



Safety Data Sheet

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

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

1.1. Product identifier

3M™ Adhesive 847 HS

Product Identification Numbers

FS-9100-1445-5

7000079843

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

Identified uses

Rubber and Gasket Adhesive

1.3. Details of the supplier of the safety data sheet

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

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

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

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

CLASSIFICATION:

Flammable Liquid, Category 2 - Flam. Liq. 2; H225
 Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
 Skin Sensitization, Category 1 - Skin Sens. 1; H317
 Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336
 Hazardous to the Aquatic Environment (Chronic), Category 3 - Aquatic Chronic 3; H412

For full text of H phrases, see Section 16.

2.2. Label elements

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

SIGNAL WORD

DANGER.

Symbols

GHS02 (Flame) |GHS05 (Corrosion) |GHS07 (Exclamation mark) |

Pictograms



Ingredient	CAS Nbr	EC No.	% by Wt
acetone	67-64-1	200-662-2	30 - 60
FUMARATED ROSIN	65997-04-8	266-040-8	< 10

HAZARD STATEMENTS:

H225	Highly flammable liquid and vapour.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261A	Avoid breathing vapours.
P280B	Wear protective gloves and eye/face protection.

Response:

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 CENTRE or doctor/physician.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

SUPPLEMENTAL INFORMATION:

Supplemental Hazard Statements:

EUH066	Repeated exposure may cause skin dryness or cracking.
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Contains 9% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

Contains a substance identified as an endocrine disrupter in the list established in accordance with REACH Article 59(1), as amended by UK REACH Regulations SI 2019/758

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
acetone	(CAS-No.) 67-64-1 (EC-No.) 200-662-2	30 - 60	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
Acrylonitrile - butadiene polymer	(CAS-No.) 9003-18-3	10 - 30	Substance not classified as hazardous
FUMARATED ROSIN	(CAS-No.) 65997-04-8 (EC-No.) 266-040-8	< 10	Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Chronic 4, H413
Resin acids and rosin acids, esters with glycerol	(CAS-No.) 8050-31-5 (EC-No.) 232-482-5	< 10	Substance not classified as hazardous
Phenol-formaldehyde resin	Trade Secret	< 10	Substance not classified as hazardous
salicylic acid	(CAS-No.) 69-72-7 (EC-No.) 200-712-3	< 3	Acute Tox. 4, H302 Eye Dam. 1, H318 Repr. 2, H361d
zinc oxide	(CAS-No.) 1314-13-2 (EC-No.) 215-222-5	< 3	Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1
4-tert-butylphenol	(CAS-No.) 98-54-4 (EC-No.) 202-679-0	< 0.5	Skin Irrit. 2, H315 Eye Dam. 1, H318 Repr. 2, H361f Aquatic Chronic 1, H410,M=1

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

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

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

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

Skin contact

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

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

Allergic skin reaction (redness, swelling, blistering, and itching). Toxic by eye contact. Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness).

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

Not applicable.

SECTION 5: Fire-fighting measures**5.1. Extinguishing media**

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture

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

Hazardous Decomposition or By-Products**Substance**

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

Condition

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

5.3. Advice for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. 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. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. 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. Warning! A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. 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. Cover spill area with a fire-extinguishing foam. 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 using non-sparking tools. Place in a metal 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.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. 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. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (eg. gloves, respirators...) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapour accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities

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

7.3. Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

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

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
DUST, INERT OR NUISANCE	1314-13-2	UK HSC	TWA(as respirable dust):4 mg/m ³ ;TWA(as inhalable dust):10 mg/m ³	
acetone	67-64-1	UK HSC	TWA:1210 mg/m ³ (500 ppm);STEL:3620 mg/m ³ (1500 ppm)	

UK HSC : UK Health and Safety Commission

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

Biological limit values

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

8.2. Exposure controls**8.2.1. Engineering controls**

Use explosion-proof ventilation equipment. 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:

Full face shield.

Indirect vented goggles.

Applicable Norms/Standards

Use eye/face protection conforming to EN 166

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. 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 (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

Organic vapour respirators may have short service life.

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

Applicable Norms/Standards

Use a respirator conforming to EN 140 or EN 136: filter types A & P

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Brown syrup
Colour	Brown
Odor	acetone
Odour threshold	<i>No data available.</i>
Melting point/freezing point	<i>No data available.</i>
Boiling point/boiling range	55.8 - 56.5 °C [<i>Details: Acetone Boiling point</i>]
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	2.1 % volume [<i>Details: Based on acetone</i>]
Flammable Limits(UEL)	13 % volume [<i>Details: Based on acetone</i>]
Flash point	-17 °C [<i>Test Method: Closed Cup</i>]
Autoignition temperature	540 °C [<i>Details: Based on acetone</i>]
Decomposition temperature	<i>No data available.</i>
pH	<i>substance/mixture is non-soluble (in water)</i>
Kinematic Viscosity	7,000 mm ² /sec
Water solubility	Slight (less than 10%)
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Vapour pressure	24.7 kPa [<i>@ 20 °C</i>] [<i>Details: Based on acetone</i>]
Density	<i>No data available.</i>
Relative density	0.89 - 0.95 [<i>Ref Std: WATER=1</i>]
Relative Vapour Density	[<i>Ref Std: AIR=1</i>] <i>No data available.</i>

9.2. Other information**9.2.2 Other safety characteristics**

EU Volatile Organic Compounds	<i>No data available.</i>
Evaporation rate	<i>No data available.</i>
Molecular weight	<i>No data available.</i>

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.
Sparks and/or flames.

10.5 Incompatible materials

Strong oxidising agents.

10.6 Hazardous decomposition products

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

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

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

Signs and Symptoms of Exposure

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

Inhalation

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

Skin contact

Prolonged or repeated exposure may cause: Dermal Defatting: Signs/symptoms may include localized redness, itching, drying and cracking of skin. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

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

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

Additional Health Effects:

Single exposure may cause target organ effects:

Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Reproductive/Developmental Toxicity:

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

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
acetone	Dermal	Rabbit	LD50 > 15,688 mg/kg
acetone	Inhalation-Vapour (4 hours)	Rat	LC50 76 mg/l
acetone	Ingestion	Rat	LD50 5,800 mg/kg
Acrylonitrile - butadiene polymer	Dermal	Rabbit	LD50 > 15,000 mg/kg
Acrylonitrile - butadiene polymer	Ingestion	Rat	LD50 > 30,000 mg/kg
Resin acids and rosin acids, esters with glycerol	Dermal	Rabbit	LD50 > 5,000 mg/kg
FUMARATED ROSIN	Dermal	Rat	LD50 > 2,000 mg/kg

FUMARATED ROSIN	Ingestion	Rat	LD50 > 2,000 mg/kg
Resin acids and rosin acids, esters with glycerol	Ingestion	Rat	LD50 > 2,000 mg/kg
Phenol-formaldehyde resin	Dermal		LD50 estimated to be > 5,000 mg/kg
Phenol-formaldehyde resin	Ingestion	Rat	LD50 5,660 mg/kg
salicylic acid	Dermal	Rat	LD50 > 2,000 mg/kg
salicylic acid	Ingestion	Rat	LD50 891 mg/kg
zinc oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
zinc oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.7 mg/l
zinc oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
4-tert-butylphenol	Dermal	Rabbit	LD50 2,318 mg/kg
4-tert-butylphenol	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.6 mg/l
4-tert-butylphenol	Ingestion	Rat	LD50 4,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
acetone	Mouse	Minimal irritation
Acrylonitrile - butadiene polymer	Professional judgement	No significant irritation
FUMARATED ROSIN	Rabbit	No significant irritation
Resin acids and rosin acids, esters with glycerol	Rabbit	Minimal irritation
salicylic acid	Rabbit	No significant irritation
zinc oxide	Human and animal	No significant irritation
4-tert-butylphenol	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
acetone	Rabbit	Severe irritant
Acrylonitrile - butadiene polymer	Professional judgement	No significant irritation
FUMARATED ROSIN	Rabbit	Corrosive
Resin acids and rosin acids, esters with glycerol	Rabbit	Mild irritant
salicylic acid	Rabbit	Corrosive
zinc oxide	Rabbit	Mild irritant
4-tert-butylphenol	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
FUMARATED ROSIN	Mouse	Sensitising
Resin acids and rosin acids, esters with glycerol	Guinea pig	Not classified
Phenol-formaldehyde resin	Human	Some positive data exist, but the data are not sufficient for classification
salicylic acid	Mouse	Not classified
zinc oxide	Guinea pig	Not classified
4-tert-butylphenol	Human and animal	Not classified

Photosensitisation

Name	Species	Value
salicylic acid	Mouse	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
acetone	In vivo	Not mutagenic
acetone	In Vitro	Some positive data exist, but the data are not sufficient for classification
FUMARATED ROSIN	In Vitro	Not mutagenic
Resin acids and rosin acids, esters with glycerol	In Vitro	Not mutagenic
salicylic acid	In Vitro	Not mutagenic
salicylic acid	In vivo	Not mutagenic
zinc oxide	In Vitro	Some positive data exist, but the data are not sufficient for classification
zinc oxide	In vivo	Some positive data exist, but the data are not sufficient for classification
4-tert-butylphenol	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
acetone	Not specified.	Multiple animal species	Not carcinogenic
4-tert-butylphenol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification

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

Name	Route	Value	Species	Test result	Exposure Duration
acetone	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,700 mg/kg/day	13 weeks
acetone	Inhalation	Not classified for development	Rat	NOAEL 5.2 mg/l	during organogenesis
FUMARATED ROSIN	Ingestion	Not classified for female reproduction	Rat	NOAEL 450 mg/kg/day	premating into lactation
FUMARATED ROSIN	Ingestion	Not classified for male reproduction	Rat	NOAEL 650 mg/kg/day	28 days
FUMARATED ROSIN	Ingestion	Not classified for development	Rat	NOAEL 370 mg/kg/day	during gestation
salicylic acid	Ingestion	Toxic to development	Rat	NOAEL 75 mg/kg/day	during organogenesis
zinc oxide	Ingestion	Not classified for reproduction and/or development	Multiple animal species	NOAEL 125 mg/kg/day	premating & during gestation
4-tert-butylphenol	Ingestion	Not classified for male reproduction	Rat	NOAEL 600 mg/kg/day	2 generation
4-tert-butylphenol	Ingestion	Not classified for development	Rat	NOAEL 70 mg/kg/day	2 generation
4-tert-butylphenol	Ingestion	Toxic to female reproduction	Rat	NOAEL 200 mg/kg/day	2 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
acetone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
acetone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 hours
acetone	Inhalation	liver	Not classified	Guinea pig	NOAEL Not available	
acetone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
FUMARATED ROSIN	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available.	
4-tert-butylphenol	Inhalation	respiratory irritation	May cause respiratory irritation	Rat	LOAEL 5.6 mg/l	4 hours

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
acetone	Dermal	eyes	Not classified	Guinea pig	NOAEL Not available	3 weeks
acetone	Inhalation	hematopoietic system	Not classified	Human	NOAEL 3 mg/l	6 weeks
acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 days
acetone	Inhalation	kidney and/or bladder	Not classified	Guinea pig	NOAEL 119 mg/l	not available
acetone	Inhalation	heart liver	Not classified	Rat	NOAEL 45 mg/l	8 weeks
acetone	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 900 mg/kg/day	13 weeks
acetone	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
acetone	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 200 mg/kg/day	13 weeks
acetone	Ingestion	liver	Not classified	Mouse	NOAEL 3,896 mg/kg/day	14 days
acetone	Ingestion	eyes	Not classified	Rat	NOAEL 3,400 mg/kg/day	13 weeks
acetone	Ingestion	respiratory system	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
acetone	Ingestion	muscles	Not classified	Rat	NOAEL 2,500 mg/kg	13 weeks
acetone	Ingestion	skin bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 11,298 mg/kg/day	13 weeks
FUMARATED ROSIN	Ingestion	endocrine system immune system	Not classified	Rat	NOAEL 450 mg/kg/day	53 days
FUMARATED ROSIN	Ingestion	nervous system eyes	Not classified	Rat	NOAEL 705 mg/kg/day	90 days
FUMARATED ROSIN	Ingestion	gastrointestinal tract hematopoietic system kidney and/or bladder respiratory system	Not classified	Rat	NOAEL 450 mg/kg/day	53 days
Resin acids and rosin acids, esters with glycerol	Ingestion	liver heart skin endocrine system	Not classified	Rat	NOAEL 5,000	90 days

		bone, teeth, nails, and/or hair blood bone marrow hematopoietic system immune system muscles nervous system eyes kidney and/or bladder respiratory system			mg/kg/day	
salicylic acid	Ingestion	liver	Not classified	Rat	NOAEL 500 mg/kg/day	3 days
zinc oxide	Ingestion	nervous system	Not classified	Rat	NOAEL 600 mg/kg/day	10 days
zinc oxide	Ingestion	endocrine system hematopoietic system kidney and/or bladder	Not classified	Other	NOAEL 500 mg/kg/day	6 months
4-tert-butylphenol	Ingestion	endocrine system liver kidney and/or bladder	Not classified	Rat	NOAEL 600 mg/kg/day	2 generation
4-tert-butylphenol	Ingestion	blood	Not classified	Rat	NOAEL 200 mg/kg	6 weeks

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
acetone	67-64-1	Algae or other aquatic plants	Experimental	96 hours	EC50	11,493 mg/l
acetone	67-64-1	Invertebrate	Experimental	24 hours	LC50	2,100 mg/l
acetone	67-64-1	Rainbow trout	Experimental	96 hours	LC50	5,540 mg/l
acetone	67-64-1	Water flea	Experimental	21 days	NOEC	1,000 mg/l
acetone	67-64-1	Bacteria	Experimental	16 hours	NOEC	1,700 mg/l
acetone	67-64-1	Redworm	Experimental	48 hours	LC50	>100
Acrylonitrile - butadiene polymer	9003-18-3	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
FUMARATED ROSIN	65997-04-8	Fathead minnow	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l

FUMARATED ROSIN	65997-04-8	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
FUMARATED ROSIN	65997-04-8	Water flea	Experimental	48 hours	EL50	>100 mg/l
FUMARATED ROSIN	65997-04-8	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	100 mg/l
FUMARATED ROSIN	65997-04-8	Activated sludge	Analogous Compound	3 hours	EC50	>1,000 mg/l
Resin acids and rosin acids, esters with glycerol	8050-31-5	Green algae	Estimated	72 hours	No tox obs at lmt of water sol	>100 mg/l
Resin acids and rosin acids, esters with glycerol	8050-31-5	Rainbow trout	Estimated	96 hours	No tox obs at lmt of water sol	>100 mg/l
Resin acids and rosin acids, esters with glycerol	8050-31-5	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Resin acids and rosin acids, esters with glycerol	8050-31-5	Green algae	Estimated	72 hours	No tox obs at lmt of water sol	>100 mg/l
Phenol-formaldehyde resin	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
salicylic acid	69-72-7	Green algae	Experimental	72 hours	EC50	>100 mg/l
salicylic acid	69-72-7	Medaka	Experimental	96 hours	LC50	>100 mg/l
salicylic acid	69-72-7	Water flea	Experimental	48 hours	EC50	870 mg/l
salicylic acid	69-72-7	Water flea	Experimental	21 days	NOEC	10 mg/l
salicylic acid	69-72-7	Activated sludge	Experimental	3 hours	EC50	>3,200
salicylic acid	69-72-7	Bacteria	Experimental	18 hours	EC10	465
zinc oxide	1314-13-2	Activated sludge	Estimated	3 hours	EC50	6.5 mg/l
zinc oxide	1314-13-2	Green algae	Estimated	72 hours	EC50	0.052 mg/l
zinc oxide	1314-13-2	Rainbow trout	Estimated	96 hours	LC50	0.21 mg/l
zinc oxide	1314-13-2	Water flea	Estimated	48 hours	EC50	0.07 mg/l
zinc oxide	1314-13-2	Green algae	Estimated	72 hours	NOEC	0.006 mg/l
zinc oxide	1314-13-2	Water flea	Estimated	7 days	NOEC	0.02 mg/l
4-tert-butylphenol	98-54-4	Ciliated protozoa	Experimental	60 hours	IC50	18.4 mg/l
4-tert-butylphenol	98-54-4	Green algae	Experimental	72 hours	ErC50	14 mg/l
4-tert-butylphenol	98-54-4	Invertebrate	Experimental	96 hours	LC50	1.9 mg/l
4-tert-butylphenol	98-54-4	Medaka	Experimental	96 hours	LC50	5.1 mg/l
4-tert-butylphenol	98-54-4	Water flea	Experimental	48 hours	EC50	3.9 mg/l
4-tert-butylphenol	98-54-4	Fathead minnow	Experimental	128 days	NOEC	0.01 mg/l
4-tert-butylphenol	98-54-4	Green algae	Experimental	72 hours	NOEC	0.32 mg/l
4-tert-butylphenol	98-54-4	Water flea	Experimental	21 days	NOEC	0.73 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
acetone	67-64-1	Experimental Biodegradation	28 days	BOD	78 %BOD/ThOD	OECD 301D - Closed bottle test
acetone	67-64-1	Experimental Photolysis		Photolytic half-life (in air)	147 days (t 1/2)	
Acrylonitrile - butadiene polymer	9003-18-3	Data not availbl-insufficient	N/A	N/A	N/A	N/A
FUMARATED ROSIN	65997-04-8	Experimental Biodegradation	28 days	BOD	15 %BOD/ThOD	OECD 301D - Closed bottle test
Resin acids and rosin acids, esters with glycerol	8050-31-5	Experimental Biodegradation	28 days	CO2 evolution	0 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Phenol-formaldehyde resin	Trade Secret	Experimental Biodegradation	28 days	CO2 evolution	0 %CO2 evolution/THCO2 evolution	
salicylic acid	69-72-7	Experimental Biodegradation	14 days	BOD	88.1 %BOD/ThOD	OECD 301C - MITI test (I)
zinc oxide	1314-13-2	Data not availbl-insufficient	N/A	N/A	N/A	N/A
4-tert-butylphenol	98-54-4	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	98 %removal of DOC	EC C.4.A. DOC Die-Away Test

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
acetone	67-64-1	Experimental BCF - Other		Bioaccumulation factor	0.65	
acetone	67-64-1	Experimental Bioconcentration		Log Kow	-0.24	
Acrylonitrile - butadiene polymer	9003-18-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
FUMARATED ROSIN	65997-04-8	Experimental Bioconcentration		Log Kow	≥4.4	OECD 117 log Kow HPLC method
Resin acids and rosin acids, esters with glycerol	8050-31-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Phenol-formaldehyde resin	Trade Secret	Estimated Bioconcentration		Bioaccumulation factor	7.4	
salicylic acid	69-72-7	Experimental Bioconcentration		Log Kow	2.26	
zinc oxide	1314-13-2	Experimental BCF - Fish	56 days	Bioaccumulation factor	≤217	OECD305-Bioconcentration
4-tert-butylphenol	98-54-4	Experimental BCF - Fish	56 days	Bioaccumulation factor	88	OECD305-Bioconcentration
4-tert-butylphenol	98-54-4	Experimental Bioconcentration		Log Kow	3	OECD 117 log Kow HPLC method

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
acetone	67-64-1	Modeled Mobility in Soil	Koc	9.7 l/kg	Episuite™
Resin acids and rosin acids, esters with glycerol	8050-31-5	Estimated Mobility in Soil	Koc	>1000 l/kg	Episuite™
salicylic acid	69-72-7	Modeled Mobility in Soil	Koc	<1 l/kg	Episuite™
4-tert-butylphenol	98-54-4	Modeled Mobility in Soil	Koc	840 l/kg	Episuite™

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

Ingredient	CAS Nbr	Environmental endocrine disruptor information
4-tert-butylphenol	98-54-4	This chemical has been determined to cause long-term effects in fish, including feminization of gonadal ducts in male fish and elevated levels of vitellogenin in female fish.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

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

Incinerate in a permitted waste incineration facility. As a disposal alternative, utilize an acceptable permitted waste disposal facility. 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	UN1133	UN1133	UN1133
14.2 UN proper shipping name	ADHESIVES	ADHESIVES	ADHESIVES
14.3 Transport hazard class(es)	3	3	3
14.4 Packing group	II	II	II
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 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code	No data available.	No data available.	No data available.

Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR Classification Code	F1	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

Authorisation status under UK REACH:

The following substance/s contained in this product might be or is/are subject to authorisation in accordance with UK REACH:

<u>Ingredient</u>	<u>CAS Nbr</u>
4-tert-butylphenol	98-54-4

Authorisation status: listed in the UK REACH Candidate List of Substances of Very High Concern for Authorisation

Regulation UK regulation 2023/63 (marketing and use of explosive precursors and poisons)

This product contains a reportable substance according to UK legislation 1972/66: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point. Please see UK Regulation 2023/63 for further details.

Global inventory status

Contact 3M for more information.

COMAH Regulation, SI 2015/483

Seveso hazard categories, Annex 1, Part 1

Hazard Categories	Qualifying quantity (tonnes) for the application of	
	Lower-tier requirements	Upper-tier requirements
P5c FLAMMABLE LIQUIDS*	5000	50000

*If maintained at a temperature above its boiling point or if particular processing conditions, such as high pressure or high temperature, may create major-accident hazards, P5a or P5b FLAMMABLE LIQUIDS may apply
Seveso named dangerous substances, Annex 1, Part 2

Dangerous Substances	Identifier(s)	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
acetone	67-64-1	10	50
4-tert-butylphenol	98-54-4	100	200

zinc oxide	1314-13-2	100	200
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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**

EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H361f	Suspected of damaging fertility.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Revision information:

Formulation: Section 16: Annex information was deleted.
 GB Section 02: CLP Ingredient table information was added.
 GB Section 02: Other hazards phrase information was added.
 GB Section 04: First Aid - Symptoms and Effects (GB CLP) information was added.
 GB Section 04: Information on toxicological effects information was added.
 GB Section 12: Classification Warning information was added.
 GB Section 15: Authorisation status under REACH: SVHC Authorisation ingredient information information was added.
 GB Section 15: Chemical Safety Assessment information was added.
 GBSDS Section 14 Transport in bulk - Main Heading information was added.
 GBSDS Section 14 UN Number information was added.
 Industrial Use of Adhesives: Section 16: Annex information was deleted.
 Professional Use of Adhesives and Sealants: Section 16: Annex information was deleted.
 Professional Use of Adhesives: Section 16: Annex information was deleted.
 CLP: Ingredient table information was deleted.
 Label: CLP Classification information was modified.
 Label: CLP Percent Unknown information was deleted.
 Label: CLP Precautionary - Prevention information was modified.
 Label: CLP Precautionary - Response information was modified.
 Section 02: Label Elements: GB Percent Unknown information was added.
 Label: Graphic information was modified.
 Section 2: Other hazards phrase information was deleted.
 Section 3: Composition/ Information of ingredients table information was added.
 Section 3: Composition/ Information of ingredients table information was deleted.
 Section 4: First Aid - notes to physician (REACH/GHS) information was modified.
 Section 04: First Aid - Symptoms and Effects (CLP) information was deleted.
 Section 4: First aid for eye contact information information was modified.

Section 04: Information on toxicological effects information was deleted.
Section 7: Precautions safe handling information information was modified.
Section 8: 8.2. Exposure controls information information was deleted.
Section 8: 8.2.3. Environmental exposure controls information information was deleted.
Section 8: Appropriate Engineering controls information information was modified.
Section 8: DNEL table row information was deleted.
Section 8: Eye/face protection information information was modified.
Section 8: glove data value information was modified.
Section 8: Personal Protection - Skin/body information information was added.
Section 8: PNEC table row information was deleted.
Section 8: Respiratory protection - recommended respirators information information was modified.
Section 8: Skin protection - protective clothing information information was added.
Section 10.1: Reactivity information information was modified.
Section 11: Acute Toxicity table information was modified.
Section 11: Classification disclaimer information was deleted.
Section 11: GB Classification disclaimer information was added.
Section 11: GB No endocrine disruptor information available warning information was added.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Eye information information was modified.
Section 11: Health Effects - Skin information information was modified.
Section 11: No endocrine disruptor information available warning information was deleted.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 11: Target Organs - Single Table information was modified.
Section 12: 12.6. Endocrine Disrupting Properties information was deleted.
Section 12: 12.6. Other adverse effects information was added.
Section 12: 12.7. Other adverse effects information was deleted.
Section 12: Classification Warning information was deleted.
Section 12: Component ecotoxicity information information was modified.
Prints No Data if Adverse effects information is not present information was deleted.
Section 12: Persistence and Degradability information information was modified.
Section 12: Bioaccumulative potential information information was modified.
Section 14 Marine transport in bulk according to IMO instruments – Main Heading information was deleted.
Section 14 UN Number information was deleted.
Section 15: Authorization status under REACH: SVHC Authorization ingredient information information was deleted.
Section 15: Chemical Safety Assessment information was deleted.
Section 15: Seveso Hazard Category Text information was added.
Section 15: Seveso Hazard Category Text information was deleted.
Section 15: Seveso Substance Text information was added.
Section 15: Seveso Substance Text information was deleted.
Annex: Prediction of exposure statement information was deleted.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material.
information was added.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material.
information was deleted.
Section 16: Web address information was added.
Section 16: Web address information was deleted.

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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.