



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

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

1.1. Product identifier

3M Scotch-Seal™ Metal Sealant 2084 Silver

Product Identification Numbers

62-2084-2631-2 62-2084-8530-0

7000046343 7000046344

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

Identified uses

Metal sealant.

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

CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:

Flammable Liquid, Category 2 - Flam. Liq. 2; H225
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
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

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER.

Symbols:

GHS02 (Flame) | GHS07 (Exclamation mark) |

Pictograms



Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
Acetone	67-64-1	200-662-2	40 - 70

HAZARD STATEMENTS:

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P210A Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261A Avoid breathing vapours.

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.
P370 + P378G In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Disposal:

P501 Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

SUPPLEMENTAL INFORMATION:

Supplemental Hazard Statements:

EUH066 Repeated exposure may cause skin dryness or cracking.

Contains 6% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EC No.	REACH Registration No.	% by Wt	Classification
Acetone	67-64-1	200-662-2	01-2119471330-49	40 - 70	Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336; EUH066
Acrylonitrile - butadiene polymer	9003-18-3			10 - 30	Substance not classified as hazardous
Phenolic Resin	Trade Secret			5 - 10	Substance not classified as hazardous
Kaolin	1332-58-7	310-194-1		5 - 10	Substance with a Community level exposure limit in the workplace
Resin acids and rosin acids, esters with glycerol	8050-31-5	232-482-5		3 - 7	Substance not classified as hazardous
Salicylic acid	69-72-7	200-712-3		< 2	Acute Tox. 4, H302; Eye Dam. 1, H318; Repr. 2, H361d
Zinc oxide	1314-13-2	215-222-5		1 - 2	Aquatic Acute 1, H400,M=1; Aquatic Chronic 1, H410,M=1
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5			0.5 - 1.5	Substance with a Community level exposure limit in the workplace
Aluminium	7429-90-5	231-072-3	01-2119529243-45	0.5 - 1.5	Flam. Sol. 1, H228; Water-react. 2, H261 - Nota T
6,6'-Di-tert-butyl-2,2'-methylene-di-p-cresol	119-47-1	204-327-1		0.1 - 1	Repr. 2, H361f; Aquatic Chronic 2, H411

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. Remove contact lenses if easy to do. Continue rinsing. 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

See Section 11.1 Information on toxicological effects

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. 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

<u>Substance</u>	<u>Condition</u>
Carbon monoxide.	During combustion.
Carbon dioxide.	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. Eliminate all ignition sources if safe to do so. 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 designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR-AFFF type foam is recommended. 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. Avoid release to the environment. 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. Protect from sunlight. 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
Silicon dioxide	112945-52-5	UK HSC	TWA(as inhalable dust):6 mg/m ³ ;TWA(as respirable dust):2.4 mg/m ³	
Kaolin	1332-58-7	UK HSC	TWA (as respirable dust): 2 mg/m ³	
Acetone	67-64-1	UK HSC	TWA:1210 mg/m ³ (500 ppm);STEL:3620 mg/m ³ (1500 ppm)	
Aluminium	7429-90-5	UK HSC	TWA(as inhalable dust):10 mg/m ³ ;TWA(as respirable dust):4 mg/m ³	

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.

Derived no effect level (DNEL)

Ingredient	Degradation Product	Population	Human exposure pattern	DNEL
Acetone		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	186 mg/kg bw/d
Acetone		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	1,210 mg/m ³
Acetone		Worker	Inhalation, Short-term	2,420 mg/m ³

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exposure, Local effects

Predicted no effect concentrations (PNEC)

Ingredient	Degradation Product	Compartment	PNEC
Acetone		Agricultural soil	29.5 mg/kg d.w.
Acetone		Freshwater	10.6 mg/l
Acetone		Freshwater sediments	30.4 mg/kg d.w.
Acetone		Intermittent releases to water	21 mg/l
Acetone		Marine water	1.06 mg/l
Acetone		Marine water sediments	3.04 mg/kg d.w.
Acetone		Sewage Treatment Plant	100 mg/l

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from UK HSC

8.2. Exposure controls

In addition, refer to the annex for more information.

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. Use explosion-proof ventilation 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:

Indirect vented goggles.

Applicable Norms/Standards

Use eye protection conforming to EN 166

Skin/hand protection

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

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

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

Applicable Norms/Standards

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

8.2.3. Environmental exposure controls

Refer to Annex

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state

Liquid.

Colour

Aluminium

Specific Physical Form:

Paste

Odor

Ketones.

Odour threshold

No data available.

pH

Not applicable.

Boiling point/boiling range

≥ 56 °C [*Details:Acetone*]

Melting point

Not applicable.

Flammability (solid, gas)

Not applicable.

Explosive properties

Not classified

Oxidising properties

Not classified

Flash point

-9.4 °C [*Test Method:Closed Cup*]

Autoignition temperature

465 °C [*Details:Acetone*]

Flammable Limits(LEL)

2.6 % volume

Flammable Limits(UEL)

12.8 % volume

Vapour pressure

$\leq 24,664.6$ Pa [*@ 20 °C*]

Relative density

1 [*Ref Std:WATER=1*]

Water solubility

Slight (less than 10%)

Solubility- non-water

No data available.

Partition coefficient: n-octanol/water

No data available.

Evaporation rate

1.9 [*Ref Std:ETHER=1*]

Vapour density

2 [*Ref Std:AIR=1*]

Decomposition temperature

No data available.

Viscosity

30,000 mPa-s [*@ 23 °C*]

Density

1 g/ml

9.2. Other information

EU Volatile Organic Compounds

No data available.

Molecular weight

No data available.

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 EU 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 Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation

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

Skin contact

Dermal Defatting: Signs/symptoms may include localised redness, itching, drying and cracking of skin. Allergic Skin Reaction (non-photo induced) in sensitive people: Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact

Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired 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

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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
Kaolin	Dermal		LD50 estimated to be > 5,000 mg/kg
Kaolin	Ingestion	Human	LD50 > 15,000 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
Phenolic Resin	Dermal		LD50 estimated to be > 5,000 mg/kg
Phenolic 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
Aluminium	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminium	Ingestion		LD50 estimated to be > 5,000 mg/kg
Aluminium	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.888 mg/l
Synthetic amorphous silica, fumed, crystalline-free	Dermal	Rabbit	LD50 > 5,000 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Rat	LD50 > 5,110 mg/kg
6,6'-Di-tert-butyl-2,2'-methylenedi-p-cresol	Dermal	Rabbit	LD50 > 10,000 mg/kg
6,6'-Di-tert-butyl-2,2'-methylenedi-p-cresol	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Acetone	Mouse	Minimal irritation
Acrylonitrile - butadiene polymer	Professional judgement	No significant irritation
Kaolin	Professional judgement	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
Aluminium	Rabbit	No significant irritation
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
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Acetone	Rabbit	Severe irritant
Acrylonitrile - butadiene polymer	Professional judgement	No significant irritation
Kaolin	Professional judgement	No significant irritation
Resin acids and rosin acids, esters with glycerol	Rabbit	Mild irritant
Salicylic acid	Rabbit	Corrosive
Zinc oxide	Rabbit	Mild irritant
Aluminium	Rabbit	No significant irritation
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Resin acids and rosin acids, esters with glycerol	Guinea pig	Not classified
Phenolic 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
Aluminium	Guinea pig	Not classified
Synthetic amorphous silica, fumed, crystalline-free	Human and animal	Not classified

Photosensitisation

Name	Species	Value
Salicylic acid	Mouse	Not sensitising

Respiratory Sensitisation

Name	Species	Value
Aluminium	Human	Not classified

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
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
Aluminium	In Vitro	Not mutagenic
Synthetic amorphous silica, fumed, crystalline-free	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Acetone	Not specified.	Multiple animal species	Not carcinogenic
Kaolin	Inhalation	Multiple	Not carcinogenic

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		animal species	
Synthetic amorphous silica, fumed, crystalline-free	Not specified.	Mouse	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
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	prematuring & during gestation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
6,6'-Di-tert-butyl-2,2'-methylenedi-p-cresol	Ingestion	Not classified for female reproduction	Rat	NOAEL 50 mg/kg/day	prematuring & during gestation
6,6'-Di-tert-butyl-2,2'-methylenedi-p-cresol	Ingestion	Toxic to male reproduction	Rat	NOAEL 12.5 mg/kg/day	50 days

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

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

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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
Kaolin	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL NA	occupational exposure
Kaolin	Inhalation	pulmonary fibrosis	Not classified	Rat	NOAEL Not available	
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
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
Aluminium	Inhalation	nervous system respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
Synthetic amorphous silica, fumed, crystalline- free	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure

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.

SECTION 12: Ecological information

The information below may not agree with the EU 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

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No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
Acetone	67-64-1	Algae other	Experimental	96 hours	EC50	11,493 mg/l
Acetone	67-64-1	Crustacea other	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
Acrylonitrile - butadiene polymer	9003-18-3		Data not available or insufficient for classification			
Kaolin	1332-58-7	Water flea	Experimental	48 hours	LC50	>1,100 mg/l
Phenolic Resin	Trade Secret		Data not available or insufficient for classification			
Resin acids and rosin acids, esters with glycerol	8050-31-5	Fathead minnow	Estimated	96 hours	Lethal Level 50%	>100 mg/l
Resin acids and rosin acids, esters with glycerol	8050-31-5	Green Algae	Estimated	72 hours	Effect Level 50%	>100 mg/l
Resin acids and rosin acids, esters with glycerol	8050-31-5	Water flea	Estimated	48 hours	Effect Level 50%	>100 mg/l
Resin acids and rosin acids, esters with glycerol	8050-31-5	Green Algae	Estimated	72 hours	No obs Effect Level	>100 mg/l
Salicylic acid	69-72-7	Green algae	Experimental	72 hours	EC50	>100 mg/l
Salicylic acid	69-72-7	Ricefish	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
Zinc oxide	1314-13-2	Rainbow trout	Estimated	96 hours	LC50	0.21 mg/l
Zinc oxide	1314-13-2	Crustacea other	Experimental	24 hours	LC50	0.24 mg/l
Zinc oxide	1314-13-2	Green Algae	Experimental	72 hours	EC50	0.057 mg/l
Zinc oxide	1314-13-2	Algae or other aquatic plants	Estimated	96 hours	Effect Concentration 10%	0.026 mg/l
Zinc oxide	1314-13-2	Crustacea other	Estimated	24 days	NOEC	0.007 mg/l
Zinc oxide	1314-13-2	Rainbow trout	Estimated	30 days	NOEC	0.049 mg/l
Aluminium	7429-90-5	Fish other	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Aluminium	7429-90-5	Green Algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Aluminium	7429-90-5	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Aluminium	7429-90-5	Green Algae	Experimental	72 hours	No tox obs at lmt of water sol	100 mg/l
Aluminium	7429-90-5	Water flea	Experimental	21 days	NOEC	0.076 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Green Algae	Experimental	72 hours	EC50	>100 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Water flea	Experimental	24 hours	EC50	>100 mg/l

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Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Green Algae	Experimental	72 hours	NOEC	60 mg/l
6,6'-Di-tert-butyl-2,2'-methylene-di-p-cresol	119-47-1	Green Algae	Endpoint not reached	72 hours	EC50	>100 mg/l
6,6'-Di-tert-butyl-2,2'-methylene-di-p-cresol	119-47-1	Water flea	Endpoint not reached	48 hours	EC50	>100 mg/l
6,6'-Di-tert-butyl-2,2'-methylene-di-p-cresol	119-47-1	Ricefish	Experimental	96 hours	LC50	>100 mg/l
6,6'-Di-tert-butyl-2,2'-methylene-di-p-cresol	119-47-1	Green Algae	Experimental	72 hours	NOEC	1.3 mg/l
6,6'-Di-tert-butyl-2,2'-methylene-di-p-cresol	119-47-1	Water flea	Experimental	21 days	NOEC	0.34 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Acetone	67-64-1	Experimental Photolysis		Photolytic half-life (in air)	147 days (t 1/2)	Other methods
Acetone	67-64-1	Experimental Biodegradation	28 days	BOD	78 % weight	OECD 301D - Closed bottle test
Acrylonitrile - butadiene polymer	9003-18-3	Data not available/insufficient			N/A	
Kaolin	1332-58-7	Data not available/insufficient			N/A	
Phenolic Resin	Trade Secret	Experimental Biodegradation	28 days	CO2 evolution	0 %CO2 evolution/THC O2 evolution	
Resin acids and rosin acids, esters with glycerol	8050-31-5	Experimental Biodegradation	28 days	CO2 evolution	0 % weight	OECD 301B - Modified sturm or CO2
Salicylic acid	69-72-7	Experimental Biodegradation	14 days	BOD	88.1 % BOD/ThBOD	OECD 301C - MITI test (I)
Zinc oxide	1314-13-2	Data not available/insufficient			N/A	
Aluminium	7429-90-5	Data not available/insufficient			N/A	
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Data not available/insufficient			N/A	
6,6'-Di-tert-butyl-2,2'-methylene-di-p-cresol	119-47-1	Experimental Biodegradation	28 days	BOD	0 % BOD/ThBOD	OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Acetone	67-64-1	Experimental Bioconcentration		Log Kow	-0.24	Other methods
Acrylonitrile - butadiene polymer	9003-18-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Kaolin	1332-58-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Phenolic Resin	Trade Secret	Estimated Bioconcentration		Bioaccumulation factor	7.4	Other methods
Resin acids and rosin acids, esters with glycerol	8050-31-5	Experimental Bioconcentration		Log Kow	<1.5	Other methods
Salicylic acid	69-72-7	Experimental Bioconcentration		Log Kow	2.26	Other methods
Zinc oxide	1314-13-2	Experimental BCF-Carp	56 days	Bioaccumulation factor	≤217	OECD 305E - Bioaccumulation flow-through fish test
Aluminium	7429-90-5	Data not available	N/A	N/A	N/A	N/A

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		or insufficient for classification				
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
6,6'-Di-tert-butyl-2,2'-methylenedi-p-cresol	119-47-1	Experimental BCF-Carp	60 days	Bioaccumulation factor	840	OECD 305E - Bioaccumulation flow-through fish test

12.4. Mobility in soil

Please contact manufacturer for more details

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

Material	CAS Nbr	Ozone Depletion Potential	Global Warming Potential
acetone	67-64-1	0	

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

62-2084-2631-2

ADR/RID: UN1866, RESIN SOLUTION, LIMITED QUANTITY, 3., II, (E), ADR Classification Code: F1.

IMDG-CODE: UN1866, RESIN SOLUTION, 3, II, IMDG-Code segregation code: NONE, LIMITED QUANTITY, EMS: FE,SE.

ICAO/IATA: UN1866, RESIN SOLUTION, 3., II.

62-2084-8530-0

ADR/RID: UN1866, RESIN SOLUTION, 3., II, (D/E), ENVIRONMENTALLY HAZARDOUS, ADR Classification Code: F1.

IMDG-CODE: UN1866, RESIN SOLUTION, (ZINC OXIDE), 3, II, IMDG-Code segregation code: NONE, Marine Pollutant, (ZINC OXIDE), EMS: FE,SE.

ICAO/IATA: UN1866, RESIN SOLUTION, 3., II .

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this mixture. Chemical safety assessments for the contained substances may have been carried out by the registrants of the substances in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information

List of relevant H statements

EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.
H228	Flammable solid.
H261	In contact with water releases flammable gas.
H302	Harmful if swallowed.
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.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Revision information:

Section 3: Composition/ Information of ingredients table information was modified.

Section 09: Color information was added.

Section 09: Odor information was added.

Sections 3 and 9: Odour, colour, grade information information was deleted.

Section 9: Solubility in water value information was deleted.

Section 12: Component ecotoxicity information information was modified.

Section 12: Persistence and Degradability information information was modified.

Section 12: Biocumulative potential information information was modified.

Section 15: Regulations - Inventories information was deleted.

Annex

1. Title	
Substance identification	Acetone; EC No. 200-662-2; CAS Nbr 67-64-1;
Exposure Scenario Name	Industrial Use of Adhesives and Sealants
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 08a -Transfer of substance or mixture (charging and discharging) at non-

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	dedicated facilities PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC 13 -Treatment of articles by dipping and pouring ERC 04 -Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
Processes, tasks and activities covered	Application of product. Transfers with dedicated controls, including loading, filling, dumping, bagging. Transfers without dedicated controls, including loading, filling, dumping, bagging.
2. Operational conditions and risk management measures	
Operating Conditions	Physical state: Liquid. General operating conditions: Duration of use: 8 hours/day; Emission days per year: <= 360 days per year;
Risk management measures	Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: Goggles - Chemical resistant; Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour); Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training. Refer to Section 8 of the SDS for specific glove material.; Environmental: None needed;
Waste management measures	No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:
3. Prediction of exposure	
Prediction of exposure	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.

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

3M United Kingdom MSDSs are available at www.3M.com/uk