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™ Thermal Bonding Film 583

Product Identification Numbers
70-0025-1124-7 70-0060-4363-5

7000047511 7000048454

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

Identified uses
Bonding

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.
The chronic aquatic environmental toxicity classification is not applied based on the physical form (adhesive film in rolls) and a calculation-based risk assessment for a similar product.

CLASSIFICATION:
Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
Reproductive Toxicity, Category 2 - Repr. 2; H361d
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
GHS05 (Corrosion) |GHS08 (Health Hazard) |

Pictograms

Ingredient	CAS Nbr	EC No.	% by Wt
salicylic acid	69-72-7	200-712-3	1 - 5

HAZARD STATEMENTS:

H318	Causes serious eye damage.
H361d	Suspected of damaging the unborn child.
H412	Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

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.

Contains 32% 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
Acrylonitrile - butadiene polymer	(CAS-No.) 9003-18-3	40 - 50	Substance not classified as hazardous
Formaldehyde, polymer with 4-(1,1-dimethylethyl) phenol	(CAS-No.) 25085-50-1	20 - 25	Substance not classified as hazardous
tackifier	Trade Secret	1 - 15	Substance not classified as hazardous
Resin acids and rosin acids, esters with glycerol	(CAS-No.) 8050-31-5 (EC-No.) 232-482-5	1 - 15	Substance not classified as hazardous
salicylic acid	(CAS-No.) 69-72-7 (EC-No.) 200-712-3	1 - 5	Acute Tox. 4, H302 Eye Dam. 1, H318 Repr. 2, H361d
zinc oxide	(CAS-No.) 1314-13-2 (EC-No.) 215-222-5	1 - 5	Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	(CAS-No.) 68411-46-1 (EC-No.) 270-128-1	< 3	Repr. 2, H361f Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1
Additive	Trade Secret	<= 1	Substance not classified as hazardous
4-tert-butylphenol	(CAS-No.) 98-54-4 (EC-No.) 202-679-0	<= 1	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
Wash with soap and water. If you are concerned, get medical advice.

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:

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. 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	Condition
Hydrocarbons.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Oxides of nitrogen.	During combustion.
Oxides of zinc.	During combustion.

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

SECTION 6: Accidental release measures

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

6.2. Environmental precautions
Avoid release to the environment.

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

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling
For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. 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. Avoid release to the environment. Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat.

7.3. Specific end use(s)
See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
DUST, INERT OR NUISANCE	1314-13-2	UK HSC	TWA(as respirable dust):4 mg/m3;TWA(as inhalable dust):10 mg/m3	

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

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

8.2. Exposure controls

8.2.1. Engineering controls
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

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
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: filter types A & P

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Film
Colour	Colourless
Odor	Slight Phenolic
Odour threshold	*Not applicable.*
Melting point/freezing point	*No data available.*
Boiling point/boiling range	*Not applicable.*
Flammability	Not applicable.
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Flash point	>=93.3 ºC [*Test Method:*Closed Cup]
Autoignition temperature	*No data available.*
Decomposition temperature	*Not applicable.*
pH	*substance/mixture is non-soluble (in water)*
Kinematic Viscosity	*Not applicable.*
Water solubility	Nil
Solubility- non-water	*Not applicable.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	*Not applicable.*
Density	*No data available.*
Relative density	1.06 [*Ref Std:*WATER=1]
Relative Vapour Density	*Not applicable.*
Particle Characteristics	*Not applicable.*

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	*No data available.*
Evaporation rate	*Not applicable.*
Percent volatile	*Not applicable.*

SECTION 10: Stability and reactivity

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

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
Heat.

10.5 Incompatible materials
None known.

10.6 Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

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) in sensitive people: 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
Physical Blockage: Signs/symptoms may include cramping, abdominal pain, and constipation. 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.

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 >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Acrylonitrile - butadiene polymer	Dermal	Rabbit	LD50 > 15,000 mg/kg
Acrylonitrile - butadiene polymer	Ingestion	Rat	LD50 > 30,000 mg/kg
Formaldehyde, polymer with 4-(1,1-dimethylethyl) phenol	Dermal		LD50 estimated to be > 5,000 mg/kg
Formaldehyde, polymer with 4-(1,1-dimethylethyl) phenol	Ingestion	Rat	LD50 5,660 mg/kg
tackifier	Ingestion	Mouse	LD50 > 2,000 mg/kg
Resin acids and rosin acids, esters with glycerol	Dermal	Rabbit	LD50 > 5,000 mg/kg
Resin acids and rosin acids, esters with glycerol	Ingestion	Rat	LD50 > 2,000 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
salicylic acid	Dermal	Rat	LD50 > 2,000 mg/kg
salicylic acid	Ingestion	Rat	LD50 891 mg/kg
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Dermal	Rat	LD50 > 2,000 mg/kg
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	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
Acrylonitrile - butadiene polymer	Professional judgement	No significant irritation
Resin acids and rosin acids, esters with glycerol	Rabbit	Minimal irritation
zinc oxide	Human and animal	No significant irritation
salicylic acid	Rabbit	No significant irritation
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Rabbit	Mild irritant
4-tert-butylphenol	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Acrylonitrile - butadiene polymer	Professional judgement	No significant irritation
Resin acids and rosin acids, esters with glycerol	Rabbit	Mild irritant
zinc oxide	Rabbit	Mild irritant
salicylic acid	Rabbit	Corrosive
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Rabbit	Mild irritant
4-tert-butylphenol	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
Formaldehyde, polymer with 4-(1,1-dimethylethyl) phenol	Human	Some positive data exist, but the data are not

		sufficient for classification
Resin acids and rosin acids, esters with glycerol	Guinea pig	Not classified
zinc oxide	Guinea pig	Not classified
salicylic acid	Mouse	Not classified
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	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
Resin acids and rosin acids, esters with glycerol	In Vitro	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
salicylic acid	In Vitro	Not mutagenic
salicylic acid	In vivo	Not mutagenic
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	In Vitro	Not mutagenic
4-tert-butylphenol	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
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
zinc oxide	Ingestion	Not classified for reproduction and/or development	Multiple animal species	NOAEL 125 mg/kg/day	premating & during gestation
salicylic acid	Ingestion	Toxic to development	Rat	NOAEL 75 mg/kg/day	during organogenesis
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Ingestion	Not classified for male reproduction	Rat	NOAEL 54 mg/kg/day	2 generation
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Ingestion	Not classified for development	Rat	NOAEL 18 mg/kg/day	2 generation
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Ingestion	Toxic to female reproduction	Rat	NOAEL 54 mg/kg/day	2 generation
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
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	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
Resin acids and rosin acids, esters with glycerol	Ingestion	liver | heart | skin | endocrine system | bone, teeth, nails, and/or hair | blood | bone marrow | hematopoietic system | immune system | muscles | nervous system | eyes | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 5,000 mg/kg/day	90 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
salicylic acid	Ingestion	liver	Not classified	Rat	NOAEL 500 mg/kg/day	3 days
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 54 mg/kg/day	98 days
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Ingestion	endocrine system | liver | kidney and/or bladder | heart | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles | eyes | respiratory system	Not classified	Rat	NOAEL 225 mg/kg/day	28 days
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
Acrylonitrile - butadiene polymer	9003-18-3	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Formaldehyde, polymer with 4-(1,1-dimethylethyl) phenol	25085-50-1	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
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
tackifier	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
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	Water flea	Experimental	24 hours	EC50	0.82 mg/l
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	Zebra Fish	Experimental	96 hours	LC50	>47.05 mg/l

Additive	Trade Secret	Fathead minnow	Experimental	96 hours	LC50	>100 mg/l
Additive	Trade Secret	Water flea	Experimental	48 hours	EC50	>100 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
Acrylonitrile - butadiene polymer	9003-18-3	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Formaldehyde, polymer with 4-(1,1-dimethylethyl) phenol	25085-50-1	Experimental Biodegradation	28 days	CO2 evolution	0 %CO2 evolution/THCO2 evolution	
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
tackifier	Trade Secret	Estimated Biodegradation	28 days	CO2 evolution	24 %CO2 evolution/THCO2 evolution	Catalogic™
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
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	Experimental Biodegradation	28 days	CO2 evolution	<=1 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Additive	Trade Secret	Experimental Biodegradation	28 days	BOD	84 %BOD/ThOD	OECD 301F - Manometric respirometry
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
Acrylonitrile - butadiene polymer	9003-18-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Formaldehyde, polymer with 4-(1,1-dimethylethyl) phenol	25085-50-1	Estimated Bioconcentration		Bioaccumulation factor	7.4	
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
tackifier	Trade Secret	Estimated BCF - Other		Bioaccumulation factor	7.9	Catalogic™

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
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	Analogous Compound BCF - Fish	42 days	Bioaccumulation factor	1730	
Additive	Trade Secret	Experimental Bioconcentration		Log Kow	7.4	
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
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.

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
120120* Spent grinding bodies and grinding materials containing dangerous substances

SECTION 14: Transportation information

Not hazardous for transportation.

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number	No data available.	No data available.	No data available.
14.2 UN proper shipping name	No data available.	No data available.	No data available.
14.3 Transport hazard class(es)	No data available.	No data available.	No data available.
14.4 Packing group	No data available.	No data available.	No data available.
14.5 Environmental hazards	No data available.	No data available.	No data available.
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	No data available.	No data available.	No data available.
IMDG Segregation Code	No data available.	No data available.	No data available.

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:

Ingredient **CAS Nbr**

4-tert-butylphenol 98-54-4

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

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

Dangerous Substances	Identifier(s)	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
4-tert-butylphenol	98-54-4	100	200
zinc oxide	1314-13-2	100	200

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

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
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.

Revision information:
Section 8: Respiratory protection - recommended respirators information information was modified.

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

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

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