



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

Fastbond 1049 PSA Clear Cylinder

Product Identification Numbers

62-1049-8030-5

7100303522

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

Identified uses

Product

1.3. Details of the supplier of the safety data sheet

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

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

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

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

CLASSIFICATION:

Skin Sensitization, Category 1 - Skin Sens. 1; H317

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

WARNING.

Symbols

GHS07 (Exclamation mark) |

Pictograms



Ingredient	CAS Nbr	EC No.	% by Wt
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	94581-15-4	305-514-1	1 - 5
Adipohydrazide	1071-93-8	213-999-5	< 0.25
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	227-561-6	< 0.1
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	911-418-6	<= 0.002

HAZARD STATEMENTS:

H317 May cause an allergic skin reaction.

PRECAUTIONARY STATEMENTS

Prevention:

P280E Wear protective gloves.

Contains 51% of components with unknown hazards to the aquatic environment.

Information required per Regulation (EU) No 528/2012, as amended for Great Britain on Biocidal Products:

Contains a biocidal product (preservative): C(M)IT/MIT (3:1).

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
Water	(CAS-No.) 7732-18-5 (EC-No.) 231-791-2	40 - 60	Substance not classified as hazardous
2-Propenoic acid, polymer with butyl 2-propenoate, isooctyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate	(CAS-No.) 2230857-46-0	40 - 60	Substance not classified as hazardous
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	(CAS-No.) 94581-15-4 (EC-No.) 305-514-1	1 - 5	Eye Irrit. 2, H319 Skin Sens. 1B, H317
Adipohydrazide	(CAS-No.) 1071-93-8 (EC-No.) 213-999-5	< 0.25	Aquatic Chronic 2, H411 Skin Sens. 1B, H317
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	(CAS-No.) 5888-33-5 (EC-No.) 227-561-6	< 0.1	Skin Sens. 1A, H317 Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1
bronopol (INN)	(CAS-No.) 52-51-7 (EC-No.) 200-143-0	< 0.02	Acute Tox. 3, H301 Acute Tox. 4, H312 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400,M=10 Acute Tox. 3, H331 Aquatic Chronic 1, H410,M=1
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	(CAS-No.) 55965-84-9 (EC-No.) 911-418-6	<= 0.002	EUH071 Acute Tox. 3, H301 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400,M=100 Aquatic Chronic 1, H410,M=100 Nota B Acute Tox. 2, H330 Acute Tox. 2, H310

Any entry in the Identifier(s) column that begins with the numbers 6, 7, 8, or 9 are a Provisional List Number provided by ECHA pending publication of the official EC Inventory Number for the substance.

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

Specific Concentration Limits

Ingredient	Identifier(s)	Specific Concentration Limits
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	(CAS-No.) 55965-84-9 (EC-No.) 911-418-6	(C >= 0.6%) Skin Corr. 1C, H314 (0.06% <= C < 0.6%) Skin Irrit. 2, H315 (C >= 0.6%) Eye Dam. 1, H318 (0.06% <= C < 0.6%) Eye Irrit. 2, H319 (C >= 0.0015%) Skin Sens. 1A, H317

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

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

Eye contact

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

If swallowed

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

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

The most important symptoms and effects based on the GB CLP classification include:
Allergic skin reaction (redness, swelling, blistering, and itching).

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Use a fire fighting agent suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance

Carbon monoxide
Carbon dioxide.
Irritant vapours or gases.
Oxides of nitrogen.

Condition

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

5.3. Advice for fire-fighters

No special protective actions for fire-fighters are anticipated.

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 vapours, in accordance with good industrial hygiene practice. Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For

information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

6.2. Environmental precautions

Avoid release to the environment. 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 detergent and water. 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

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.

7.2. Conditions for safe storage including any incompatibilities

Protect from sunlight. Store in a well-ventilated place. 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

No occupational exposure limit values exist for any of the components listed in Section 3 of this Safety Data Sheet.

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

No engineering controls required.

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 16321

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:

Material	Thickness (mm)	Breakthrough Time
Polymer laminate	No data available	No data available

Applicable Norms/Standards

Use gloves tested to EN 374

If this product is used in a manner that presents a higher potential for exposure (e.g., spraying, high splash potential, etc.), then use of a protective apron may be necessary. See recommended glove material(s) for determining appropriate apron material(s). If a glove material is not available as an apron, polymer laminate is a suitable option.

Respiratory protection

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

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

Half facepiece or full facepiece supplied-air respirator

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

Applicable Norms/Standards

Use a respirator conforming to EN 140 or EN 136

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Colour	White
Odor	Moderate Acrylate
Odour threshold	No data available.
Melting point/freezing point	Not applicable.
Boiling point/boiling range	100 °C
Flammability	Not applicable.
Flammable Limits(LEL)	No data available.
Flammable Limits(UEL)	No data available.
Flash point	No flash point
Autoignition temperature	No data available.
Decomposition temperature	No data available.
pH	8
Kinematic Viscosity	No data available.
Water solubility	Moderate
Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	No data available.

Vapour pressure	No data available.
Density	1 g/ml
Relative density	1 [Ref Std: WATER=1]
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

No data available.

Molecular weight

No data available.

Percent volatile

approximately 100 % weight

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

Not determined

10.6 Hazardous decomposition products

Substance

Condition

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

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

Signs and Symptoms of Exposure

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

Inhalation

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. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

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.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
2-Propenoic acid, polymer with butyl 2-propenoate, isooctyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
2-Propenoic acid, polymer with butyl 2-propenoate, isooctyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate	Ingestion	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	Dermal	Rat	LD50 > 2,000 mg/kg
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	Ingestion	Rat	LD50 > 2,000 mg/kg
Adipohydrazide	Ingestion	Mouse	LD50 > 5,000 mg/kg
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Dermal	Rabbit	LD50 > 5,000 mg/kg
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Ingestion	Rat	LD50 4,350 mg/kg
bronopol (INN)	Dermal	Rat	LD50 > 2,000 mg/kg
bronopol (INN)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.588 mg/l
bronopol (INN)	Ingestion	Rat	LD50 193 mg/kg
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	Dermal	Rabbit	LD50 87 mg/kg
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.171 mg/l
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	Ingestion	Rat	LD50 40 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
2-Propenoic acid, polymer with butyl 2-propenoate, isooctyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate	Professional judgement	No significant irritation
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	Rabbit	No significant irritation
Adipohydrazide	Rabbit	No significant irritation
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Rabbit	Minimal irritation
bronopol (INN)	Rabbit	Corrosive
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and	Rabbit	Corrosive

2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)		
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Serious Eye Damage/Irritation

Name	Species	Value
2-Propenoic acid, polymer with butyl 2-propenoate, isooctyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate	Professional judgement	No significant irritation
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	Rabbit	Moderate irritant
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Rabbit	Mild irritant
bronopol (INN)	Rabbit	Corrosive
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
2-Propenoic acid, polymer with butyl 2-propenoate, isooctyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate	Professional judgement	Not classified
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	Mouse	Sensitising
Adipohydrazide	Guinea pig	Sensitising
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Human and animal	Sensitising
bronopol (INN)	Guinea pig	Not classified
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	Human and animal	Sensitising

Photosensitisation

Name	Species	Value
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	Human and animal	Not sensitising

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
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	In Vitro	Not mutagenic
Adipohydrazide	In vivo	Not mutagenic
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	In Vitro	Not mutagenic
bronopol (INN)	In vivo	Not mutagenic
bronopol (INN)	In Vitro	Some positive data exist, but the data are not sufficient for classification
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	In vivo	Not mutagenic
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
bronopol (INN)	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification

bronopol (INN)	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	Dermal	Mouse	Not carcinogenic
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	Ingestion	Rat	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	42 days
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	31 days
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Ingestion	Not classified for female reproduction	Rat	NOAEL 100 mg/kg/day	premating into lactation
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Ingestion	Not classified for development	Rat	NOAEL 100 mg/kg/day	premating into lactation
bronopol (INN)	Ingestion	Not classified for male reproduction	Rat	NOAEL 150 mg/kg/day	2 generation
bronopol (INN)	Ingestion	Not classified for female reproduction	Rat	NOAEL 50 mg/kg/day	2 generation
bronopol (INN)	Ingestion	Not classified for development	Rabbit	NOAEL 10 mg/kg/day	during gestation
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	Ingestion	Not classified for female reproduction	Rat	NOAEL 10 mg/kg/day	2 generation
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	Ingestion	Not classified for male reproduction	Rat	NOAEL 10 mg/kg/day	2 generation
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	Ingestion	Not classified for development	Rat	NOAEL 15 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
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	
bronopol (INN)	Inhalation	respiratory irritation	May cause respiratory irritation	similar health hazards	NOAEL Not available.	
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	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
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	Ingestion	heart gastrointestinal tract hematopoietic system liver nervous system eyes kidney and/or bladder	Not classified	Rat	NOAEL 1,090 mg/kg/day	90 days
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Ingestion	gastrointestinal tract immune system kidney and/or bladder heart endocrine system hematopoietic system liver nervous system respiratory system	Not classified	Rat	NOAEL 500 mg/kg/day	31 days
bronopol (INN)	Dermal	heart skin endocrine system gastrointestinal tract hematopoietic system liver immune system nervous system eyes kidney and/or bladder	Not classified	Rabbit	NOAEL 5 mg/kg/day	21 days
bronopol (INN)	Ingestion	gastrointestinal tract immune system kidney and/or bladder heart endocrine system hematopoietic system liver nervous system eyes respiratory system	Not classified	Rat	NOAEL 160 mg/kg/day	2 years

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
Resin acids and Rosin acids, fumarated, esters	94581-15-4	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	>100 mg/l

with pentaerythritol						
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	94581-15-4	Zebra Fish	Analogous Compound	96 hours	No tox obs at lmt of water sol	>100 mg/l
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	94581-15-4	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	94581-15-4	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	>100 mg/l
Adipohydrazide	1071-93-8	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Adipohydrazide	1071-93-8	Common Carp	Experimental	96 hours	LC50	>100 mg/l
Adipohydrazide	1071-93-8	Green algae	Experimental	72 hours	ErC50	8.7 mg/l
Adipohydrazide	1071-93-8	Water flea	Experimental	48 hours	EC50	>=106 mg/l
Adipohydrazide	1071-93-8	Green algae	Experimental	72 hours	NOEC	0.22 mg/l
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Green algae	Experimental	72 hours	ErC50	1.98 mg/l
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Zebra Fish	Experimental	96 hours	LC50	0.704 mg/l
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Green algae	Experimental	72 hours	NOEC	0.405 mg/l
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Water flea	Experimental	21 days	NOEC	0.092 mg/l
bronopol (INN)	52-51-7	Bluegill	Experimental	96 hours	LC50	11 mg/l
bronopol (INN)	52-51-7	Diatom	Experimental	72 hours	ErC50	0.178 mg/l
bronopol (INN)	52-51-7	Green algae	Experimental	96 hours	ErC50	0.02 mg/l
bronopol (INN)	52-51-7	Mysid Shrimp	Experimental	96 hours	LC50	4.3 mg/l
bronopol (INN)	52-51-7	Sheepshead Minnow	Experimental	96 hours	LC50	57.6 mg/l
bronopol (INN)	52-51-7	Water flea	Experimental	48 hours	EC50	1.4 mg/l
bronopol (INN)	52-51-7	Diatom	Experimental	72 hours	NOEC	0.052 mg/l
bronopol (INN)	52-51-7	Green algae	Experimental	96 hours	NOEL	0.012 mg/l
bronopol (INN)	52-51-7	Rainbow trout	Experimental	49 days	NOEC	1.94 mg/l
bronopol (INN)	52-51-7	Water flea	Experimental	21 days	NOEC	0.27 mg/l
bronopol (INN)	52-51-7	Activated sludge	Experimental	150 minutes	EC50	43 mg/l
bronopol (INN)	52-51-7	Bobwhite quail	Experimental	5 hours	LD50	4,488 mg/kg (Dry Weight)
bronopol (INN)	52-51-7	Redworm	Experimental	14 days	LC50	>500 mg/kg (Dry Weight)
bronopol (INN)	52-51-7	Redworm	Experimental	56 days	NOEC	62.5 mg/kg (Dry Weight)

bronopol (INN)	52-51-7	Soil microbes	Experimental	28 days	EC50	78.1 mg/kg (Dry Weight)
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	Activated sludge	Experimental	3 hours	NOEC	0.91 mg/l
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	Bacteria	Experimental	16 hours	EC50	5.7 mg/l
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	Copepod	Experimental	48 hours	EC50	0.007 mg/l
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	Diatom	Experimental	72 hours	ErC50	0.0199 mg/l
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	Green algae	Experimental	72 hours	ErC50	0.027 mg/l
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	Rainbow trout	Experimental	96 hours	LC50	0.19 mg/l
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	Sheepshead Minnow	Experimental	96 hours	LC50	0.3 mg/l
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	Water flea	Experimental	48 hours	EC50	0.099 mg/l
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one	55965-84-9	Diatom	Experimental	48 hours	NOEC	0.00049 mg/l

[EC no. 247-500-7] and 2-methyl-2H- isothiazol-3-one [EC no. 220-239-6] (3:1)						
reaction mass of: 5- chloro-2-methyl-4- isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H- isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	Fathead minnow	Experimental	36 days	NOEL	0.02 mg/l
reaction mass of: 5- chloro-2-methyl-4- isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H- isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	Green algae	Experimental	72 hours	NOEC	0.004 mg/l
reaction mass of: 5- chloro-2-methyl-4- isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H- isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	Water flea	Experimental	21 days	NOEC	0.004 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	94581-15-4	Experimental Biodegradation	28 days	CO2 evolution	46 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Adipohydrazide	1071-93-8	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	62.1 %removal of DOC	OECD 301E - Modif. OECD Screen
Adipohydrazide	1071-93-8	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	>1 years (t 1/2)	OECD 111 Hydrolysis func of pH
exo-1,7,7- trimethylbicyclo[2. 2.1]hept-2-yl acrylate	5888-33-5	Experimental Biodegradation	28 days	CO2 evolution	57 %CO2 evolution/THCO2 evolution	OECD 310 CO2 Headspace
bronopol (INN)	52-51-7	Experimental Biodegradation	28 days	CO2 evolution	20 %CO2 evolution/THCO2 evolution (does not pass 10-day window)	OECD 301B - Modified sturm or CO2
bronopol (INN)	52-51-7	Experimental Aquatic Inherent Biodegrad.	45 days	Dissolv. Organic Carbon Deplet	50 %removal of DOC	OECD 302B Zahn- Wellens/EVPA
bronopol (INN)	52-51-7	Experimental Biodegradation	1 hours	Percent degraded	99 %degraded	OECD 314 Simu Biodeg WW
bronopol (INN)	52-51-7	Experimental Photolysis		Photolytic half- life(in water)	24 hours (t 1/2)	
bronopol (INN)	52-51-7	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	2.4 hours (t 1/2)	OECD 111 Hydrolysis func of pH
reaction mass of: 5- chloro-2-methyl-4- isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H- isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	Analogous Compound Biodegradation	29 days	CO2 evolution	62 %CO2 evolution/THCO2 evolution (does not pass 10-day window)	OECD 301B - Modified sturm or CO2

reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	> 60 days (t 1/2)	
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12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	94581-15-4	Experimental Bioconcentration		Log Kow	3.41	EC A.8 Partition Coefficient
Adipohydrazide	1071-93-8	Experimental Bioconcentration		Log Kow	-2.7	OECD 107 log Kow shke flask mtd
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Analogous Compound BCF - Fish	56 hours	Bioaccumulation factor	37	OECD305-Bioconcentration
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Experimental Bioconcentration		Log Kow	4.52	OECD 117 log Kow HPLC method
bronopol (INN)	52-51-7	Experimental Bioconcentration		Log Kow	0.15	OECD 107 log Kow shke flask mtd
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	Analogous Compound BCF - Fish	28 days	Bioaccumulation factor	54	OECD305-Bioconcentration
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	Analogous Compound Bioconcentration		Log Kow	0.4	

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
Resin acids and Rosin acids, fumarated, esters with pentaerythritol	94581-15-4	Estimated Mobility in Soil	Koc	>120 - < 2.3E+05 l/kg	
Adipohydrazide	1071-93-8	Modeled Mobility in Soil	Koc	10 l/kg	Episuite™
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Analogous Compound Mobility in Soil	Koc	5,100 l/kg	OECD 121 Estim. of Koc by HPLC
bronopol (INN)	52-51-7	Experimental Mobility in Soil	Koc	<1416 l/kg	
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6]	55965-84-9	Experimental Mobility in Soil	Koc	10 l/kg	OECD 106 Adsp-Desb Batch Equil

(3:1)					
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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 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.

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 or ID number	UN3500	UN3082	UN3500
14.2 UN proper shipping name	CHEMICAL UNDER PRESSURE, N.O.S.(NITROGEN)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(NITROGEN)	CHEMICAL UNDER PRESSURE, N.O.S.(NITROGEN)
14.3 Transport hazard class(es)	2.2	9	2.2
14.4 Packing group	No data available.	III	III
14.5 Environmental hazards	Not Environmentally Hazardous	Not applicable.	Not a Marine Pollutant

14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Marine Transport in bulk according to IMO instruments	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR Classification Code	8A	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

Restrictions on the manufacture, placing on the market and use:

The following substance(s) contained in this product is/are subject to Annex XVII of regulation (EC) 1907/2006, as amended for GB, with regard to restrictions on the manufacture, placing on the market and use when present in certain dangerous conditions. Users of this product are required to comply with the restrictions placed upon it by the aforementioned provision.

Ingredient

CAS Nbr

reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)

Restriction status: listed in UK REACH Annex XVII

Restricted uses: See Annex XVII to Regulation (EC) No 1907/2006 as amended for Great Britain for Conditions of Restriction

Global inventory status

Contact 3M for more information. 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.

COMAH Regulation, SI 2015/483

Seveso hazard categories, Annex 1, Part 1

None

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**

EUH071	Corrosive to the respiratory tract.
H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

List of Relevant Notas

Nota B	Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid ... %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.
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Revision information:

Section 14 - Not Hazardous for Transportation information was added.

EU Section 14 - Table Data information was added.

EU Section 14 - Table Headers information was added.

GBSDS Section 14 Transport in bulk - Main Heading information was deleted.

GBSDS Section 14 UN Number information was deleted.

Label: Graphic information was modified.

Section 08: Personal Protection - Apron Statement information was added.

Section 8: Personal Protection - Skin/body information information was deleted.

Section 8: Skin protection - protective clothing information information was deleted.

Section 14 Classification Code – Main Heading information was deleted.

Section 14 Classification Code – Regulation Data information was deleted.

Section 14 Control Temperature – Main Heading information was deleted.

Section 14 Control Temperature – Regulation Data information was deleted.

Section 14 Emergency Temperature – Main Heading information was deleted.

Section 14 Emergency Temperature – Regulation Data information was deleted.

Section 14 Hazard Class + Sub Risk – Main Heading information was deleted.

Section 14 Hazard Class + Sub Risk – Regulation Data information was deleted.
Section 14 Other Dangerous Goods – Main Heading information was deleted.
Section 14 Other Dangerous Goods – Regulation Data information was deleted.
Section 14 Packing Group – Main Heading information was deleted.
Section 14 Packing Group – Regulation Data information was deleted.
Section 14 Proper Shipping Name information was deleted.
Section 14 Regulations – Main Headings information was deleted.
Section 14 Segregation – Regulation Data information was deleted.
Section 14 Segregation Code – Main Heading information was deleted.
Section 14 Special Precautions – Main Heading information was deleted.
Section 14 Special Precautions – Regulation Data information was deleted.
Section 14 Transport in bulk – Regulation Data information was deleted.
Section 14 UN Number Column data information was deleted.
Section 15: Seveso Substance Text information was deleted.
Section 16: Two-column table displaying the unique list of Notas for all components of the given material. information was added.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into the European Union, you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration.

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

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