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 AF-191 Structural Adhesive Film

Product Identification Numbers

62-2608-5309-8	62-2707-5306-4	62-2707-5309-8	62-3068-6005-7	62-3072-5306-2
62-3142-5306-3	62-3142-5309-7	62-3142-6005-0		
7100031513	7000046379	7000046411	7000046413	7000046421
7000000838	7000000839			

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: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

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.

CLASSIFICATION:
Acute Toxicity, Category 4 - Acute Tox. 4; H302
Germ Cell Mutagenicity, Category 2 - Muta. 2; H341
Reproductive Toxicity, Category 1B - Repr. 1B; H360F
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
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	28390-91-2	500-062-3	20 - 40
N,N,N',N'-Tetrakis(2,3-epoxypropyl)-m-xylene-α,α'-diamine	63738-22-7	264-438-6	10 - 20
dapsone	80-08-0	201-248-4	< 10

HAZARD STATEMENTS:

H302	Harmful if swallowed.
H341	Suspected of causing genetic defects.
H360F	May damage fertility.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P201	Obtain special instructions before use.
P273	Avoid release to the environment.
P280K	Wear protective gloves and respiratory protection.

Response:

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

SUPPLEMENTAL INFORMATION:

Supplemental Hazard Statements:

EUH208	Contains Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane. May produce an allergic reaction.

Supplemental Precautionary Statements:
Restricted to professional users.

50% of the mixture consists of components of unknown acute oral toxicity.

Contains 65% 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
Alkyl/ Diamine/ Phenolic Epoxy reaction product	Trade Secret	40 - 60	Substance not classified as hazardous
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	(CAS-No.) 28390-91-2 (EC-No.) 500-062-3	20 - 40	Aquatic Chronic 2, H411 Skin Sens. 1, H317 Muta. 2, H341
N,N,N',N'-Tetrakis(2,3-epoxypropyl)-m-xylene-α,α'-diamine	(CAS-No.) 63738-22-7 (EC-No.) 264-438-6	10 - 20	Acute Tox. 4, H302 Skin Irrit. 2, H315
dapsone	(CAS-No.) 80-08-0 (EC-No.) 201-248-4	< 10	Acute Tox. 3, H301 Aquatic Chronic 2, H411 Repr. 1B, H360F STOT SE 2, H371 STOT RE 2, H373
Calcium trifluoromethanesulphonate	(CAS-No.) 358-23-6 (EC-No.) 206-616-8	<= 0.01	EUH014 Ox. Liq. 2, H272 Met. Corr. 1, H290 Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact
Wash with soap and water. If signs/symptoms develop, get medical attention.

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

If swallowed
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
The most important symptoms and effects based on the GB CLP classification include:
Harmful if swallowed.

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.

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
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Fluoride	During combustion.
Oxides of nitrogen.	During combustion.
Oxides of sulphur.	During combustion.

5.3. Advice for fire-fighters
Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate

authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections
Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling
For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. 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
Store away from heat.

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

UK HSC : 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
Provide ventilated enclosure for heat 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. 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:
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.
Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

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

Applicable Norms/Standards
Use a respirator conforming to EN 140 or EN 136: filter types A & P

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Film
Colour	White
Odor	Odourless
Odour 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.*
Vapour pressure	*No data available.*
Density	1.26 g/cm3
Relative density	*No data available.*
Relative Vapour Density	*No data available.*
Particle Characteristics	*Not applicable.*

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	*No data available.*
Evaporation rate	*Not applicable.*
Molecular weight	*No data available.*
Percent volatile	<= 1.3 % weight [*Test Method:*Estimated]

SECTION 10: Stability and reactivity

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

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
Heat.

10.5 Incompatible materials
None known.

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

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
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. 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	Ingestion		No data available; calculated ATE >300 - =2,000 mg/kg
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	Dermal	Rabbit	LD50 > 3,000 mg/kg
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	Ingestion	Rat	LD50 > 5,000 mg/kg
N,N,N',N'-Tetrakis(2,3-epoxypropyl)-m-xylene-α,α'-diamine	Ingestion	Rat	LD50 630 mg/kg
dapsone	Ingestion	Professional judgement	LD50 250 mg/kg
dapsone	Dermal	Rabbit	LD50 > 2,000 mg/kg
Calcium trifluoromethanesulphonate	Ingestion	Rat	LD50 1,012 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	Multiple animal species	No significant irritation
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	Rabbit	No significant irritation
N,N,N',N'-Tetrakis(2,3-epoxypropyl)-m-xylene-α,α'-diamine	Rabbit	Irritant
dapsone	Rabbit	No significant irritation
Calcium trifluoromethanesulphonate	Rabbit	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	Rabbit	Mild irritant
N,N,N',N'-Tetrakis(2,3-epoxypropyl)-m-xylene-α,α'-diamine	In vitro data	No significant irritation
dapsone	In vitro data	No significant irritation
Calcium trifluoromethanesulphonate	similar health hazards	Corrosive

Skin Sensitisation

Name	Species	Value
Overall product	Guinea pig	Not classified
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	Human and animal	Sensitising
N,N,N',N'-Tetrakis(2,3-epoxypropyl)-m-xylene-α,α'-diamine	Professional judgement	Sensitising
dapsone	Mouse	Not classified

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	In Vitro	Some positive data exist, but the data are not sufficient for classification
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	In vivo	Mutagenic
N,N,N',N'-Tetrakis(2,3-epoxypropyl)-m-xylene-α,α'-diamine	In Vitro	Some positive data exist, but the data are not sufficient for classification
dapsone	In vivo	Not mutagenic
dapsone	In Vitro	Some positive data exist, but the data are not sufficient for classification
Calcium trifluoromethanesulphonate	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

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	Ingestion	Not classified for development	Rat	NOAEL 90 mg/kg/day	during gestation
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

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
N,N,N',N'-Tetrakis(2,3-epoxypropyl)-m-xylene-α,α'-diamine	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
Calcium trifluoromethanesulphonate	Inhalation	respiratory irritation	May cause respiratory irritation	similar health hazards	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 50 mg/kg/day	13 weeks
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	Ingestion	gastrointestinal tract | liver | immune system | nervous system | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 200 mg/kg/day	13 weeks
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 exposure	Human	NOAEL Not available	poisoning and/or abuse
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

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
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	28390-91-2	Bacteria	Experimental	24 hours	IC50	>10,000 mg/l
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	28390-91-2	Common Carp	Experimental	96 hours	LC50	7 mg/l
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	28390-91-2	Green algae	Experimental	72 hours	EC50	>11 mg/l
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	28390-91-2	Water flea	Experimental	48 hours	EC50	4.7 mg/l
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	28390-91-2	Green algae	Experimental	72 hours	EC10	2.4 mg/l
N,N,N',N'-Tetrakis(2,3-epoxypropyl)-m-xylene-α,α'-diamine	63738-22-7	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

Calcium trifluoromethanesulphonate	358-23-6	Green algae	Hydrolysis Product	72 hours	ErC50	48 mg/l
Calcium trifluoromethanesulphonate	358-23-6	Rainbow trout	Hydrolysis Product	96 hours	LC50	>100 mg/l
Calcium trifluoromethanesulphonate	358-23-6	Water flea	Hydrolysis Product	48 hours	EC50	>100 mg/l
Calcium trifluoromethanesulphonate	358-23-6	Green algae	Hydrolysis Product	72 hours	ErC10	5.8 mg/l
Calcium trifluoromethanesulphonate	358-23-6	Activated sludge	Hydrolysis Product	3 hours	EC50	>1,000 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	28390-91-2	Experimental Biodegradation	28 days	CO2 evolution	10 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
dapsone	80-08-0	Experimental Biodegradation	28 days	BOD	<1 %BOD/ThOD	OECD 301D - Closed bottle test
Calcium trifluoromethanesulphonate	358-23-6	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	≤2 minutes (t 1/2)	

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Benzenamine, 4,4'-methylenebis-, polymer with (chloromethyl)oxirane	28390-91-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
N,N,N',N'-Tetrakis(2,3-epoxypropyl)-m-xylene-α,α'-diamine	63738-22-7	Estimated Bioconcentration		Log Kow	-0.34	
dapsone	80-08-0	Experimental Bioconcentration		Log Kow	0.97	
Calcium trifluoromethanesulphonate	358-23-6	Hydrolysis product Bioconcentration		Log Kow	<0.3	similar to OECD 117

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™
Calcium trifluoromethanesulphonate	358-23-6	Modeled Mobility in Soil	Koc	1 l/kg	ACD/Labs ChemSketch™

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 HF. 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 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 material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

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

None

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

EUH014	Reacts violently with water.
H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H360F	May damage fertility.
H371	May cause damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Revision information:
GB Section 02: CLP Ingredient table information was modified.
GB Section 15: Carcinogenicity information information was modified.
Section 02: CLP Physical and Health Hazard Statements information was modified.
Label: CLP Classification information was modified.
Label: CLP Precautionary - Prevention information was modified.
Section 3: Composition/ Information of ingredients table information was modified.
Section 5: Fire - Special hazards information information was modified.
Section 5: Hazardous combustion products table information was modified.
Section 8: Appropriate Engineering controls information information was modified.
Section 8: glove data value information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 8: Personal Protection - Respiratory Information information was modified.
Section 8: Personal Protection - Skin/hand information information was modified.
Section 10: Hazardous Decomposition Products information information was added.
Section 11: Acute Toxicity table information was modified.
Section 11: Aspiration Hazard Table information was deleted.
Section 11: Aspiration Hazard text information was added.
Section 11: Carcinogenicity Table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Inhalation information information was modified.
Section 11: Mutagenicity information information was added.
Section 11: Reproductive Toxicity 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 11: Target Organs - Single Table information was modified.
Section 12: Component ecotoxicity information 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.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 15: Regulations - Inventories information was modified.
Section 15: Restrictions on manufacture ingredients information information was deleted.

Section 15: Seveso Substance Text information was deleted.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was modified.

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