



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (1907/2006), as amended for GB.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

3M Scotch-Weld Structural Adhesive Film AF 131-2

Product Identification Numbers

62-3157-5506-6 87-3300-0351-5

7000046427 7100329864

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

Identified uses

Structural Adhesive Film

1.3. Details of the supplier of the safety data sheet

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

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain

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:

Acute Toxicity, Category 4 - Acute Tox. 4; H302

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

Reproductive Toxicity, Category 1B - Repr. 1B; H360F

Specific Target Organ Toxicity-Single Exposure, Category 2 - STOT SE 2; H371

Specific Target Organ Toxicity-Repeated Exposure, Category 2 - STOT RE 2; H373

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

The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain

SIGNAL WORD

DANGER.

Symbols

GHS07 (Exclamation mark) | GHS08 (Health Hazard) | GHS09 (Environment) |

Pictograms



Ingredient	CAS Nbr	EC No.	% by Wt
dapsone	80-08-0	201-248-4	15 - 40
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	225-716-2	10 - 30

HAZARD STATEMENTS:

H302	Harmful if swallowed.
H341	Suspected of causing genetic defects.
H360F	May damage fertility.
H371	May cause damage to organs: blood or blood-forming organs.
H373	May cause damage to organs through prolonged or repeated exposure: blood or blood-forming organs gastrointestinal tract liver.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P201	Obtain special instructions before use.
P273	Avoid release to the environment.
P280E	Wear protective gloves.

Response:

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

SUPPLEMENTAL INFORMATION:**Supplemental Hazard Statements:**

EUH205

Contains epoxy constituents. May produce an allergic reaction.

Supplemental Precautionary Statements:

Restricted to professional users.

Contains 34% 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], as amended for GB
EPOXY RESIN B	Trade Secret	20 - 40	Eye Irrit. 2, H319
dapsone	(CAS-No.) 80-08-0 (EC-No.) 201-248-4	15 - 40	Acute Tox. 3, H301 Aquatic Chronic 2, H411 Repr. 1B, H360F STOT SE 2, H371 STOT RE 2, H373
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	(CAS-No.) 5026-74-4 (EC-No.) 225-716-2	10 - 30	Aquatic Chronic 2, H411 Acute Tox. 4, H302 Skin Sens. 1A, H317 Muta. 2, H341 STOT RE 2, H373
reaction product: bisphenol-A-(epichlorhydrin)	(CAS-No.) 25068-38-6 (EC-No.) 500-033-5	< 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Synthetic amorphous silica, fumed, crystalline-free	(CAS-No.) 112945-52-5	0.5 - 3	Substance with a national occupational exposure limit
Siloxanes and Silicones, di-Me, reaction products with silica	(CAS-No.) 67762-90-7	0.5 - 2.5	Substance with a national occupational exposure limit

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
reaction product: bisphenol-A-	(CAS-No.) 25068-38-6	(C >= 5%) Skin Irrit. 2, H315

(epichlorhydrin)	(EC-No.) 500-033-5	(C >= 5%) Eye Irrit. 2, H319
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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 feel unwell, 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

The most important symptoms and effects based on the GB CLP classification include:

Harmful if swallowed. Target organ effects. See Section 11 for additional details. Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

4.3. Indication of any immediate medical attention and special treatment required

Overexposure to this product may result in methemoglobinemia. Methemoglobinemia may be clinically suspected by the presence of clinical "cyanosis" in the presence of a normal PaO₂ (as obtained by arterial blood gases). Routine pulse oximetry may be inaccurate for monitoring oxygen saturation in the presence of methemoglobinemia, and should not be used to make the diagnosis of this disorder. If the patient is symptomatic or if the methemoglobin level is >20%, specific therapy with methylene blue should be considered as part of the medical management.

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.

Non-combustible. Use a fire fighting agent suitable for surrounding fire.

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

Substance

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

Condition

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

5.3. Advice for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus,

bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. 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.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements.

7.3. Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

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

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Silicon dioxide	112945-52-5	UK HSE	TWA(as respirable dust):2.4 mg/m ³ ;TWA(as inhalable dust):6 mg/m ³	
Silicon dioxide	67762-90-7	UK HSE	TWA(as respirable dust):2.4 mg/m ³ ;TWA(as inhalable dust):6 mg/m ³	

dapsone 80-08-0 Manufacturer TWA:0.1 mg/m3
 determined

UK HSE : UK Health and Safety Commission
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

8.2. Exposure controls

8.2.1. Engineering controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

Safety glasses with side shields.

Applicable Norms/Standards

Use eye protection conforming to EN 166

Skin/hand protection

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.

Gloves made from the following material(s) are recommended:

Material	Thickness (mm)	Breakthrough Time
Chemical Protective glove of any material type	No data available	No data available

Applicable Norms/Standards

Use gloves tested to EN 374

Respiratory protection

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

Half facepiece or full facepiece air-purifying respirator suitable for particulates

Half facepiece or full facepiece supplied-air respirator

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

Applicable Norms/Standards

Use a respirator conforming to EN 140 or EN 136

Use a respirator conforming to EN 140 or EN 136: filter type P

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Film
Colour	Tan
Odor	Odourless
Odour threshold	<i>No data available.</i>
Melting point/freezing point	<i>No data available.</i>
Boiling point/boiling range	<i>Not applicable.</i>
Flammability	Not applicable.
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Flash point	No flash point
Autoignition temperature	<i>Not applicable.</i>
Decomposition temperature	<i>No data available.</i>
pH	<i>substance/mixture is non-soluble (in water)</i>
Kinematic Viscosity	<i>Not applicable.</i>
Water solubility	Nil
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>Not applicable.</i>
Vapour pressure	<i>Not applicable.</i>
Density	0.96 g/cm ³ [<i>@ 20 °C</i>]
Relative density	0.96 [<i>Ref Std: WATER=1</i>]
Relative Vapour Density	<i>Not applicable.</i>
Particle Characteristics	<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>
Molecular weight	<i>No data available.</i>
Percent volatile	Negligible

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation may occur.

10.4 Conditions to avoid

Avoid curing large quantities of material to prevent a premature reaction (exotherm) with production of intense heat and smoke.

10.5 Incompatible materials

None known.

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 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 3M assessments.

11.1. Information on hazard classes as defined in the retained CLP Regulation (EU) No 1272/2008, as amended for Great Britain.

Signs and Symptoms of Exposure

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

Inhalation

May be harmful if inhaled. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin contact

May be harmful in contact with skin.

Eye contact

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

Ingestion

Harmful if swallowed.

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

Additional Health Effects:

Single exposure may cause target organ effects:

Methemoglobinemia: Signs/symptoms may include headache, dizziness, nausea, difficulty breathing, and generalised weakness. Liver effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice. Blood effects: Signs/symptoms may include generalised weakness and fatigue, skin pallor, changes in blood clotting time, internal bleeding, and hemoglobinemia.

Prolonged or repeated exposure may cause target organ effects:

Liver effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice. Gastrointestinal Effects: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea. Blood effects: Signs/symptoms may include generalised weakness and fatigue, skin pallor, changes in blood clotting time, internal bleeding, and hemoglobinemia. Neurological effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and changes in blood pressure and heart rate.

Reproductive/Developmental Toxicity:

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

chemicals which may interfere with lactation or be harmful to breastfed children.

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 >2,000 - =5,000 mg/kg
Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE >5 - =12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE >300 - =2,000 mg/kg
EPOXY RESIN B	Ingestion	Not available	LD50 > 2,000 mg/kg
EPOXY RESIN B	Dermal	Rabbit	LD50 > 3,000 mg/kg
dapsone	Ingestion	Professional judgement	LD50 250 mg/kg
dapsone	Dermal	Rabbit	LD50 > 2,000 mg/kg
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	Dermal	Rat	LD50 > 4,000 mg/kg
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	Ingestion	Rat	LD50 1,037 mg/kg
reaction product: bisphenol-A-(epichlorhydrin)	Dermal	Rat	LD50 > 1,600 mg/kg
reaction product: bisphenol-A-(epichlorhydrin)	Ingestion	Rat	LD50 > 1,000 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Dermal	Rabbit	LD50 > 5,000 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Rat	LD50 > 5,110 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	Multiple animal species	No significant irritation
EPOXY RESIN B	Professional judgement	Mild irritant
dapsone	Rabbit	No significant irritation
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	Rabbit	No significant irritation
reaction product: bisphenol-A-(epichlorhydrin)	Rabbit	Mild irritant
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
EPOXY RESIN B	Professional	Moderate irritant

	judgement	
dapsone	In vitro data	No significant irritation
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	Rabbit	Mild irritant
reaction product: bisphenol-A-(epichlorhydrin)	Rabbit	Moderate irritant
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Overall product	Guinea pig	Not classified
EPOXY RESIN B	similar compounds	Not classified
dapsone	Mouse	Not classified
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	Mouse	Sensitising
reaction product: bisphenol-A-(epichlorhydrin)	Human and animal	Sensitising
Synthetic amorphous silica, fumed, crystalline-free	Human and animal	Not classified
Siloxanes and Silicones, di-Me, reaction products with silica	Human and animal	Not classified

Respiratory Sensitisation

Name	Species	Value
reaction product: bisphenol-A-(epichlorhydrin)	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
EPOXY RESIN B	In Vitro	Not mutagenic
dapsone	In vivo	Not mutagenic
dapsone	In Vitro	Some positive data exist, but the data are not sufficient for classification
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	In Vitro	Some positive data exist, but the data are not sufficient for classification
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	In vivo	Mutagenic
reaction product: bisphenol-A-(epichlorhydrin)	In vivo	Not mutagenic
reaction product: bisphenol-A-(epichlorhydrin)	In Vitro	Some positive data exist, but the data are not sufficient for classification
Synthetic amorphous silica, fumed, crystalline-free	In Vitro	Not mutagenic
Siloxanes and Silicones, di-Me, reaction products with silica	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
dapsone	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
reaction product: bisphenol-A-(epichlorhydrin)	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Synthetic amorphous silica, fumed, crystalline-free	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Siloxanes and Silicones, di-Me, reaction products with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
dapsone	Ingestion	Not classified for female reproduction	Rat	NOAEL 30 mg/kg/day	2 generation
dapsone	Ingestion	Not classified for development	Mouse	NOAEL 100 mg/kg/day	during organogenesis
dapsone	Ingestion	Toxic to male reproduction	Rat	LOAEL 7.5 mg/kg/day	2 generation
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	Ingestion	Not classified for male reproduction	Rat	NOAEL 25 mg/kg/day	2 generation
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	Ingestion	Not classified for development	Rat	NOAEL 15 mg/kg/day	during gestation
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	Ingestion	Toxic to female reproduction	Rat	NOAEL 50 mg/kg/day	28 days
reaction product: bisphenol-A-(epichlorhydrin)	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
reaction product: bisphenol-A-(epichlorhydrin)	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
reaction product: bisphenol-A-(epichlorhydrin)	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
reaction product: bisphenol-A-(epichlorhydrin)	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

Lactation

Name	Route	Species	Value
dapsone	Ingestion	Human	Causes effects on or via lactation

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
EPOXY RESIN B	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available.	
dapsone	Ingestion	blood methemoglobinemia liver	Causes damage to organs	Human	NOAEL Not available	poisoning and/or abuse
dapsone	Ingestion	central nervous system depression	Not classified	Human	NOAEL Not available	poisoning and/or abuse

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
dapsone	Ingestion	blood liver	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	not available
dapsone	Ingestion	nervous system	May cause damage to organs though prolonged or repeated	Human	NOAEL Not available	poisoning and/or abuse

			exposure			
dapsone	Ingestion	immune system	Not classified	Mouse	NOAEL 54 mg/kg/day	30 days
dapsone	Ingestion	heart	Not classified	Human	NOAEL Not available	not available
dapsone	Ingestion	kidney and/or bladder	Not classified	Human	NOAEL Not available	poisoning and/or abuse
dapsone	Ingestion	vascular system	Not classified	Human	NOAEL Not available	not available
dapsone	Ingestion	endocrine system eyes	Not classified	Rat	NOAEL 100 mg/kg/day	90 days
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	Ingestion	gastrointestinal tract	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 15 mg/kg/day	90 days
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	Ingestion	endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system kidney and/or bladder nervous system	Not classified	Rat	NOAEL 450 mg/kg/day	28 days
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	Ingestion	eyes	Not classified	Rat	NOAEL 15 mg/kg/day	90 days
reaction product: bisphenol-A-(epichlorhydrin)	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
reaction product: bisphenol-A-(epichlorhydrin)	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
reaction product: bisphenol-A-(epichlorhydrin)	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
Synthetic amorphous silica, fumed, crystalline-free	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

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

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

11.2. Information on other hazards

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

SECTION 12: Ecological information

The information below may not agree with the 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
EPOXY RESIN B	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
dapsone	80-08-0	Common Carp	Experimental	96 hours	LC50	>100 mg/l
dapsone	80-08-0	Green algae	Experimental	72 hours	EC50	2.7 mg/l
dapsone	80-08-0	Green algae	Experimental	72 hours	NOEC	0.22 mg/l
dapsone	80-08-0	Water flea	Experimental	21 days	NOEC	0.22 mg/l
dapsone	80-08-0	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Water flea	Analogous Compound	48 hours	EC50	18 mg/l
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Bacteria	Experimental	16 hours	EC50	>=10 mg/l
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Common Carp	Experimental	96 hours	LC50	4.2 mg/l
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Green algae	Experimental	96 hours	ErC50	13 mg/l
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Green algae	Experimental	96 hours	NOEC	4.2 mg/l
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Water flea	Experimental	21 days	NOEC	0.42 mg/l
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Water flea	Estimated	48 hours	LC50	1.8 mg/l
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Activated sludge	Experimental	3 hours	IC50	>100 mg/l
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Green algae	Experimental	72 hours	EC50	>11 mg/l
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Green algae	Experimental	72 hours	NOEC	4.2 mg/l
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Water flea	Experimental	21 days	NOEC	0.3 mg/l
Synthetic amorphous silica, fumed, crystalline-	112945-52-5	Green algae	Analogous Compound	72 hours	ErC50	>173.1 mg/l

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free						
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Sediment organism	Analogous Compound	96 hours	EC50	8,500 mg/kg (Dry Weight)
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Water flea	Analogous Compound	24 hours	EL50	>10,000 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Zebra Fish	Analogous Compound	96 hours	LL50	>10,000 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Green algae	Analogous Compound	72 hours	NOEC	173.1 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Water flea	Analogous Compound	21 days	NOEC	68 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
EPOXY RESIN B	Trade Secret	Estimated Biodegradation	28 days	BOD	12 %BOD/ThOD	
dapsone	80-08-0	Experimental Biodegradation	28 days	BOD	<1 %BOD/ThOD	OECD 301D - Closed bottle test
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Experimental Biodegradation	29 days	CO2 evolution	≤10 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	4.1 days (t 1/2)	OECD 111 Hydrolysis func of pH
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Experimental Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Experimental Hydrolysis		Hydrolytic half-life	117 hours (t 1/2)	
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
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EPOXY RESIN B	Trade Secret	Estimated Bioconcentration		Bioaccumulation factor	≤15	
dapsone	80-08-0	Experimental Bioconcentration		Log Kow	0.97	
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Modeled Bioconcentration		Log Kow	0.87	Episuite™
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Experimental Bioconcentration		Log Kow	3.242	
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	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
dapsone	80-08-0	Modeled Mobility in Soil	Koc	28 l/kg	Episuite™
p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	Experimental Mobility in Soil	Koc	84 l/kg	OECD 121 Estim. of Koc by HPLC

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. Other adverse effects

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

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/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product as sold)

08 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances

20 01 27* Paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transportation information

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number	UN3077	UN3077	UN3077
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(EPOXY RESIN; P,P'DIAMINODIPHENYL SULFONE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(EPOXY RESIN; P,P'DIAMINODIPHENYL SULFONE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(EPOXY RESIN; P,P'DIAMINODIPHENYL SULFONE)
14.3 Transport hazard class(es)	9	9	9
14.4 Packing group	III	III	III
14.5 Environmental hazards	Environmentally Hazardous	Not applicable	Marine Pollutant
14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR 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**CAS Nbr****Classification****Regulation**

dapsone

80-08-0

Gr. 3: Not classifiable

International Agency
for Research on Cancer

Global inventory status

Contact 3M for more information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). 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.

COMAH Regulation, SI 2015/483

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

Dangerous Substances	Identifier(s)	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	200	500

Regulation (EU) No 649/2012, as amended for GB

No chemicals listed

15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this substance/mixture in accordance with Regulation (EC) No 1907/2006, as amended for GB.

SECTION 16: Other information**List of relevant H statements**

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H341	Suspected of causing genetic defects.
H360F	May damage fertility.
H371	May cause damage to organs.
H371	May cause damage to organs: blood or blood-forming organs.
H373	May cause damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure: blood or blood-forming organs gastrointestinal tract liver.
H411	Toxic to aquatic life with long lasting effects.

Revision information:

Section 1: Product identification numbers information was modified.

Section 01: SAP Material Numbers 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. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into the European Union, you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration.

3M SDSs for Great Britain are available at www.3M.com/uk

For Northern Ireland documents, please contact your 3M representative to obtain a copy.