hours (t 1/2)	Non-standard method
Epoxy Resin	25068-38-6	Estimated Biodegradation	28 days	Biological Oxygen Demand	5 %BOD/COD	OECD 301F - Manometric Respiro
4,4'-ISOPROPYLIDENEDIPHENOL	80-05-7	Experimental Biodegradation	28 days	Biological Oxygen Demand	81.4 % BOD/ThBOD	OECD 301F - Manometric Respiro
1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA)	17526-94-2	Estimated Biodegradation	28 days	Biological Oxygen Demand	3 % BOD/ThBOD	OECD 301C - MITI (I)
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	Experimental Hydrolysis		Hydrolytic half-life	4.1 days (t 1/2)	Non-standard method
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	Experimental Biodegradation	29 days	Carbon dioxide evolution	≤10 % weight	OECD 301B - Mod. 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	Carbon dioxide evolution	1.1 %CO2 evolution/THC O2 evolution	OECD 309 Aero Sim Biod Water
3-(TRIMETHOXYSILYL)PHENYL GLYCIDYL ETHER	2530-83-8	Experimental Hydrolysis		Hydrolytic half-life	6.5 hours (t 1/2)	Non-standard method
3-(TRIMETHOXYSILYL)PHENYL GLYCIDYL ETHER	2530-83-8	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	37 % weight	Non-standard method

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
Epoxy Resin	25068-38-6	Estimated Bioconcentration		Log of Octanol/H2O part. coeff	3.242	Non-standard method
4,4'-ISOPROPYLIDENEDIPHENOL	80-05-7	Experimental BCF-Carp	42 days	Bioaccumulation Factor	≤67	Non-standard method
1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA)	17526-94-2	Estimated Bioconcentration		Bioaccumulation Factor	4.3	Est: Bioconcentration factor
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	Estimated Bioconcentration		Log of Octanol/H2O part. coeff	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 Bioconcentration		Log of Octanol/H2O part. coeff	-0.52	OECD 107 log Kow shke flask mtd
3-(TRIMETHOXYSILYL)PHENYL GLYCIDYL ETHER	2530-83-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

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™
3-(TRIMETHOXYSILYL)P ROPYL GLYCIDYL ETHER	2530-83-8	Estimated Mobility in Soil	Koc	58 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. 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/CE 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)

080409* Waste adhesives and sealants containing organic solvents or other dangerous substances
200127* Paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transportation information

Transport Exemption: For vessels containing a net quantity of 5l or a net mass of 5kg or less per single or inner packaging, special provision 375 (ADR), exemption per 2.10.2.7 (IMDG) or special provision A197 (IATA) may be applied, if applicable.

ADR: UN3077; Environmentally Hazardous Substance, Solid, N.O.S. (Solid Epoxy Resin); 9; III; (E); M7.

IATA: UN3077; Environmentally Hazardous Substance, Solid, N.O.S. (Solid Epoxy Resin); 9; III.

IMDG: UN3077; Environmentally Hazardous Substance, Solid, N.O.S. (Solid Epoxy Resin); 9; III; EMS: FA, SF.

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

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

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

<u>Ingredient</u>	<u>C.A.S. No.</u>
4,4'-ISOPROPYLIDENEDIPHENOL	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:

<u>Ingredient</u>	<u>C.A.S. No.</u>
4,4'-ISOPROPYLIDENEDIPHENOL	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.

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.
Section 02: CLP Ingredient table information was modified.
Section 02: CLP Remark(phrase) information was deleted.
Section 02: Contains statement for sensitizers information was deleted.
Section 02: H phrase reference information was deleted.
Section 02: Label Elements: CLP Classification information was deleted.
Section 02: Label Elements: CLP Environmental Hazard Statements information was deleted.
Section 02: Label Elements: CLP Percent Unknown information was modified.
Section 02: Label Elements: CLP Precautionary - Disposal information was deleted.
Section 02: Label Elements: CLP Precautionary - Prevention information was deleted.
Section 02: Label Elements: Graphic information was deleted.
Section 02: Label Elements: Signal Word information was deleted.
Section 02: List of sensitizers information was modified.
Section 02: Other hazards phrase information was modified.
Section 03: Composition table % Column heading information was added.
Section 03: 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: First aid for eye contact information information was modified.

Section 04: Information on toxicological effects information was modified.
Section 05: Fire - Advice for fire fighters information information was modified.
Section 05: Hazardous combustion products table information was modified.
Section 06: Accidental release clean-up information information was modified.
Section 06: Accidental release personal information information was modified.
Section 07: Precautions safe handling information information was modified.
Section 08: Occupational exposure limit table information was deleted.
Section 08: Occupational exposure limit table information was modified.
Section 08: OEL Reg Agency Desc information was deleted.
Section 08: Personal Protection - Respiratory Information information was added.
Section 08: Personal Protection - Skin/hand information information was modified.
Section 08: Respiratory protection - recommended respirators guide information was added.
Section 08: Respiratory protection - recommended respirators information information was added.
Section 08: Respiratory protection information information was deleted.
Section 08: Skin protection - recommended gloves information information was modified.
Section 08: STEL key information was deleted.
Section 08: TWA key information was deleted.
Section 09: Color information was added.
Section 09: Evaporation Rate information information was deleted.
Section 09: Explosive properties information information was deleted.
Section 09: Kinematic Viscosity information information was added.
Section 09: Melting point information information was modified.
Section 09: Odor information was added.
Section 09: Odor, color, grade information information was deleted.
Section 09: Oxidising properties information information was deleted.
Section 09: pH information information was deleted.
Section 09: Property description for optional properties information was modified.
Section 09: Vapor density value information was added.
Section 09: Vapor density value information was deleted.
Section 09: 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: 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: 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: Reproductive and/or Developmental Effects text information was deleted.
Section 11: Reproductive Hazards information information was deleted.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Reproductive/developmental effects information information was added.
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: No PBT/vPvB information available warning information was modified.
Section 12: Persistence and Degradability information information was modified.

Section 12: Biocumulative potential information information was modified.

Section 13: Standard Phrase Category Waste GHS information was modified.

Section 14: Transportation classification information was modified.

Section 15: Authorization status under REACH: SVHC Authorization ingredient information information was added.

Section 15: Label remarks and EU Detergent information was deleted.

Section 15: Regulations - Inventories information was modified.

Section 15: Restrictions on manufacture ingredients information information was added.

Section 16: Two-column table displaying the unique list of H Codes and statements (std phrses) for all components of the given material. information was modified.

Section 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.

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