

Marine Transport (IMDG)

UN No Not applicable

Proper Shipping Name Not applicable

Hazard Class/Division Not applicable

Subsidiary Risk Not applicable

Packing Group: Not applicable

Environmental Hazards: Not applicable

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Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the GHS guidelines & India Hazardous substances (Classification, Labeling & Packaging) Draft Rules 2011.

SECTION 1: Identification

1.1. Product identifier

3M(TM) Scotch-Weld(TM) Structural Plastic Adhesive DP8010 Blue and Structural Plastic Adhesive 8010 Blue, Part B

1.2. Recommended use and restrictions on use

Recommended use

Structural adhesive., Industrial use.

1.3. Supplier's details

Address: 3M India Limited, plot-48-51, Electronic city, Hosur road, Bangalore-560100
Telephone: 080-45543000, contact Product EHS team
E Mail: productehs.in@mmm.com
Website: <http://solutions.3mindia.co.in>

1.4. Emergency telephone number

080-45543000 (Contact hours: 8:00 AM to 5:00 PM)

SECTION 2: Hazard identification

Under MSIHC Rules, information is noted below on flammability, acute toxicity and explosivity relevant to this product. In line with international standards, information on other hazard classes and associated precautionary statements relevant to this product are included as well.

2.1. Classification of the substance or mixture

Acute Toxicity (dermal): Category 5.
Skin Corrosion/Irritation: Category 3.
Respiratory Sensitizer: Category 1.
Skin Sensitizer: Category 1.
Reproductive Toxicity: Category 1B.
Carcinogenicity: Category 2.
Acute Aquatic Toxicity: Category 2.
Chronic Aquatic Toxicity: Category 3.

2.2. Label elements

Signal Word

DANGER!

Symbols

Health Hazard |

Pictograms



HAZARD STATEMENTS:

- H313 May be harmful in contact with skin.
- H316 Causes mild skin irritation.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H317 May cause an allergic skin reaction.
- H360 May damage fertility or the unborn child.
- H351 Suspected of causing cancer.

- H401 Toxic to aquatic life.
- H412 Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

- P201 Obtain special instructions before use.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P284A In case of inadequate ventilation wear respiratory protection.
- P280E Wear protective gloves.

Response:

- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
- P308 + P313 IF exposed or concerned: Get medical advice/attention.

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
Tetrahydrofurfuryl Methacrylate	2455-24-5	30 - 60
2-Ethylhexyl Methacrylate	688-84-6	10 - 30
Acrylate Polymer (NJTS Reg No 04499600-7169)	Trade Secret	10 - 30
Impact Modifier	20882-04-6	1 - 9
Dibutyl Itaconate	2155-60-4	0.1 - 5

Glass Microspheres (NJTS Reg. No. 04499600-7431)	Trade Secret	0.1 - 5
Naphthenic acids, copper salts	1338-02-9	< 1
Succinic Anhydride	108-30-5	< 0.6
Tetrahydrofurfuryl Alcohol	97-99-4	< 0.3
Styrene	100-42-5	< 0.2
Maleic anhydride	108-31-6	< 0.002

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

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. 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

No critical symptoms or effects. See Section 11.1, information on toxicological effects.

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. 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

Hydrocarbons.
Carbon monoxide.
Carbon dioxide.
Hydrogen cyanide.
Oxides of nitrogen.

Condition

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

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation

to disperse or exhaust vapors, in accordance with good industrial hygiene practice. 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. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. 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. 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. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Store away from heat. Store away from acids.

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
Styrene	100-42-5	ACGIH	TWA:10 ppm,STEL:20 ppm	A3: Confirmed animal carcin., Ototoxicant
Maleic anhydride	108-31-6	ACGIH	TWA(inhalable fraction and vapor):0.01 mg/m3	A4: Not class. as human carcin, Dermal/Respiratory Sensitizer
COPPER COMPOUNDS	1338-02-9	ACGIH	TWA(as Cu, fume):0.2 mg/m3;TWA(as Cu dust or mist):1 mg/m3	
Tetrahydrofurfuryl Alcohol	97-99-4	AIHA	TWA:2 mg/m3(0.5 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Provide appropriate local exhaust ventilation for cutting, grinding, sanding or machining. 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

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Paste
Color	Blue-Green
Odor	Mild Acrylic
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point: NA	<i>Not applicable.</i>
Boiling point/Initial boiling point/Boiling range	<i>No data available.</i>
Flash point	106.1 °C [<i>Test Method: Closed Cup</i>]
Evaporation rate	<i>No data available.</i>
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	<i>No data available.</i>
Vapor Density and/or Relative Vapor Density	<i>No data available.</i>
Density	0.95 - 1.05 g/ml
Relative density	0.95 - 1.05 [<i>Ref Std: WATER=1</i>]

Water solubility	Slight (less than 10%)
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity/Kinematic Viscosity	<i>No data available.</i>
Volatile organic compounds (VOC)	0.6 % weight [<i>Details: when used as intended with Part A</i>]
Percent volatile	
VOC less H₂O & exempt solvents	5.5 g/l [<i>Details: when used as intended with Part A</i>]
Molecular weight	<i>No data available.</i>

Nanoparticles

This material contains nanoparticles.

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.

Sparks and/or flames.

10.5 Incompatible materials

Strong acids.

10.6 Hazardous decomposition products**Substance**

None known.

Condition

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

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

and throat pain. Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest. May cause additional health effects (see below).

Skin contact

May be harmful in contact with skin.

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching. May cause additional health effects (see below).

Eye contact

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

Ingestion

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Reproductive/Developmental Toxicity:

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

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

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	Ingestion		No data available; calculated ATE >5,000 mg/kg
Tetrahydrofurfuryl Methacrylate	Ingestion	Rat	LD50 4,000 mg/kg
Tetrahydrofurfuryl Methacrylate	Dermal	similar health hazards	LD50 estimated to be 2,000 - 5,000 mg/kg
2-Ethylhexyl Methacrylate	Dermal		LD50 estimated to be > 5,000 mg/kg
2-Ethylhexyl Methacrylate	Ingestion	Rat	LD50 > 2,000 mg/kg
Impact Modifier	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
Impact Modifier	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Naphthenic acids, copper salts	Dermal	similar compounds	LD50 > 2,000 mg/kg
Naphthenic acids, copper salts	Ingestion	similar compounds	LD50 >300, < 2,000 mg/kg
Succinic Anhydride	Dermal	Rat	LD50 > 2,000 mg/kg
Succinic Anhydride	Ingestion	Rat	LD50 1,510 mg/kg
Tetrahydrofurfuryl Alcohol	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
Tetrahydrofurfuryl Alcohol	Inhalation-Vapor (4 hours)	Rat	LC50 > 3.1 mg/l
Tetrahydrofurfuryl Alcohol	Ingestion	Rat	LD50 > 2,000 mg/kg
Styrene	Dermal	Rat	LD50 > 2,000 mg/kg
Styrene	Inhalation-Vapor (4 hours)	Rat	LC50 11.8 mg/l

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Styrene	Ingestion	Rat	LD50 5,000 mg/kg
Maleic anhydride	Dermal	Rabbit	LD50 2,620 mg/kg
Maleic anhydride	Ingestion	Rat	LD50 1,030 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Tetrahydrofurfuryl Methacrylate	Rabbit	No significant irritation
2-Ethylhexyl Methacrylate	Rabbit	Minimal irritation
Impact Modifier	Not applicable	Irritant
Naphthenic acids, copper salts	Rabbit	No significant irritation
Succinic Anhydride	In vitro data	Corrosive
Tetrahydrofurfuryl Alcohol	Rabbit	No significant irritation
Styrene	Professional judgement	Mild irritant
Maleic anhydride	Human and animal	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
Tetrahydrofurfuryl Methacrylate	Rabbit	No significant irritation
2-Ethylhexyl Methacrylate	Rabbit	No significant irritation
Impact Modifier	Not available	Severe irritant
Naphthenic acids, copper salts	In vitro data	No significant irritation
Succinic Anhydride	similar health hazards	Corrosive
Tetrahydrofurfuryl Alcohol	Rabbit	Severe irritant
Styrene	Professional judgement	Moderate irritant
Maleic anhydride	Rabbit	Corrosive

Sensitization:

Skin Sensitisation

Name	Species	Value
Tetrahydrofurfuryl Methacrylate	In vitro data	Sensitising
2-Ethylhexyl Methacrylate	Guinea pig	Sensitising
Impact Modifier	similar compounds	Sensitising
Naphthenic acids, copper salts	Guinea pig	Not classified
Succinic Anhydride	Mouse	Sensitising
Tetrahydrofurfuryl Alcohol	Mouse	Not classified
Styrene	Guinea pig	Not classified
Maleic anhydride	Multiple animal	Sensitising

	species	
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Respiratory Sensitisation

Name	Species	Value
Succinic Anhydride	similar compounds	Sensitising
Maleic anhydride	Human	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
Tetrahydrofurfuryl Methacrylate	In Vitro	Not mutagenic
Impact Modifier	In Vitro	Not mutagenic
Succinic Anhydride	In Vitro	Not mutagenic
Tetrahydrofurfuryl Alcohol	In Vitro	Not mutagenic
Styrene	In Vitro	Some positive data exist, but the data are not sufficient for classification
Styrene	In vivo	Some positive data exist, but the data are not sufficient for classification
Maleic anhydride	In vivo	Not mutagenic
Maleic anhydride	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Succinic Anhydride	Ingestion	Multiple animal species	Not carcinogenic
Styrene	Ingestion	Mouse	Carcinogenic.
Styrene	Inhalation	Human and animal	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Tetrahydrofurfuryl Methacrylate	Ingestion	Not classified for male reproduction	Rat	NOAEL 300 mg/kg/day	29 days
Tetrahydrofurfuryl Methacrylate	Ingestion	Toxic to female reproduction	Rat	NOAEL 120 mg/kg/day	prematuring into lactation
Tetrahydrofurfuryl Methacrylate	Ingestion	Toxic to development	Rat	NOAEL 120 mg/kg/day	prematuring into lactation
Tetrahydrofurfuryl Alcohol	Ingestion	Toxic to female reproduction	Rat	NOAEL 50 mg/kg/day	prematuring into lactation
Tetrahydrofurfuryl Alcohol	Dermal	Toxic to male reproduction	Rat	NOAEL 100 mg/kg/day	13 weeks
Tetrahydrofurfuryl Alcohol	Ingestion	Toxic to male reproduction	Rat	NOAEL 150 mg/kg/day	47 days
Tetrahydrofurfuryl Alcohol	Inhalation	Toxic to male reproduction	Rat	NOAEL 0.6 mg/l	90 days
Tetrahydrofurfuryl Alcohol	Ingestion	Toxic to development	Rat	NOAEL 50 mg/kg/day	prematuring into lactation
Styrene	Ingestion	Not classified for female reproduction	Rat	NOAEL 21 mg/kg/day	3 generation
Styrene	Inhalation	Not classified for female reproduction	Rat	NOAEL 2.1 mg/l	2 generation
Styrene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.1 mg/l	2 generation
Styrene	Ingestion	Not classified for male reproduction	Rat	NOAEL 400 mg/kg/day	60 days

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Styrene	Ingestion	Not classified for development	Rat	NOAEL 400 mg/kg/day	during gestation
Styrene	Inhalation	Not classified for development	Multiple animal species	NOAEL 2.1 mg/l	during gestation
Maleic anhydride	Ingestion	Not classified for female reproduction	Rat	NOAEL 55 mg/kg/day	2 generation
Maleic anhydride	Ingestion	Not classified for male reproduction	Rat	NOAEL 55 mg/kg/day	2 generation
Maleic anhydride	Ingestion	Not classified for development	Rat	NOAEL 140 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Impact Modifier	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Succinic Anhydride	Inhalation	respiratory irritation	May cause respiratory irritation	similar health hazards	NOAEL Not available	
Tetrahydrofurfuryl Alcohol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Styrene	Inhalation	auditory system	Causes damage to organs	Multiple animal species	LOAEL 4.3 mg/l	not available
Styrene	Inhalation	liver	Causes damage to organs	Mouse	LOAEL 2.1 mg/l	not available
Styrene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	occupational exposure
Styrene	Inhalation	respiratory irritation	May cause respiratory irritation	Human and animal	NOAEL Not available	
Styrene	Inhalation	endocrine system	Not classified	Rat	NOAEL Not available	not available
Styrene	Inhalation	kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2.1 mg/l	not available
Maleic anhydride	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Tetrahydrofurfuryl Methacrylate	Ingestion	hematopoietic system nervous system	Not classified	Rat	NOAEL 300 mg/kg/day	29 days
Succinic Anhydride	Ingestion	heart skin endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system nervous system kidney and/or bladder respiratory system	Not classified	Mouse	NOAEL 300 mg/kg/day	13 weeks
Tetrahydrofurfuryl Alcohol	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.2 mg/l	90 days
Tetrahydrofurfuryl Alcohol	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.6 mg/l	90 days

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Tetrahydrofurfuryl Alcohol	Inhalation	eyes	Not classified	Rat	NOAEL 2.1 mg/l	90 days
Tetrahydrofurfuryl Alcohol	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 69 mg/kg/day	91 days
Tetrahydrofurfuryl Alcohol	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 150 mg/kg/day	28 days
Tetrahydrofurfuryl Alcohol	Ingestion	endocrine system kidney and/or bladder	Not classified	Rat	NOAEL 600 mg/kg/day	28 days
Tetrahydrofurfuryl Alcohol	Ingestion	liver eyes	Not classified	Rat	NOAEL 781 mg/kg/day	91 days
Tetrahydrofurfuryl Alcohol	Ingestion	heart nervous system	Not classified	Rat	NOAEL 600 mg/kg/day	28 days
Styrene	Inhalation	auditory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL not available	occupational exposure
Styrene	Inhalation	eyes	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Styrene	Inhalation	liver	May cause damage to organs though prolonged or repeated exposure	Mouse	LOAEL 0.85 mg/l	13 weeks
Styrene	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	LOAEL 1.1 mg/l	not available
Styrene	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 0.85 mg/l	7 days
Styrene	Inhalation	endocrine system	Not classified	Rat	NOAEL 0.6 mg/l	10 days
Styrene	Inhalation	respiratory system	Not classified	Multiple animal species	LOAEL 0.09 mg/l	not available
Styrene	Inhalation	heart gastrointestinal tract bone, teeth, nails, and/or hair muscles kidney and/or bladder	Not classified	Multiple animal species	NOAEL 4.3 mg/l	2 years
Styrene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 500 mg/kg/day	8 weeks
Styrene	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	not available
Styrene	Ingestion	liver kidney and/or bladder	Not classified	Rat	NOAEL 677 mg/kg/day	6 months
Styrene	Ingestion	hematopoietic system	Not classified	Dog	NOAEL 600 mg/kg/day	470 days
Styrene	Ingestion	heart respiratory system	Not classified	Rat	NOAEL 35 mg/kg/day	105 weeks
Maleic anhydride	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.0011 mg/l	6 months
Maleic anhydride	Inhalation	endocrine system hematopoietic system nervous system kidney and/or bladder heart liver eyes	Not classified	Rat	NOAEL 0.0098 mg/l	6 months
Maleic anhydride	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 55 mg/kg/day	80 days
Maleic anhydride	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 250 mg/kg/day	183 days
Maleic anhydride	Ingestion	heart nervous system	Not classified	Rat	NOAEL 600 mg/kg/day	183 days
Maleic anhydride	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 150 mg/kg/day	80 days

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Maleic anhydride	Ingestion	hematopoietic system	Not classified	Dog	NOAEL 60 mg/kg/day	90 days
Maleic anhydride	Ingestion	skin endocrine system immune system eyes respiratory system	Not classified	Rat	NOAEL 150 mg/kg/day	80 days

Aspiration Hazard

Name	Value
Styrene	Aspiration hazard

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 2: Toxic to aquatic life.

Chronic aquatic hazard:

GHS Chronic 3: Harmful to aquatic life with long lasting effects.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Tetrahydrofurfuryl Methacrylate	2455-24-5	Fathead minnow	Experimental	96 hours	LC50	34.7 mg/l
Tetrahydrofurfuryl Methacrylate	2455-24-5	Green algae	Experimental	72 hours	EC50	>100 mg/l
Tetrahydrofurfuryl Methacrylate	2455-24-5	Green algae	Experimental	72 hours	EC10	100 mg/l
Tetrahydrofurfuryl Methacrylate	2455-24-5	Water flea	Experimental	21 days	NOEC	37.2 mg/l
2-Ethylhexyl Methacrylate	688-84-6	Green Algae	Experimental	72 hours	EC50	5.3 mg/l
2-Ethylhexyl Methacrylate	688-84-6	Medaka	Experimental	96 hours	LC50	2.8 mg/l
2-Ethylhexyl Methacrylate	688-84-6	Water flea	Experimental	48 hours	EC50	4.6 mg/l
2-Ethylhexyl Methacrylate	688-84-6	Green Algae	Experimental	72 hours	NOEC	0.81 mg/l
2-Ethylhexyl Methacrylate	688-84-6	Water flea	Experimental	21 days	NOEC	0.105 mg/l
Acrylate	Trade Secret		Data not			N/A

3M(TM) Scotch-Weld(TM) Structural Plastic Adhesive DP8010 Blue and Structural Plastic Adhesive 8010 Blue, Part B

Polymer (NJTS Reg No 04499600-7169)			available or insufficient for classification			
Impact Modifier	20882-04-6	Green algae	Estimated	72 hours	EC50	710 mg/l
Impact Modifier	20882-04-6	Medaka	Estimated	96 hours	LC50	227 mg/l
Impact Modifier	20882-04-6	Water flea	Estimated	48 hours	EC50	380 mg/l
Impact Modifier	20882-04-6	Green algae	Estimated	72 hours	NOEC	160 mg/l
Impact Modifier	20882-04-6	Water flea	Estimated	21 days	NOEC	24.1 mg/l
Dibutyl Itaconate	2155-60-4		Data not available or insufficient for classification			N/A
Naphthenic acids, copper salts	1338-02-9	Green Algae	Estimated	72 hours	EC50	0.629 mg/l
Naphthenic acids, copper salts	1338-02-9	Water flea	Estimated	48 hours	EC50	0.0756 mg/l
Naphthenic acids, copper salts	1338-02-9	Zebra Fish	Estimated	96 hours	LC50	0.0702 mg/l
Naphthenic acids, copper salts	1338-02-9	Algae or other aquatic plants	Estimated	hours	NOEC	0.132 mg/l
Naphthenic acids, copper salts	1338-02-9	Fathead minnow	Estimated	32 days	EC10	0.0354 mg/l
Naphthenic acids, copper salts	1338-02-9	Water flea	Estimated	21 days	NOEC	0.0756 mg/l
Succinic Anhydride	108-30-5	Green Algae	Estimated	72 hours	EC50	>100 mg/l
Succinic Anhydride	108-30-5	Water flea	Estimated	48 hours	EC50	>100 mg/l
Succinic Anhydride	108-30-5	Zebra Fish	Estimated	96 hours	LC50	>100 mg/l
Succinic Anhydride	108-30-5	Green Algae	Estimated	72 hours	NOEC	100 mg/l
Tetrahydrofurfuryl Alcohol	97-99-4	Green Algae	Experimental	72 hours	EC50	>100 mg/l
Tetrahydrofurfuryl Alcohol	97-99-4	Medaka	Experimental	96 hours	LC50	>100 mg/l
Tetrahydrofurfuryl Alcohol	97-99-4	Water flea	Experimental	48 hours	EC50	>100 mg/l
Tetrahydrofurfuryl Alcohol	97-99-4	Green Algae	Experimental	72 hours	NOEC	>100 mg/l
Tetrahydrofurfuryl Alcohol	97-99-4	Water flea	Experimental	21 days	NOEC	>100 mg/l

3M(TM) Scotch-Weld(TM) Structural Plastic Adhesive DP8010 Blue and Structural Plastic Adhesive 8010 Blue, Part B

Styrene	100-42-5	Activated sludge	Experimental	30 minutes	EC50	500 mg/l
Styrene	100-42-5	Fathead minnow	Experimental	96 hours	LC50	4.02 mg/l
Styrene	100-42-5	Green Algae	Experimental	72 hours	EC50	4.9 mg/l
Styrene	100-42-5	Water flea	Experimental	48 hours	EC50	4.7 mg/l
Styrene	100-42-5	Green algae	Experimental	96 hours	EC10	0.28 mg/l
Styrene	100-42-5	Water flea	Experimental	21 days	NOEC	1.01 mg/l
Maleic anhydride	108-31-6	Green algae	Estimated	72 hours	EC50	74.4 mg/l
Maleic anhydride	108-31-6	Water flea	Estimated	48 hours	EC50	93.8 mg/l
Maleic anhydride	108-31-6	Bacteria	Experimental	18 hours	EC10	44.6 mg/l
Maleic anhydride	108-31-6	Rainbow trout	Experimental	96 hours	LC50	75 mg/l
Maleic anhydride	108-31-6	Green algae	Estimated	72 hours	EC10	11.8 mg/l
Maleic anhydride	108-31-6	Water flea	Experimental	21 days	NOEC	10 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Tetrahydrofurfuryl Methacrylate	2455-24-5	Experimental Biodegradation	28 days	BOD	75 % BOD/ThBOD	OECD 301F - Manometric respirometry
2-Ethylhexyl Methacrylate	688-84-6	Experimental Biodegradation	28 days	BOD	88 % BOD/ThBOD	OECD 301C - MITI test (I)
Acrylate Polymer (NJTS Reg No 04499600-7169)	Trade Secret	Data not available-insufficient			N/A	
Impact Modifier	20882-04-6	Estimated Biodegradation	14 days	BOD	95 % weight	OECD 301C - MITI test (I)
Dibutyl Itaconate	2155-60-4	Estimated Biodegradation	28 days	BOD	72 % BOD/ThBOD	OECD 301F - Manometric respirometry
Naphthenic acids, copper salts	1338-02-9	Data not available-insufficient			N/A	
Succinic Anhydride	108-30-5	Experimental Hydrolysis		Hydrolytic half-life	4.3 minutes (t _{1/2})	Non-standard method
Succinic Anhydride	108-30-5	Estimated Biodegradation	28 days	Dissolv. Organic Carbon Deplet	96.55 % weight	OECD 301E - Modif. OECD Screen
Tetrahydrofurfuryl Alcohol	97-99-4	Experimental Biodegradation	28 days	BOD	92 % weight	OECD 301C - MITI test (I)
Styrene	100-42-5	Experimental Photolysis		Photolytic half-life (in air)	6.64 hours (t _{1/2})	Non-standard method
Styrene	100-42-5	Experimental Biodegradation	28 days	BOD	70.9 % BOD/ThBOD	Non-standard method
Maleic	108-31-6	Experimental		Hydrolytic	22 seconds (t _{1/2})	Non-standard method

anhydride		Hydrolysis		half-life	1/2)	
Maleic anhydride	108-31-6	Estimated Biodegradation	25 days	CO2 evolution	>90 % weight	OECD 301B - Modified sturm or CO2

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Tetrahydrofurfuryl Methacrylate	2455-24-5	Estimated Bioconcentration		Bioaccumulation factor	3.42	Estimated: Bioconcentration factor
2-Ethylhexyl Methacrylate	688-84-6	Experimental Bioconcentration	96 hours	Bioaccumulation factor	37	OECD 305C-Bioaccum degree fish
Acrylate Polymer (NJTS Reg No 04499600-7169)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Impact Modifier	20882-04-6	Estimated Bioconcentration		Bioaccumulation factor	3.0	Estimated: Bioconcentration factor
Dibutyl Itaconate	2155-60-4	Estimated Bioconcentration		Bioaccumulation factor	5.7	Estimated: Bioconcentration factor
Naphthenic acids, copper salts	1338-02-9	Estimated BCF-Carp	42 days	Bioaccumulation factor	≤27	OECD 305E - Bioaccumulation flow-through fish test
Succinic Anhydride	108-30-5	Experimental Bioconcentration		Log Kow	2.44	Non-standard method
Tetrahydrofurfuryl Alcohol	97-99-4	Experimental Bioconcentration		Log Kow	-0.11	Non-standard method
Styrene	100-42-5	Experimental Bioconcentration		Log Kow	2.96	Non-standard method
Maleic anhydride	108-31-6	Experimental Bioconcentration		Log Kow	-2.61	Non-standard method

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

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

Dispose of completely cured (or polymerised) 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. 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.

SECTION 14: Transport Information

Not hazardous for transportation.

Air Transport (IATA) Regulations

UN No Not applicable

Proper Shipping Name Not applicable

Hazard Class/Division Not applicable

Subsidiary Risk Not applicable

Packing Group: Not applicable

Marine Transport (IMDG)

UN No Not applicable

Proper Shipping Name Not applicable

Hazard Class/Division Not applicable

Subsidiary Risk Not applicable

Packing Group: Not applicable

Environmental Hazards: Not applicable

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. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Applicable Environmental, Health and Safety Regulations

The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989

Hazardous Waste(Management , Handling & Transboundary) Rules, 2008

Hazardous Chemicals (Classification, Packaging and Labelling Draft Rules), 2011

The following ingredients are listed as hazardous on Part II of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules

COPPER COMPOUNDS

Maleic anhydride

Styrene

The following ingredients are classified as hazardous based on the criteria listed under Part I of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules:

The product is classified as Non-Hazardous as per MSIHC Rules, 1989.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision information:

No revision information

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3M India SDSs are available at <http://solutions.3mindia.co.in>



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the GHS guidelines & India Hazardous substances (Classification, Labeling & Packaging) Draft Rules 2011.

SECTION 1: Identification

1.1. Product identifier

3M(TM) Scotch-Weld(TM) Structural Plastic Adhesive DP8010 and Structural Plastic Adhesive 8010, Part A

Product Identification Numbers

62-2883-7530-6 62-2883-8530-5 FS-9100-5342-0

1.2. Recommended use and restrictions on use

Recommended use

Structural adhesive., Industrial use.

1.3. Supplier's details

Address: 3M India Limited, plot-48-51, Electronic city, Hosur road, Bangalore-560100
Telephone: 080-45543000, contact Product EHS team
E Mail: productehs.in@mmm.com
Website: <http://solutions.3mindia.co.in>

1.4. Emergency telephone number

080-45543000 (Contact hours: 8:00 AM to 5:00 PM)

SECTION 2: Hazard identification

Under MSIHC Rules, information is noted below on flammability, acute toxicity and explosivity relevant to this product. In line with international standards, information on other hazard classes and associated precautionary statements relevant to this product are included as well.

2.1. Classification of the substance or mixture

Acute Toxicity (oral): Category 4.
Serious Eye Damage/Irritation: Category 1.
Skin Corrosion/Irritation: Category 3.
Respiratory Sensitizer: Category 1.
Skin Sensitizer: Category 1.
Germ Cell Mutagenicity: Category 2.

2.2. Label elements

Signal Word

DANGER!

Symbols

Corrosion | Exclamation mark | Health Hazard |

Pictograms



HAZARD STATEMENTS:

H302	Harmful if swallowed.
H318	Causes serious eye damage.
H316	Causes mild skin irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H341	Suspected of causing genetic defects.

PRECAUTIONARY STATEMENTS

Prevention:

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P284A	In case of inadequate ventilation wear respiratory protection.
P280B	Wear protective gloves and eye/face protection.

Response:

P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

2.3. Other hazards

Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Synthetic Rubber Oligomer (NJTS Reg No 04499600-7168)	Trade Secret	40 - 70
Polyfunctional Aziridine	64265-57-2	10 - 30
Amine Borane Complex	223674-50-8	1 - 15
Silane, trimethoxyoctyl-, hydrolysis products with silica	67762-90-7	1 - 5
Dichloromethane	75-09-2	< 0.01

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

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately 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

Allergic respiratory reaction (difficulty breathing, wheezing, cough, and tightness of chest). Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision).

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.
- Amine compounds.
- Carbon monoxide.
- Carbon dioxide.
- Oxides of nitrogen.
- Toxic vapour, gas, particulate.

Condition

- 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

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. 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. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. 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. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities

Protect from sunlight. Store away from heat. Store away from acids.

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
Dichloromethane	75-09-2	ACGIH	TWA:50 ppm	A3: Confirmed animal carcin.

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

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. Provide appropriate local exhaust ventilation for cutting, grinding, sanding or machining.

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:

Indirect vented goggles.

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

Respiratory protection

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

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Viscous Liquid
Color	Colorless
Odor	Mild Acrylic
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point: NA	<i>Not applicable.</i>
Boiling point/Initial boiling point/Boiling range	≥ 98.9 °C [<i>@ 101,325 Pa</i>]
Flash point	96.7 °C [<i>Test Method: Closed Cup</i>] [<i>Details: Specific method: SETAFLASH ASTM D-3278-96</i>]
Evaporation rate	<i>No data available.</i>
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	13.3 Pa [<i>@ 20 °C</i>] [<i>Details: MITS data</i>]
Vapor Density and/or Relative Vapor Density	<i>No data available.</i>
Density	1.063 g/ml [<i>@ 20 °C</i>]
Relative density	1.063 [<i>Ref Std: WATER=1</i>]
Water solubility	Slight (less than 10%)
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity/Kinematic Viscosity	25,000 - 35,000 mPa-s
Volatile organic compounds (VOC)	0 g/l
Percent volatile	0 % [<i>Test Method: ACS</i>]
VOC less H2O & exempt solvents	0 g/l [<i>Test Method: tested per EPA method 24</i>]
Molecular weight	<i>No data available.</i>

Nanoparticles

This material contains nanoparticles.

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

Strong acids.

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 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

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest. May cause additional health effects (see below).

Skin contact

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching. May cause additional health effects (see below).

Eye contact

Corrosive (eye burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion

Harmful if swallowed.

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Genotoxicity:

Genotoxicity and Mutagenicity: May interact with genetic material and possibly alter gene expression.

Additional information:

Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines.

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 ATE300 - 2,000 mg/kg
Polyfunctional Aziridine	Dermal	Rabbit	LD50 > 3,000 mg/kg
Polyfunctional Aziridine	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.252 mg/l
Polyfunctional Aziridine	Ingestion	Rat	LD50 3,038 mg/kg
Silane, trimethoxyoctyl-, hydrolysis products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silane, trimethoxyoctyl-, hydrolysis products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silane, trimethoxyoctyl-, hydrolysis products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Dichloromethane	Dermal	Rat	LD50 > 2,000 mg/kg
Dichloromethane	Inhalation-Vapor (4 hours)	Rat	LC50 63.7 mg/l
Dichloromethane	Ingestion	Rat	LD50 1,410 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Polyfunctional Aziridine	Rabbit	Mild irritant
Silane, trimethoxyoctyl-, hydrolysis products with silica	Rabbit	No significant irritation
Dichloromethane	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Polyfunctional Aziridine	Rabbit	Corrosive
Silane, trimethoxyoctyl-, hydrolysis products with silica	Rabbit	No significant irritation
Dichloromethane	Rabbit	Severe irritant

Sensitization:

Skin Sensitisation

Name	Species	Value
Polyfunctional Aziridine	Human and animal	Sensitising
Silane, trimethoxyoctyl-, hydrolysis products with silica	Human and animal	Not classified

Respiratory Sensitisation

Name	Species	Value
Polyfunctional Aziridine	Human	Sensitising

Germ Cell Mutagenicity

3M(TM) Scotch-Weld(TM) Structural Plastic Adhesive DP8010 and Structural Plastic Adhesive 8010, Part A

Name	Route	Value
Polyfunctional Aziridine	In vivo	Mutagenic
Silane, trimethoxyoctyl-, hydrolysis products with silica	In Vitro	Not mutagenic
Dichloromethane	In vivo	Not mutagenic
Dichloromethane	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Silane, trimethoxyoctyl-, hydrolysis products with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Dichloromethane	Inhalation	Multiple animal species	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Silane, trimethoxyoctyl-, hydrolysis products with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silane, trimethoxyoctyl-, hydrolysis products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silane, trimethoxyoctyl-, hydrolysis products with silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Dichloromethane	Inhalation	Not classified for female reproduction	Rat	NOAEL 5.2 mg/l	2 generation
Dichloromethane	Inhalation	Not classified for male reproduction	Rat	NOAEL 5.2 mg/l	2 generation
Dichloromethane	Inhalation	Not classified for development	Multiple animal species	NOAEL 4.3 mg/l	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Polyfunctional Aziridine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	4 hours
Dichloromethane	Dermal	blood	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	4 hours
Dichloromethane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	occupational exposure
Dichloromethane	Inhalation	blood	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Dichloromethane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Silane, trimethoxyoctyl-, hydrolysis products with silica	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Dichloromethane	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for	Rat	LOAEL 6.95 mg/l	2 years

			classification			
Dichloromethane	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.17 mg/l	2 years
Dichloromethane	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	LOAEL 35 mg/l	8 weeks
Dichloromethane	Inhalation	heart	Not classified	Human	NOAEL Not available	
Dichloromethane	Inhalation	immune system	Not classified	Rat	NOAEL 18 mg/l	28 days
Dichloromethane	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 1,200 mg/kg/day	3 months
Dichloromethane	Ingestion	blood	Not classified	Rat	NOAEL 249 mg/kg/day	2 years
Dichloromethane	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1,469 mg/kg/day	3 months
Dichloromethane	Ingestion	eyes	Not classified	Rat	NOAEL 249 mg/kg/day	104 weeks

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:

Not acutely toxic to aquatic life by GHS criteria.

Chronic aquatic hazard:

Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Synthetic Rubber Oligomer (NJTS Reg No 04499600-7168)	Trade Secret		Data not available or insufficient for classification			N/A
Polyfunctional Aziridine	64265-57-2		Data not available or insufficient for classification			N/A
Amine Borane Complex	223674-50-8		Data not available or			n/a

			insufficient for classification			
Silane, trimethoxyoctyl-, hydrolysis products with silica	67762-90-7		Data not available or insufficient for classification			N/A
Dichloromethane	75-09-2	Fathead minnow	Experimental	96 hours	LC50	193 mg/l
Dichloromethane	75-09-2	Green Algae	Experimental	72 hours	EC50	242 mg/l
Dichloromethane	75-09-2	Water flea	Experimental	48 hours	LC50	27 mg/l
Dichloromethane	75-09-2	Fathead minnow	Experimental	28 days	NOEC	83 mg/l
Dichloromethane	75-09-2	Green Algae	Experimental	72 hours	EC10	115 mg/l
Dichloromethane	75-09-2	Activated sludge	Experimental	40 minutes	EC50	2,590 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Synthetic Rubber Oligomer (NJTS Reg No 04499600-7168)	Trade Secret	Data not available-insufficient			N/A	
Polyfunctional Aziridine	64265-57-2	Data not available-insufficient			N/A	
Amine Borane Complex	223674-50-8	Data not available-insufficient			N/A	
Silane, trimethoxyoctyl-, hydrolysis products with silica	67762-90-7	Data not available-insufficient			N/A	
Dichloromethane	75-09-2	Experimental Photolysis		Photolytic half-life (in air)	226 days (t 1/2)	
Dichloromethane	75-09-2	Experimental Biodegradation	28 days	BOD	68 % BOD/ThBOD	OECD 301D - Closed bottle test

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Synthetic Rubber Oligomer (NJTS Reg No 04499600-7168)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

Polyfunctional Aziridine	64265-57-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Amine Borane Complex	223674-50-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Silane, trimethoxyoctyl-, hydrolysis products with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Dichloromethane	75-09-2	Experimental BCF-Carp	42 days	Bioaccumulation factor	≤40	OECD305-Bioconcentration
Dichloromethane	75-09-2	Experimental Bioconcentration		Log Kow	1.25	

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

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

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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.

SECTION 14: Transport Information

Not hazardous for transportation.

Air Transport (IATA) Regulations

UN No Not applicable
 Proper Shipping Name Not applicable
 Hazard Class/Division Not applicable
 Subsidiary Risk Not applicable
 Packing Group: Not applicable

Marine Transport (IMDG)

UN No Not applicable
 Proper Shipping Name Not applicable
 Hazard Class/Division Not applicable
 Subsidiary Risk Not applicable

Packing Group: Not applicable

Environmental Hazards: Not applicable

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. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

Applicable Environmental, Health and Safety Regulations

The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989

Hazardous Waste(Management , Handling & Transboundary) Rules, 2008

Hazardous Chemicals (Classification, Packaging and Labelling Draft Rules), 2011

The following ingredients are listed as hazardous on Part II of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules

Dichloromethane

The following ingredients are classified as hazardous based on the criteria listed under Part I of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules:

The product is classified as Non-Hazardous as per MSIHC Rules, 1989.

SECTION 16: Other information

NFPA Hazard Classification

Health: 3 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision information:

No revision information

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

3M India SDSs are available at <http://solutions.3mindia.co.in>