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 163-2

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

Identified uses
Structural Film Adhesive.

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.
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:
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

Symbols:
GHS09 (Environment) |

Pictograms

HAZARD STATEMENTS:

H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P273	Avoid release to the environment.

Response:

P391	Collect spillage.

SUPPLEMENTAL INFORMATION:

Supplemental Hazard Statements:

EUH208	Contains ADIPIC DIHYDRAZIDE. | Bisphenol A Diglycidyl Ether. May produce an allergic reaction.

60% of the mixture consists of components of unknown acute oral toxicity.

Contains 60% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

None known
This material does not contain any substances that are assessed to be a PBT or vPvB

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
EPOXY RESIN REACTION PRODUCT	None	45 - 65	Substance not classified as hazardous
Bisphenol A Diglycidyl Ether	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5	15 - 40	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
DICYANDIAMIDE	(CAS-No.) 461-58-5 (EC-No.) 207-312-8	< 5	Substance not classified as hazardous

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
PHENOL, 2,2',6-TRIBROMO-4,4'-ISOPROPYLIDENEDI-	(CAS-No.) 6386-73-8 (EC-No.) 228-988-0	< 1	Aquatic Acute 1, H400,M=1 Aquatic Chronic 2, H411
ADIPIC DIHYDRAZIDE	(CAS-No.) 1071-93-8 (EC-No.) 213-999-5	< 1	Aquatic Chronic 2, H411 Skin Sens. 1B, H317
3-(trimethoxysilyl)propyl glycidyl ether	(CAS-No.) 2530-83-8 (EC-No.) 219-784-2	< 1	Eye Dam. 1, H318 Aquatic Chronic 3, H412
Dye	Trade Secret	< 0.2	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
Bisphenol A Diglycidyl Ether	(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:
No need for first aid is anticipated. If symptoms develop, remove the affected person to fresh air. Get medical attention.

Skin Contact:
If exposed, wash with soap and water. If signs/symptoms develop, get medical attention.

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

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
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

Exposure to extreme heat can give rise to thermal decomposition.

Hazardous Decomposition or By-Products

Substance	Condition
Aldehydes	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion
Hydrogen Cyanide	During Combustion
Hydrogen Fluoride	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
Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS. Ventilate the area with fresh air.

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
Avoid breathing of vapors created during cure cycle. Do not breathe thermal decomposition products. Avoid breathing of dust created by cutting, sanding, grinding or machining. For industrial/occupational use only. Not for consumer sale or use. Avoid release to the environment.

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
Provide ventilated enclosure for curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. For those situations where the material might be exposed to extreme overheating due to misuse or equipment failure, use with appropriate local exhaust ventilation sufficient to maintain levels of thermal decomposition products below their exposure guidelines.

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.

Respiratory protection

For those situations where the material might be exposed to extreme overheating due to misuse or equipment failure, use a positive pressure supplied-air respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Specific Physical Form:	Film
Color	Red
Odor	Odorless
Odor threshold	*No Data Available*
Melting point/freezing point	*No Data Available*
Boiling point/boiling range	*Not Applicable*
Flammability	Not Applicable
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Flash Point	No flash point
Autoignition temperature	*Not Applicable*
Decomposition temperature	*No Data Available*
pH	*substance/mixture is non-soluble (in water)*
Kinematic Viscosity	*Not Applicable*
Water solubility	Nil
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*Not Applicable*
Vapor Pressure	*Not Applicable*
Density	1.27 g/ml

Relative Density	1.27 [*Ref Std:*WATER=1]
Relative Vapor Density	*Not Applicable*
Particle Characteristics	*Not Applicable*

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	Negligible % [*Test Method:*Estimated]
Evaporation rate	*Not Applicable*
Molecular weight	*No Data Available*
Percent volatile	Negligible

SECTION 10: Stability and reactivity

10.1. Reactivity
This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Heat

10.5. Incompatible materials
Amines

10.6. Hazardous decomposition products

Substance	**Condition**
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

Extreme heat arising from situations such as misuse or equipment failure can generate hydrogen fluoride as a decomposition product.

SECTION 11: Toxicological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.

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

Signs and Symptoms of Exposure

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

Inhalation:

No known health effects.

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

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.

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
Bisphenol A Diglycidyl Ether	Dermal	Rat	LD50 > 1,600 mg/kg
Bisphenol A Diglycidyl Ether	Ingestion	Rat	LD50 > 1,000 mg/kg
DICYANDIAMIDE	Dermal	Rabbit	LD50 > 10,000 mg/kg
DICYANDIAMIDE	Ingestion	Rat	LD50 > 30,000 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
ADIPIC DIHYDRAZIDE	Ingestion	Mouse	LD50 > 5,000 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
Bisphenol A Diglycidyl Ether	Rabbit	Mild irritant
DICYANDIAMIDE	Human and animal	Minimal irritation
1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA)	Rabbit	No significant irritation
ADIPIC DIHYDRAZIDE	Rabbit	No significant irritation
3-(trimethoxysilyl)propyl glycidyl ether	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Bisphenol A Diglycidyl Ether	Rabbit	Moderate irritant
DICYANDIAMIDE	Professional judgement	Mild irritant
1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA)	Rabbit	No significant irritation
3-(trimethoxysilyl)propyl glycidyl ether	Rabbit	Corrosive

Skin Sensitization

Name	Species	Value
Overall product	Guinea pig	Not classified
Bisphenol A Diglycidyl Ether	Human and animal	Sensitizing
DICYANDIAMIDE	Guinea pig	Not classified
ADIPIC DIHYDRAZIDE	Guinea pig	Sensitizing
3-(trimethoxysilyl)propyl glycidyl ether	Guinea pig	Not classified

Respiratory Sensitization

Name	Species	Value
Bisphenol A Diglycidyl Ether	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
Bisphenol A Diglycidyl Ether	In vivo	Not mutagenic
Bisphenol A Diglycidyl Ether	In Vitro	Some positive data exist, but the data are not sufficient for classification
DICYANDIAMIDE	In Vitro	Not mutagenic
ADIPIC DIHYDRAZIDE	In vivo	Not mutagenic
3-(trimethoxysilyl)propyl glycidyl ether	In Vitro	Some positive data exist, but the data are not sufficient for classification
3-(trimethoxysilyl)propyl glycidyl ether	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Bisphenol A Diglycidyl Ether	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
DICYANDIAMIDE	Ingestion	Rat	Not carcinogenic
3-(trimethoxysilyl)propyl glycidyl ether	Dermal	Mouse	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Bisphenol A Diglycidyl Ether	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Bisphenol A Diglycidyl Ether	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Bisphenol A Diglycidyl Ether	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
Bisphenol A Diglycidyl Ether	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	premating & 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	premating & during gestation
3-(trimethoxysilyl)propyl glycidyl ether	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000	1 generation

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

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Bisphenol A Diglycidyl Ether	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
Bisphenol A Diglycidyl Ether	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Bisphenol A Diglycidyl Ether	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
3-(trimethoxysilyl)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

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
Bisphenol A Diglycidyl Ether	1675-54-3	Activated sludge	Analogous Compound	3 hours	IC50	>100 mg/l
Bisphenol A Diglycidyl Ether	1675-54-3	Rainbow Trout	Estimated	96 hours	LC50	2 mg/l
Bisphenol A Diglycidyl Ether	1675-54-3	Water flea	Estimated	48 hours	EC50	1.8 mg/l
Bisphenol A Diglycidyl Ether	1675-54-3	Green algae	Experimental	72 hours	ErC50	>11 mg/l
Bisphenol A Diglycidyl Ether	1675-54-3	Green algae	Experimental	72 hours	NOEC	4.2 mg/l
Bisphenol A Diglycidyl Ether	1675-54-3	Water flea	Experimental	21 days	NOEC	0.3 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)
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	ErC50	>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
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	Green algae	Experimental	96 hours	ErC50	350 mg/l
3-(trimethoxysilyl)propyl glycidyl ether	2530-83-8	Invertebrate	Experimental	48 hours	LC50	324 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
3-(trimethoxysilyl)propyl glycidyl ether	2530-83-8	Activated sludge	Experimental	3 hours	EC50	>100 mg/l
ADIPIC DIHYDRAZIDE	1071-93-8	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
ADIPIC DIHYDRAZIDE	1071-93-8	Common Carp	Experimental	96 hours	LC50	>100 mg/l
ADIPIC DIHYDRAZIDE	1071-93-8	Green algae	Experimental	72 hours	ErC50	8.7 mg/l

ADIPIC DIHYDRAZIDE	1071-93-8	Water flea	Experimental	48 hours	EC50	>=106 mg/l
ADIPIC DIHYDRAZIDE	1071-93-8	Green algae	Experimental	72 hours	NOEC	0.22 mg/l
PHENOL, 2,2',6-TRIBROMO-4,4'-ISOPROPYLIDENEDI-	6386-73-8	Diatom	Analogous Compound	72 hours	EC50	0.43 mg/l
PHENOL, 2,2',6-TRIBROMO-4,4'-ISOPROPYLIDENEDI-	6386-73-8	Fathead Minnow	Analogous Compound	96 hours	LC50	0.54 mg/l
PHENOL, 2,2',6-TRIBROMO-4,4'-ISOPROPYLIDENEDI-	6386-73-8	Green algae	Analogous Compound	72 hours	EC50	>1.9 mg/l
PHENOL, 2,2',6-TRIBROMO-4,4'-ISOPROPYLIDENEDI-	6386-73-8	Water flea	Analogous Compound	48 hours	EC50	0.96 mg/l
PHENOL, 2,2',6-TRIBROMO-4,4'-ISOPROPYLIDENEDI-	6386-73-8	Fathead Minnow	Analogous Compound	35 days	NOEC	0.16 mg/l
PHENOL, 2,2',6-TRIBROMO-4,4'-ISOPROPYLIDENEDI-	6386-73-8	Green algae	Analogous Compound	72 hours	NOEC	0.5 mg/l
PHENOL, 2,2',6-TRIBROMO-4,4'-ISOPROPYLIDENEDI-	6386-73-8	Water flea	Analogous Compound	21 days	NOEC	0.3 mg/l
Dye	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Bisphenol A Diglycidyl Ether	1675-54-3	Experimental Biodegradation	28 days	Biological Oxygen Demand	5 %BOD/COD	OECD 301F - Manometric Respiro
Bisphenol A Diglycidyl Ether	1675-54-3	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	117 hours (t 1/2)	OECD 111 Hydrolysis func of pH
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/THCO2 evolution	OECD 309 Aero Sim Biod Water
1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA)	17526-94-2	Experimental Aquatic Inherent Biodegrad.	28 days	Dissolv. Organic Carbon Deplet	10 %removal of DOC (does not pass 10-day window)	similar to OECD 302B
1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA)	17526-94-2	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	33 days (t 1/2)	OECD 111 Hydrolysis func of pH
3-(trimethoxysilyl)propyl glycidyl ether	2530-83-8	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	37 %removal of DOC	EC C.4.A. DOC Die-Away Test
3-(trimethoxysilyl)propyl glycidyl ether	2530-83-8	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	6.5 hours (t 1/2)	OECD 111 Hydrolysis func of pH
ADIPIC DIHYDRAZIDE	1071-93-8	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	62.1 %removal of DOC	OECD 301E - Modif. OECD Screen
ADIPIC DIHYDRAZIDE	1071-93-8	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	>1 years (t 1/2)	OECD 111 Hydrolysis func of pH
PHENOL, 2,2',6-	6386-73-8	Modeled	28 days	Biological Oxygen	16 %BOD/ThO	Catalogic™

TRIBROMO-4,4'-ISOPROPYLIDENEDI-		Biodegradation		Demand	D	
Dye	Trade Secret	Modeled Biodegradation	28 days	Carbon dioxide evolution	41.8 %CO2 evolution/THC O2 evolution	Catalogic™

12.3. Bioaccumulative potential

Material	Cas No.	Test Type	Duration	Study Type	Test Result	Protocol
Bisphenol A Diglycidyl Ether	1675-54-3	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	3.242	OECD 117 log Kow HPLC method
DICYANDIAMIDE	461-58-5	Experimental BCF - Fish	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 flsk mtd
1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA)	17526-94-2	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	<0.23	OECD 117 log Kow HPLC method
3-(trimethoxysilyl)propyl glycidyl ether	2530-83-8	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	0.5	Episuite™
ADIPIC DIHYDRAZIDE	1071-93-8	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	-2.7	OECD 107 log Kow shke flsk mtd
PHENOL, 2,2',6-TRIBROMO-4,4'-ISOPROPYLIDENEDI-	6386-73-8	Modeled Bioconcentration		Bioaccumulation Factor	410	Catalogic™
PHENOL, 2,2',6-TRIBROMO-4,4'-ISOPROPYLIDENEDI-	6386-73-8	Modeled Bioconcentration		Log of Octanol/H2O part. coeff	6.3	Episuite™
Dye	Trade Secret	Modeled Bioconcentration		Bioaccumulation Factor	500	Catalogic™
Dye	Trade Secret	Modeled Bioconcentration		Log of Octanol/H2O part. coeff	5.7	Episuite™

12.4. Mobility in soil

Material	Cas No.	Test Type	Study Type	Test Result	Protocol
Bisphenol A Diglycidyl Ether	1675-54-3	Modeled Mobility in Soil	Koc	450 l/kg	Episuite™
DICYANDIAMIDE	461-58-5	Modeled Mobility in Soil	Koc	9 l/kg	Episuite™
3-(trimethoxysilyl)propyl glycidyl ether	2530-83-8	Modeled Mobility in Soil	Koc	10 l/kg	Episuite™
ADIPIC DIHYDRAZIDE	1071-93-8	Modeled Mobility in Soil	Koc	10 l/kg	Episuite™
PHENOL, 2,2',6-TRIBROMO-4,4'-ISOPROPYLIDENEDI-	6386-73-8	Modeled Mobility in Soil	Koc	170,000 l/kg	Episuite™
Dye	Trade Secret	Modeled Mobility in Soil	Koc	29,000 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 completely cured (or polymerized) material 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 & 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

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number or ID 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 Marine Transport in bulk according to IMO instruments	No Data Available	No Data Available	No Data Available

Control Temperature	No Data Available	No Data Available	No Data Available
Emergency Temperature	No Data Available	No Data Available	No Data Available
ADR Classification Code	M7	Not Applicable	Not Applicable
IMDG Segregation Code	Not Applicable	Not Applicable	NONE

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

SECTION 15: Regulatory information

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

Carcinogenicity

Ingredient	C.A.S. No.	Classification	Regulation
Bisphenol A Diglycidyl Ether	1675-54-3	Gr. 3: Not classifiable	International Agency for Research on Cancer

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

Ingredient	C.A.S. No.
Bisphenol A Diglycidyl Ether	1675-54-3

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

Global inventory status
Contact 3M for more information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

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

Hazard Categories	Qualifying quantity (tonnes) for the application of	
	Lower-tier requirements	Upper-tier requirements
E2 Hazardous to the Aquatic environment	200	500

Seveso named dangerous substances, Annex 1, Part 2
None

Regulation (EU) No 649/2012
No chemicals listed

SECTION 16: Other information

List of relevant H statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Revision information:
Section 01: Product identification numbers information was deleted.
Section 06: Accidental release personal information information was modified.
Section 07: Conditions safe storage information was modified.
Section 12: Mobility in soil information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.

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.

3M Israel SDSs are available at www.3M.com/il