



## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the South African National Standard SANS 10234:2008.

### SECTION 1: Identification

#### 1.1. Product identifier

3M Scotch-Weld AF-163-2 Structural Adhesive Film

#### Product Identification Numbers

62-0187-3905-2      62-0187-5345-9

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Structural Film Adhesive., Structural Adhesive Film for Bonding Applications

#### 1.3. Supplier's details

**Address:** 3M South Africa (Pty) Ltd, Private Bag X926, Rivonia 2128  
**Telephone:** 011 806 2000  
**E Mail:** Not available.  
**Website:** www.3m.co.za

#### 1.4. Emergency telephone number

011 806 2000

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

Skin Corrosion/Irritation: Category 3.

Acute Aquatic Toxicity: Category 1.

Chronic Aquatic Toxicity: Category 2.

#### 2.2. Label elements

##### Signal word

WARNING!

##### Symbols

Environment |

##### Pictograms



**HAZARD STATEMENTS:**

H316 Causes mild skin irritation.  
 H400 Very toxic to aquatic life.  
 H411 Toxic to aquatic life with long lasting effects.

**PRECAUTIONARY STATEMENTS**

**Prevention:**

P273 Avoid release to the environment.

**Disposal:**

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

**2.3. Other hazards**

None known.

**SECTION 3: Composition/information on ingredients**

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Polymeric epoxy reaction product (MW >700)	Trade Secret	40 - 70
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	1675-54-3	10 - 30
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER (MW unknown or <=700)	25068-38-6	3 - 7
Cyanoguanidine	461-58-5	3 - 7
N,N''-(4-Methyl-m-phenylene)bis[N',N'-dimethylurea]	17526-94-2	0.5 - 1.5
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	0.1 - 1
Adipohydrazide	1071-93-8	< 1

**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**

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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**

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. Suitable 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  
Hydrogen cyanide.  
Ammonia  
Oxides of nitrogen.

##### **Condition**

During combustion.  
During combustion.  
During combustion.  
During combustion.  
During combustion.  
During combustion.  
During combustion.

#### **5.3. Special protective actions 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**

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.

## **SECTION 7: Handling and storage**

#### **7.1. Precautions for safe handling**

For industrial/occupational use only. Not for consumer sale or use. 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.

## 7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from amines.

## 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.

### 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/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

#### 8.2.2. Personal protective equipment (PPE)

##### Eye/face protection

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

Safety glasses with side shields.

##### 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: Polymer laminate

When only incidental contact is anticipated, alternative glove material(s) may be used. If contact with the glove does occur, remove immediately and replace with a set of new gloves. For incidental contact, gloves made of the following material(s) are recommended: Nitrile rubber.

##### Respiratory protection

None required.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Film
Appearance/Odour	Red, odorless
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point	<i>No data available.</i>
Boiling point/Initial boiling point/Boiling range	<i>Not applicable.</i>
Flash point	No flash point
Evaporation rate	<i>Not applicable.</i>
Flammability (solid, gas)	Not classified

Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapour pressure	<i>Not applicable.</i>
Vapour density	<i>Not applicable.</i>
Density	1,27 g/ml
Relative density	1,27 [Ref Std:WATER=1]
Water solubility	Nil
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>Not applicable.</i>
Autoignition temperature	<i>Not applicable.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	<i>Not applicable.</i>
Molecular weight	<i>No data available.</i>
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 polymerisation will not occur.

### 10.4 Conditions to avoid

Heat.

### 10.5 Incompatible materials

Amines.

### 10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
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None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

### 11.1 Information on Toxicological effects

#### Signs and Symptoms of Exposure

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

#### Inhalation

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No health effects are expected.

**Skin contact**

Prolonged or repeated exposure may cause:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

**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
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	Dermal	Rat	LD50 > 1 600 mg/kg
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	Ingestion	Rat	LD50 > 1 000 mg/kg
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER (MW unknown or <=700)	Dermal	Rat	LD50 > 1 600 mg/kg
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER (MW unknown or <=700)	Ingestion	Rat	LD50 > 1 000 mg/kg
Cyanoguanidine	Dermal	Rabbit	LD50 > 10 000 mg/kg
Cyanoguanidine	Ingestion	Rat	LD50 > 30 000 mg/kg
N,N''-(4-Methyl-m-phenylene)bis[N',N'-dimethylurea]	Dermal	Rat	LD50 > 2 000 mg/kg
N,N''-(4-Methyl-m-phenylene)bis[N',N'-dimethylurea]	Ingestion	Rat	LD50 > 2 000 mg/kg
Adipohydrazide	Ingestion	Mouse	LD50 > 5 000 mg/kg
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Dermal	Rabbit	LD50 4 000 mg/kg
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5,3 mg/l
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Ingestion	Rat	LD50 7 010 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Overall product	Multiple animal species	Minimal irritation
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	Rabbit	Mild irritant
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER (MW unknown or <=700)	Rabbit	Mild irritant
Cyanoguanidine	Human and animal	Minimal irritation
N,N''-(4-Methyl-m-phenylene)bis[N',N'-dimethylurea]	Rabbit	No significant irritation
Adipohydrazide	Rabbit	No significant irritation
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Rabbit	Mild irritant

**Serious Eye Damage/Irritation**

Name	Species	Value
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	Rabbit	Moderate irritant
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER (MW unknown or <=700)	Rabbit	Moderate irritant

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Cyanoguanidine	Professional judgement	Mild irritant
N,N'-(4-Methyl-m-phenylene)bis[N',N'-dimethylurea]	Rabbit	No significant irritation
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Rabbit	Corrosive

**Skin Sensitisation**

Name	Species	Value
Overall product	Guinea pig	Not classified
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	Human and animal	Sensitising
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER (MW unknown or <=700)	Human and animal	Sensitising
Cyanoguanidine	Guinea pig	Not classified
Adipohydrazide	Guinea pig	Sensitising
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Guinea pig	Not classified

**Respiratory Sensitisation**

Name	Species	Value
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	Human	Not classified
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER (MW unknown or <=700)	Human	Not classified

**Germ Cell Mutagenicity**

Name	Route	Value
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	In vivo	Not mutagenic
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	In Vitro	Some positive data exist, but the data are not sufficient for classification
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER (MW unknown or <=700)	In vivo	Not mutagenic
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER (MW unknown or <=700)	In Vitro	Some positive data exist, but the data are not sufficient for classification
Cyanoguanidine	In Vitro	Not mutagenic
Adipohydrazide	In vivo	Not mutagenic
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	In vivo	Not mutagenic
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	In Vitro	Some positive data exist, but the data are not sufficient for classification

**Carcinogenicity**

Name	Route	Species	Value
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER (MW unknown or <=700)	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Cyanoguanidine	Ingestion	Rat	Not carcinogenic
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Dermal	Mouse	Not carcinogenic

**Reproductive Toxicity**
**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
2,2'-[(1-Methylethylidene)bis(4,1-	Ingestion	Not classified for female reproduction	Rat	NOAEL 750	2 generation

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phenyleneoxymethylene)]bisoxirane				mg/kg/day	
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER (MW unknown or <=700)	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER (MW unknown or <=700)	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER (MW unknown or <=700)	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER (MW unknown or <=700)	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
Cyanoguanidine	Ingestion	Not classified for female reproduction	Rat	NOAEL 1 000 mg/kg/day	prematuring & during gestation
Cyanoguanidine	Ingestion	Not classified for male reproduction	Rat	NOAEL 1 000 mg/kg/day	44 days
Cyanoguanidine	Ingestion	Not classified for development	Rat	NOAEL 1 000 mg/kg/day	prematuring & during gestation
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	Ingestion	Not classified for female reproduction	Rat	NOAEL 1 000 mg/kg/day	1 generation
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	Ingestion	Not classified for male reproduction	Rat	NOAEL 1 000 mg/kg/day	1 generation
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	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
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	Dermal	liver	Not classified	Rat	NOAEL 1 000 mg/kg/day	2 years
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	Dermal	nervous system	Not classified	Rat	NOAEL 1 000 mg/kg/day	13 weeks
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	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
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER (MW	Dermal	liver	Not classified	Rat	NOAEL 1 000 mg/kg/day	2 years



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unknown or <=700)						
4,4'-ISOPROPYLIDENEDIPH ENOL-EPICHLOROHYDRIN POLYMER (MW unknown or <=700)	Dermal	nervous system	Not classified	Rat	NOAEL 1 000 mg/kg/day	13 weeks
4,4'-ISOPROPYLIDENEDIPH ENOL-EPICHLOROHYDRIN POLYMER (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
Cyanoguanidine	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 6 822 mg/kg/day	13 weeks
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	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.**

**SECTION 12: Ecological information**

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

**12.1. Toxicity**

**Acute aquatic hazard:**

GHS Acute 1: Very toxic to aquatic life.

**Chronic aquatic hazard:**

GHS Chronic 2: Toxic to aquatic life with long lasting effects.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxy methylene)]bis oxirane	1675-54-3	Green Algae	Experimental	72 hours	EC50	>11 mg/l
2,2'-[(1-	1675-54-3	Rainbow trout	Experimental	96 hours	LC50	2 mg/l

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Methylethylidene)bis(4,1-phenyleneoxy methylene)]bis oxirane						
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxy methylene)]bis oxirane	1675-54-3	Water flea	Experimental	48 hours	EC50	1,8 mg/l
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxy methylene)]bis oxirane	1675-54-3	Green Algae	Experimental	72 hours	NOEC	4,2 mg/l
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxy methylene)]bis oxirane	1675-54-3	Water flea	Experimental	21 days	NOEC	0,3 mg/l
4,4'-ISOPROPYLI DENE DIPHENOL-EPICHLOROH YDRIN POLYMER (MW unknown or <=700)	25068-38-6	Water flea	Estimated	48 hours	LC50	0,95 mg/l
4,4'-ISOPROPYLI DENE DIPHENOL-EPICHLOROH YDRIN POLYMER (MW unknown or <=700)	25068-38-6	Green Algae	Experimental	72 hours	EC50	>11 mg/l
4,4'-ISOPROPYLI DENE DIPHENOL-EPICHLOROH YDRIN POLYMER (MW unknown or <=700)	25068-38-6	Rainbow trout	Experimental	96 hours	LC50	1,2 mg/l
4,4'-ISOPROPYLI DENE DIPHENOL-EPICHLOROH	25068-38-6	Green Algae	Experimental	72 hours	NOEC	4,2 mg/l

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YDRIN POLYMER (MW unknown or <=700)						
4,4'- ISOPROPYLI DENEDIPHEN OL- EPICHLOROH YDRIN POLYMER (MW unknown or <=700)	25068-38-6	Water flea	Experimental	21 days	NOEC	0,3 mg/l
Cyanoguanidin e	461-58-5	Bluegill	Experimental	96 hours	LC50	>1 000 mg/l
Cyanoguanidin e	461-58-5	Green algae	Experimental	72 hours	EC50	>1 000 mg/l
Cyanoguanidin e	461-58-5	Water flea	Experimental	48 hours	EC50	3 177 mg/l
Cyanoguanidin e	461-58-5	Green algae	Experimental	72 hours	NOEC	310 mg/l
Cyanoguanidin e	461-58-5	Water flea	Experimental	21 days	NOEC	25 mg/l
N,N''-(4- Methyl-m- phenylene)bis[ N',N'- dimethylurea]	17526-94-2	Common Carp	Experimental	96 hours	LC50	>100 mg/l
N,N''-(4- Methyl-m- phenylene)bis[ N',N'- dimethylurea]	17526-94-2	Green Algae	Experimental	72 hours	EC50	>100 mg/l
N,N''-(4- Methyl-m- phenylene)bis[ N',N'- dimethylurea]	17526-94-2	Water flea	Experimental	48 hours	EC50	>100 mg/l
N,N''-(4- Methyl-m- phenylene)bis[ N',N'- dimethylurea]	17526-94-2	Green Algae	Experimental	72 hours	NOEC	100 mg/l
[3-(2,3- Epoxypropoxy) propyl] trimethoxysilan e	2530-83-8	Common Carp	Experimental	96 hours	LC50	55 mg/l
[3-(2,3- Epoxypropoxy) propyl] trimethoxysilan e	2530-83-8	Crustacea other	Experimental	48 hours	LC50	324 mg/l
[3-(2,3- Epoxypropoxy)	2530-83-8	Green algae	Experimental	96 hours	EC50	350 mg/l

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propyl] trimethoxysilane						
[3-(2,3-Epoxypropoxy) propyl] trimethoxysilane	2530-83-8	Green Algae	Experimental	96 hours	NOEC	130 mg/l
[3-(2,3-Epoxypropoxy) propyl] trimethoxysilane	2530-83-8	Water flea	Experimental	21 days	NOEC	>=100 mg/l
Adipohydrazide	1071-93-8	Common Carp	Experimental	96 hours	LC50	>100 mg/l
Adipohydrazide	1071-93-8	Green Algae	Experimental	72 hours	EC50	8,7 mg/l
Adipohydrazide	1071-93-8	Water flea	Experimental	48 hours	EC50	>=106 mg/l
Adipohydrazide	1071-93-8	Green Algae	Experimental	72 hours	NOEC	0,22 mg/l

**12.2. Persistence and degradability**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxy methylene)]bis oxirane	1675-54-3	Experimental Hydrolysis		Hydrolytic half-life	117 hours (t 1/2)	Other methods
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxy methylene)]bis oxirane	1675-54-3	Experimental Biodegradation	28 days	BOD	5 % BOD/ThBOD	OECD 301F - Manometric respirometry
4,4'-ISOPROPYLI DENEDIPHENOL-EPICHLOROH YDRIN POLYMER (MW unknown or <=700)	25068-38-6	Estimated Hydrolysis		Hydrolytic half-life	<2 days (t 1/2)	Other methods
4,4'-ISOPROPYLI DENEDIPHENOL-EPICHLOROH YDRIN POLYMER (MW unknown or <=700)	25068-38-6	Experimental Biodegradation	28 days	BOD	0 % BOD/ThBOD	OECD 301C - MITI test (I)

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Cyanoguanidine	461-58-5	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	0 % weight	OECD 301E - Modified OECD Scre
N,N''-(4-Methyl-m-phenylene)bis[N',N'-dimethylurea]	17526-94-2	Estimated Biodegradation	28 days	BOD	3 % BOD/ThBOD	OECD 301C - MITI test (I)
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Experimental Hydrolysis		Hydrolytic half-life	6.5 hours (t <sub>1/2</sub> )	Other methods
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	37 % weight	Other methods
Adipohydrazide	1071-93-8	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	62.1 % weight	OECD 301E - Modified OECD Scre

**12.3 : Bioaccumulative potential**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxy methylene)]bis oxirane	1675-54-3	Estimated Bioconcentration		Bioaccumulation factor	31	Estimated: Bioconcentration factor
4,4'-ISOPROPYLDENEDIPHENOL-EPICHLOROHYDRIN POLYMER (MW unknown or <=700)	25068-38-6	Experimental BCF-Carp	28 days	Bioaccumulation factor	<=42	OECD 305E - Bioaccumulation flow-through fish test
Cyanoguanidine	461-58-5	Experimental BCF-Carp	42 days	Bioaccumulation factor	<=3.1	OECD 305C-Bioaccum degree fish
N,N''-(4-Methyl-m-phenylene)bis[N',N'-dimethylurea]	17526-94-2	Estimated Bioconcentration		Bioaccumulation factor	4.3	Estimated: Bioconcentration factor
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Adipohydrazide	1071-93-8	Experimental Bioconcentration		Log Kow	-2.7	Other methods

#### **12.4. Mobility in soil**

Please contact manufacturer for more details

#### **12.5 Other adverse effects**

No information available.

### **SECTION 13: Disposal considerations**

#### **13.1. Disposal methods**

Product must only be disposed of by an authorized/permitted waste disposal contractor or incinerated in an industrial or commercial facility in the presence of a combustible material.

### **SECTION 14: Transport Information**

Compliance is required to South African Transport Information Road Traffic Act & Regulations and Railroad regulations, IATA Standards for airfreight and Maritime standards for ocean freight.

### **SECTION 15: Regulatory information**

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

##### **Global inventory status**

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

### **SECTION 16: Other information**

#### **Revision information:**

Section 2: Ingredient table information was modified.  
Section 7: Precautions safe handling information information was modified.  
Section 08: Skin protection - incidental contact text information was added.  
Section 08: Skin protection - incidental contact information was added.  
Section 8: Skin protection - recommended gloves information information was modified.  
Section 11: Acute Toxicity table information was modified.  
Section 11: Carcinogenicity Table information was modified.  
Section 11: Germ Cell Mutagenicity Table information was modified.  
Section 11: Reproductive Toxicity Table information was modified.  
Section 11: Respiratory Sensitization Table information was modified.  
Section 11: Serious Eye Damage/Irritation Table information was modified.  
Section 11: Skin Corrosion/Irritation Table information was modified.  
Section 11: Skin Sensitization Table information was modified.  
Section 11: Target Organs - Repeated Table information was modified.  
Section 12: Component ecotoxicity information information was modified.  
Section 12: Persistence and Degradability information information was modified.  
Section 12: Biocumulative 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

**3M Scotch-Weld AF-163-2 Structural Adhesive Film**

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 South Africa SDSs are available at [www.3m.co.za](http://www.3m.co.za)**