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™ Rubber Adhesive 1300L TF

Product Identification Numbers
UU-0015-1018-7 UU-0015-1694-5

7100036384 7100036550

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

Identified uses
Adhesive

1.3. Details of the supplier of the safety data sheet
Address: 3M Ireland Limited, The Iveagh Building, The Park, Carrickmines, Dublin 18.
Telephone: +353 1 280 3555
E Mail: tox.uk@mmm.com
Website: www.3M.com

1.4. Emergency telephone number
Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
CLP REGULATION (EC) No 1272/2008

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 aspiration hazard classification is not required due to the product's viscosity.

CLASSIFICATION:
Flammable Liquid, Category 2 - Flam. Liq. 2; H225

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
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 2 - Aquatic Chronic 2; H411

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) |GHS09 (Environment) |

Pictograms

Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		927-510-4	20 - 40
butanone	78-93-3	201-159-0	15 - 30

HAZARD STATEMENTS:

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic 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.
P273	Avoid release to the environment.

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 + P378	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:
EUH208 Contains rosin. May produce an allergic reaction.

11% of the mixture consists of components of unknown acute oral toxicity.

Contains 11% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

None known.
This material does not contain any substances that are assessed to be a PBT or vPvB

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	(CAS-No.) 68610-51-5 (EC-No.) 271-867-2 (REACH-No.) 01-2119496062-39	0.1 - 0.5	Aquatic Chronic 4, H413 Repr. 2, H361d
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	(EC-No.) 927-510-4	20 - 40	Aquatic Chronic 2, H411 Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336
butanone	(CAS-No.) 78-93-3 (EC-No.) 201-159-0 (REACH-No.) 01-2119457290-43	15 - 30	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	(EC-No.) 931-254-9	10 - 20	Aquatic Chronic 2, H411 Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336
P-Tertiobutylphenol Formaldehyde Resin	Trade Secret	7 - 13	Substance not classified as hazardous
Polychloroprene	(CAS-No.) 9010-98-4	7 - 13	Substance not classified as hazardous
propyl acetate	(CAS-No.) 109-60-4 (EC-No.) 203-686-1	7 - 13	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066 Nota C
Magnesium oxide	(CAS-No.) 1309-48-4 (EC-No.) 215-171-9	1 - 5	Substance with a national occupational exposure limit
zinc oxide	(CAS-No.) 1314-13-2 (EC-No.) 215-222-5 (REACH-No.) 01-	0.1 - 1	Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1

	2119463881-32		
rosin	(CAS-No.) 8050-09-7 (EC-No.) 232-475-7	< 1	Skin Sens. 1B, H317

Any entry in the Identifier(s) column that begins with the numbers 6, 7, 8, or 9 are a Provisional List Number provided by ECHA pending publication of the official EC Inventory Number for the substance.
Please see section 16 for the full text of any H statements referred to in this section

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
The most important symptoms and effects based on the CLP classification include:
Irritation to the skin (localized redness, swelling, itching, and dryness). Serious irritation to the eyes (significant redness, swelling, pain, tearing, and impaired 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	Condition
Hydrocarbons.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Chloride	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 that is resistant to polar solvents. 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. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. 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. 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
propyl acetate	109-60-4	Ireland OELs	TWA(8 hours):100 ppm;STEL(15 minutes):150 ppm	
Magnesium oxide	1309-48-4	Ireland OELs	TWA(Total inhalable dust)(8 hours):10 mg/m3;TWA(as respirable dust)(8 hours):4 mg/m3;TWA(as fume)(8 hours):5 mg/m3;STEL(as fume)(15 minutes):10 mg/m3	
zinc oxide	1314-13-2	Ireland OELs	TWA(Respirable fraction & fume)(8 hours):2 mg/m3;STEL(Respirable fraction & fume)(15 minutes):10 mg/m3	
butanone	78-93-3	Ireland OELs	TWA(8 hours):600 mg/m3(200 ppm);TWA(8 hours):200 ppm(600 mg/m3);STEL(15 minutes):900 mg/m3(300 ppm);STEL(15 minutes):300 ppm(900 mg/m3)	SKIN
ROSIN CORE SOLDER PYROLYSIS PRODUCTS	8050-09-7	Ireland OELs	TWA(8 hours):0.05 mg/m3;STEL(15 minutes):0.15 mg/m3	AIR, total respirable

Ireland OELs : Ireland. OELs
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
Hydrocarbons, C6, isoalkanes, < 5% n-hexane		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	13,964 mg/kg bw/d
Hydrocarbons, C6, isoalkanes, < 5% n-hexane		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	5,306 mg/m³
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	13,964 mg/kg bw/d
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	5,306 mg/m³
Hydrocarbons, C6, isoalkanes, < 5% n-hexane		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	300 mg/kg bw/d
Hydrocarbons, C6, isoalkanes, < 5% n-hexane		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	2,085 mg/m³
Hydrocarbons, C7, n-		Worker	Dermal, Long-term	300 mg/kg bw/d

alkanes, isoalkanes, cyclics			exposure (8 hours), Systemic effects	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	2,085 mg/m³
butanone		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	1,161 mg/kg bw/d
butanone		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	600 mg/m³
zinc oxide		Worker	Dermal, Long-term exposure (8 hours), Local effects	622 mg/cm2
zinc oxide		Worker	Dermal, Short-term exposure, Local effects	6,223 mg/cm2
zinc oxide		Worker	Inhalation, Long-term exposure (8 hours), Local effects	1.2 mg/m³
zinc oxide		Worker	Inhalation, Short-term exposure, Local effects	6.2 mg/m³
zinc oxide		Worker	Oral, Short-term exposure, Local effects	62.2 mg/kg bw/d
Hydrocarbons, C6, isoalkanes, < 5% n-hexane		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	300 mg/kg bw/d
Hydrocarbons, C6, isoalkanes, < 5% n-hexane		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	2,085 mg/m³
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	300 mg/kg bw/d
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	2,085 mg/m³

Predicted no effect concentrations (PNEC)

Ingredient	Degradation Product	Compartment	PNEC
butanone		Agricultural soil	22.5 mg/kg d.w.
butanone		Freshwater	55.8 mg/l
butanone		Freshwater sediments	284.7 mg/kg d.w.
butanone		Intermittent releases to water	55.8 mg/l
butanone		Marine water	55.8 mg/l
butanone		Marine water sediments	284.7 mg/kg d.w.
butanone		Sewage Treatment Plant	709 mg/l
zinc oxide		Agricultural soil	44.3 mg/kg d.w.
zinc oxide		Freshwater	0.0256 mg/l
zinc oxide		Freshwater sediments	146 mg/kg d.w.
zinc oxide		Marine water	0.0076 mg/l
zinc oxide		Marine water sediments	70.3 mg/kg d.w.

zinc oxide		Sewage Treatment Plant	0.0647 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n- hexane		Agricultural soil	0.53 mg/kg d.w.
Hydrocarbons, C6, isoalkanes, < 5% n- hexane		Freshwater	0.096 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n- hexane		Freshwater sediments	2.5 mg/kg d.w.
Hydrocarbons, C6, isoalkanes, < 5% n- hexane		Marine water	0.096 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n- hexane		Marine water sediments	2.5 mg/kg d.w.
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		Agricultural soil	0.53 mg/kg d.w.
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		Freshwater	0.096 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		Freshwater sediments	2.5 mg/kg d.w.
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		Marine water	0.096 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		Marine water sediments	2.5 mg/kg d.w.

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from Indust. Inspect./Ministry (IE)

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:
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

Physical state	Liquid.
Specific Physical Form:	Liquid (see just above)
Colour	Yellow
Odor	Solvent
Odour threshold	*No data available.*
Melting point/freezing point	*No data available.*
Boiling point/boiling range	>=48 ºC [*Details:*Data for Aliphatic hydrocarbons]
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Flash point	<=0 ºC [*Test Method:*Closed Cup] [*Details:*Data for Aliphatic hydrocarbons]
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
pH	*substance/mixture is non-soluble (in water)*
Kinematic Viscosity	353 mm²/sec
Water solubility	*No data available.*
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	*No data available.*
Density	*No data available.*
Relative density	0.85 - 0.87 [*Ref Std:*WATER=1]
Relative Vapour Density	*No data available.*
Particle Characteristics	*Not applicable.*

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	67.5 - 74.5 %
Evaporation rate	*No data available.*

Percent volatile	67.5 - 74.5 % weight

SECTION 10: Stability and reactivity

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

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
Heat.
Sparks and/or flames.

10.5 Incompatible materials
Strong oxidising agents.

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 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 internal hazard assessments.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Signs and Symptoms of Exposure

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

Inhalation
May be harmful if inhaled. 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
Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, dryness, cracking, blistering, and pain. Mechanical skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

Eye contact
Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision. Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

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.

Prolonged or repeated exposure may cause target organ effects:
Peripheral neuropathy: Signs/symptoms may include tingling or numbness of the extremities, incoordination, weakness of the hands and feet, tremors and muscle atrophy.

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	Inhalation-Vapour(4 hr)		No data available; calculated ATE >20 - =50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
butanone	Dermal	Rabbit	LD50 > 8,050 mg/kg
butanone	Inhalation-Vapour (4 hours)	Rat	LC50 34.5 mg/l
butanone	Ingestion	Rat	LD50 2,737 mg/kg
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Dermal	Rabbit	LD50 > 2,920 mg/kg
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Dermal	Rabbit	LD50 > 3,160 mg/kg
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Dermal	Rabbit	LD50 > 3,160 mg/kg
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Dermal	Rat	LD50 > 2,000 mg/kg
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Inhalation-Vapour (4 hours)	Rat	LC50 > 14.7 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Inhalation-Vapour (4 hours)	Rat	LC50 > 23.3 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Inhalation-Vapour (4 hours)	Rat	LC50 > 5.61 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Ingestion	Rat	LD50 > 5,000 mg/kg
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Ingestion	Rat	LD50 > 5,840 mg/kg
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Ingestion	Rat	LD50 > 5,000 mg/kg
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Dermal	Rabbit	LD50 > 2,920 mg/kg
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Dermal	Rabbit	LD50 > 3,160 mg/kg
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Dermal	Rabbit	LD50 > 3,160 mg/kg
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Dermal	Rat	LD50 > 2,000 mg/kg
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Inhalation-Vapour (4 hours)	Rat	LC50 > 14.7 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Inhalation-Vapour (4 hours)	Rat	LC50 > 23.3 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Inhalation-Vapour (4 hours)	Rat	LC50 > 5.61 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Ingestion	Rat	LD50 > 5,000 mg/kg
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Ingestion	Rat	LD50 > 5,840 mg/kg
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Ingestion	Rat	LD50 > 5,000 mg/kg
Polychloroprene	Dermal		LD50 estimated to be > 5,000 mg/kg
Polychloroprene	Ingestion	Rat	LD50 > 20,000 mg/kg

propyl acetate	Dermal	Rabbit	LD50 > 17,756 mg/kg
propyl acetate	Inhalation-Vapour (4 hours)	Rat	LC50 >16.7, < 33.4 mg/l
propyl acetate	Ingestion	Rat	LD50 8,700 mg/kg
Magnesium oxide	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
Magnesium oxide	Ingestion	Rat	LD50 3,870 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
rosin	Dermal	Rabbit	LD50 > 2,500 mg/kg
rosin	Ingestion	Rat	LD50 7,600 mg/kg
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	Dermal	Rat	LD50 > 2,000 mg/kg
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
butanone	Rabbit	Minimal irritation
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Rabbit	Irritant
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Rabbit	Irritant
Polychloroprene	Human	No significant irritation
propyl acetate	Rabbit	No significant irritation
Magnesium oxide	Professional judgement	No significant irritation
zinc oxide	Human and animal	No significant irritation
rosin	Rabbit	No significant irritation
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
butanone	Rabbit	Severe irritant
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Rabbit	No significant irritation
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Rabbit	Mild irritant
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Rabbit	No significant irritation
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Rabbit	Mild irritant
Polychloroprene	Professional judgement	No significant irritation
propyl acetate	Rabbit	Moderate irritant
zinc oxide	Rabbit	Mild irritant
rosin	Rabbit	Mild irritant
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Guinea pig	Not classified
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Guinea pig	Not classified
propyl acetate	similar compounds	Not classified
zinc oxide	Guinea pig	Not classified
rosin	Guinea pig	Sensitising
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	Guinea pig	Not classified

Respiratory Sensitisation

Name	Species	Value
rosin	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
butanone	In Vitro	Not mutagenic
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	In Vitro	Not mutagenic
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	In Vitro	Not mutagenic
propyl acetate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Magnesium oxide	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
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
butanone	Inhalation	Human	Not carcinogenic
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
Magnesium oxide	Not specified.	Human and animal	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
butanone	Inhalation	Not classified for development	Rat	LOAEL 8.8 mg/l	during gestation
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Not specified.	Not classified for female reproduction	Rat	NOAEL Not available	2 generation
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Not specified.	Not classified for male reproduction	Rat	NOAEL Not available	2 generation
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Not specified.	Not classified for development	Rat	NOAEL Not available	2 generation
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	Not specified.	Not classified for female reproduction	Rat	NOAEL Not available	2 generation
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	Not specified.	Not classified for male reproduction	Rat	NOAEL Not available	2 generation

Hydrocarbons, C6, isoalkanes, < 5% n-hexane	Not specified.	Not classified for development	Rat	NOAEL Not available	2 generation
propyl acetate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	during gestation
zinc oxide	Ingestion	Not classified for reproduction and/or development	Multiple animal species	NOAEL 125 mg/kg/day	premating & during gestation
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	Ingestion	Not classified for development	Rabbit	NOAEL 15 mg/kg/day	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
butanone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	official classification	NOAEL Not available	
butanone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
butanone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
butanone	Ingestion	liver	Not classified	Rat	NOAEL Not available	not applicable
butanone	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 1,080 mg/kg	not applicable
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
propyl acetate	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Cat	NOAEL NA	
propyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	
propyl acetate	Inhalation	nervous system	Not classified	Rat	NOAEL NA	4 hours

Magnesium oxide	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
butanone	Dermal	nervous system	Not classified	Guinea pig	NOAEL Not available	31 weeks
butanone	Inhalation	liver | kidney and/or bladder | heart | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles	Not classified	Rat	NOAEL 14.7 mg/l	90 days
butanone	Ingestion	liver	Not classified	Rat	NOAEL Not available	7 days
butanone	Ingestion	nervous system	Not classified	Rat	NOAEL 173 mg/kg/day	90 days
propyl acetate	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.6 mg/l	90 days
propyl acetate	Inhalation	heart | skin | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | liver | immune system | muscles | nervous system | eyes | kidney and/or bladder | vascular system	Not classified	Rat	NOAEL 6.4 mg/l	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
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	Ingestion	endocrine system | blood | liver | eyes	Not classified	Rat	NOAEL 289 mg/kg/day	90 days

Aspiration Hazard

Name	Value
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Aspiration hazard
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

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 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

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	68610-51-5	Bacteria	Experimental	17 hours	NOEC	150.9 mg/l
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	68610-51-5	Green algae	Experimental	72 hours	EC50	>100 mg/l
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	68610-51-5	Rainbow trout	Experimental	96 hours	LC50	>100 mg/l
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	68610-51-5	Water flea	Experimental	48 hours	EC50	>100 mg/l
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	68610-51-5	Fathead minnow	Experimental	34 days	NOEL	100 mg/l
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	68610-51-5	Green algae	Experimental	72 hours	NOEC	100 mg/l
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	68610-51-5	Water flea	Experimental	21 days	EC10	<1 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Green algae	Analogous Compound	72 hours	EL50	29 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Medaka	Analogous Compound	96 hours	LC50	0.561 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Water flea	Analogous Compound	48 hours	EC50	0.4 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Fathead minnow	Estimated	96 hours	LL50	8.2 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Green algae	Estimated	72 hours	EL50	3.1 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Green algae	Estimated	72 hours	EL50	29 mg/l

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Green algae	Estimated	72 hours	EL50	55 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Water flea	Estimated	48 hours	EL50	3 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Water flea	Estimated	48 hours	EL50	4.5 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Water flea	Estimated	48 hours	LC50	3.9 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Rainbow trout	Experimental	96 hours	LL50	>13.4 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Green algae	Analogous Compound	72 hours	NOEL	6.3 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Water flea	Analogous Compound	21 days	NOEC	0.17 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Green algae	Estimated	72 hours	NOEL	0.5 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Green algae	Estimated	72 hours	NOEL	6.3 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Green algae	Estimated	72 hours	NOEL	30 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Water flea	Estimated	21 days	NOEL	1 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Water flea	Estimated	21 days	NOEL	2.6 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Activated sludge	Analogous Compound	15 hours	IC50	29 mg/l
butanone	78-93-3	Fathead minnow	Experimental	96 hours	LC50	2,993 mg/l
butanone	78-93-3	Green algae	Experimental	96 hours	ErC50	2,029 mg/l
butanone	78-93-3	Water flea	Experimental	48 hours	EC50	308 mg/l
butanone	78-93-3	Green algae	Experimental	96 hours	ErC10	1,289 mg/l
butanone	78-93-3	Water flea	Experimental	21 days	NOEC	100 mg/l
butanone	78-93-3	Bacteria	Experimental	16 hours	LOEC	1,150 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	931-254-9	Green algae	Analogous Compound	72 hours	EL50	29 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	931-254-9	Medaka	Analogous Compound	96 hours	LC50	0.561 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	931-254-9	Water flea	Analogous Compound	48 hours	EC50	0.4 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	931-254-9	Fathead minnow	Estimated	96 hours	LL50	8.2 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	931-254-9	Green algae	Estimated	72 hours	EL50	3.1 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n-	931-254-9	Green algae	Estimated	72 hours	EL50	29 mg/l

hexane						
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	931-254-9	Green algae	Estimated	72 hours	EL50	55 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	931-254-9	Water flea	Estimated	48 hours	EL50	3 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	931-254-9	Water flea	Estimated	48 hours	EL50	4.5 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	931-254-9	Water flea	Estimated	48 hours	LC50	3.9 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	931-254-9	Rainbow trout	Experimental	96 hours	LL50	>13.4 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	931-254-9	Green algae	Analogous Compound	72 hours	NOEL	6.3 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	931-254-9	Water flea	Analogous Compound	21 days	NOEC	0.17 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	931-254-9	Green algae	Estimated	72 hours	NOEL	0.5 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	931-254-9	Green algae	Estimated	72 hours	NOEL	6.3 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	931-254-9	Green algae	Estimated	72 hours	NOEL	30 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	931-254-9	Water flea	Estimated	21 days	NOEL	1 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	931-254-9	Water flea	Estimated	21 days	NOEL	2.6 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n-hexane	931-254-9	Activated sludge	Analogous Compound	15 hours	IC50	29 mg/l
propyl acetate	109-60-4	Activated sludge	Experimental	16 hours	IC50	>1,000 mg/l
propyl acetate	109-60-4	Fathead minnow	Experimental	96 hours	LC50	56 mg/l
propyl acetate	109-60-4	Green algae	Experimental	72 hours	EC50	672 mg/l
propyl acetate	109-60-4	Water flea	Experimental	48 hours	EC50	91.5 mg/l
propyl acetate	109-60-4	Green algae	Experimental	72 hours	NOEC	83.2 mg/l
Polychloroprene	9010-98-4	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Magnesium oxide	1309-48-4	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
rosin	8050-09-7	Bacteria	Experimental	N/A	EC50	76.1 mg/l
rosin	8050-09-7	Green algae	Experimental	72 hours	EL50	>100 mg/l
rosin	8050-09-7	Water flea	Experimental	48 hours	EL50	911 mg/l
rosin	8050-09-7	Zebra Fish	Experimental	96 hours	LL50	>1 mg/l
rosin	8050-09-7	Green algae	Experimental	72 hours	NOEL	100 mg/l

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

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	68610-51-5	Experimental Biodegradation	28 days	CO2 evolution	1 % weight	OECD 301B - Modified sturm or CO2
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Analogous Compound Biodegradation	28 days	BOD	74.4 %BOD/ThOD	OECD 301F - Manometric respirometry
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Estimated Biodegradation	28 days	BOD	98 %BOD/COD	OECD 301F - Manometric respirometry
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Estimated Biodegradation	28 days	BOD	77 %BOD/ThOD	OECD 301F - Manometric respirometry
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Estimated Biodegradation	28 days	BOD	98 %BOD/COD	OECD 301F - Manometric respirometry
butanone	78-93-3	Experimental Biodegradation	28 days	BOD	98 %BOD/ThOD	OECD 301D - Closed bottle test
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	931-254-9	Analogous Compound Biodegradation	28 days	BOD	74.4 %BOD/ThOD	OECD 301F - Manometric respirometry
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	931-254-9	Estimated Biodegradation	28 days	BOD	98 %BOD/COD	OECD 301F - Manometric respirometry
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	931-254-9	Estimated Biodegradation	28 days	BOD	77 %BOD/ThOD	OECD 301F - Manometric respirometry
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	931-254-9	Estimated Biodegradation	28 days	BOD	98 %BOD/COD	OECD 301F - Manometric respirometry
propyl acetate	109-60-4	Experimental Biodegradation	14 days	BOD	81 %BOD/ThOD	OECD 301C - MITI test (I)
Polychloroprene	9010-98-4	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Magnesium oxide	1309-48-4	Data not availbl-insufficient	N/A	N/A	N/A	N/A
rosin	8050-09-7	Experimental Biodegradation	28 days	CO2 evolution	64 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
zinc oxide	1314-13-2	Data not availbl-insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	68610-51-5	Modeled Bioconcentration		Bioaccumulation factor	≤55	Catalogic™
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Analogous Compound BCF - Fish	28 days	Bioaccumulation factor	540	OECD305-Bioconcentration
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Analogous Compound Bioconcentration		Log Kow	4.66	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Estimated Bioconcentration		Log Kow	3.6	
butanone	78-93-3	Experimental Bioconcentration		Log Kow	0.3	OECD 117 log Kow HPLC method
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	931-254-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	931-254-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	931-254-9	Analogous Compound BCF - Fish	28 days	Bioaccumulation factor	540	OECD305-Bioconcentration
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	931-254-9	Analogous Compound Bioconcentration		Log Kow	4.66	
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	931-254-9	Estimated Bioconcentration		Log Kow	3.6	
propyl acetate	109-60-4	Experimental Bioconcentration		Log Kow	1.4	
Polychloroprene	9010-98-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Magnesium oxide	1309-48-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
rosin	8050-09-7	Analogous Compound BCF - Fish	20 days	Bioaccumulation factor	129	
zinc oxide	1314-13-2	Experimental BCF - Fish	56 days	Bioaccumulation factor	≤217	OECD305-Bioconcentration

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
P-CRESOL, REACTION PRODUCTS WITH DICYCLOPENTADIENE AND ISOBUTYLENE	68610-51-5	Experimental Mobility in Soil	Koc	>427000 l/kg	OECD 121 Estim. of Koc by HPLC
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Modeled Mobility in Soil	Koc	≥202 l/kg	Episuite™
Hydrocarbons, C6, isoalkanes, < 5% n- hexane	931-254-9	Modeled Mobility in Soil	Koc	≥202 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. Endocrine disrupting properties

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

12.7. Other adverse effects

No information available.

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. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. 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

SECTION 14: Transportation information

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number or ID number	UN1133	UN1133	UN1133
14.2 UN proper shipping name	ADHESIVES	ADHESIVES	ADHESIVES (ZINC OXIDE)
14.3 Transport hazard class(es)	3	3	3
14.4 Packing group	II	II	II
14.5 Environmental hazards	Environmentally Hazardous	Not applicable	Marine Pollutant
14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Marine Transport in bulk according to IMO instruments	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR Classification Code	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

Carcinogenicity

Ingredient	CAS Nbr	Classification	Regulation
Polychloroprene	9010-98-4	Gr. 3: Not classifiable	International Agency for Research on Cancer

Global inventory status
Contact 3M for more information.

DIRECTIVE 2012/18/EU
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
butanone	78-93-3	10	50
propyl acetate	109-60-4	10	50
zinc oxide	1314-13-2	100	200

Regulation (EU) No 649/2012
No chemicals listed

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.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.

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.
H413	May cause long lasting harmful effects to aquatic life.

Revision information:
Section 3: Composition/ Information of ingredients table information was modified.
Section 09: Particle Characteristics N/A information was added.
Section 12: Component ecotoxicity information information was modified.
Section 12: Mobility in soil information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.

Annex

1. Title	
Substance identification	zinc oxide; EC No. 215-222-5; CAS Nbr 1314-13-2;
Exposure Scenario Name	Formulation
Lifecycle Stage	Formulation or re-packing
Contributing activities	PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC 09 -Transfer of substance or mixture into small containers (dedicated filling line, including weighing) ERC 02 -Formulation into mixture
Processes, tasks and activities covered	Open sampling. Transfer of substance/mixture with dedicated engineering controls. Transfers without dedicated controls, including loading, filling, dumping, bagging.
2. Operational conditions and risk management measures	
Operating Conditions	**Physical state:**Liquid. **General operating conditions:** Continuous release; Frequency of exposure at workplace [for one worker]: 8 hours/day; Used amount or applied quantity per task/application by worker: 50 tonnes 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; Protective clothing / Wear suitable protective clothing; 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:** Waste Water treatment - Incineration;
Waste management measures	Do not release to waterways or sewers; Incinerate in a permitted hazardous waste incinerator; Send to a municipal sewage treatment plant;
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.

1. Title	
Substance identification	butanone; EC No. 201-159-0; CAS Nbr 78-93-3;
Exposure Scenario Name	Formulation
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC 09 -Transfer of substance or mixture into small containers (dedicated filling line, including weighing) ERC 02 -Formulation into mixture
Processes, tasks and activities covered	Transfer of substances/mixtures into small containers e.g. tubes , bottles or small reservoirs. 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 exposure per day at workplace [for one worker]: 8 hours/day;
Risk management measures	Under the operational conditions described above the following risk management measures apply: **General risk management measures:** **Human health:** Goggles - Chemical resistant; Local exhaust ventilation; **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.

1. Title	
Substance identification	Hydrocarbons, C6, isoalkanes, < 5% n- hexane; EC No. 931-254-9; Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics; EC No. 927-510-4;
Exposure Scenario Name	Industrial Use of Adhesives
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 07 -Industrial spraying PROC 10 -Roller application or brushing 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 with a roller or brush. Spraying of substances/mixtures.
2. Operational conditions and risk management measures	
Operating Conditions	**Physical state:**Liquid. **General operating conditions:** Assumes use at not more than 20°C above ambient temperature;

	Continuous release; Duration of exposure per day at workplace [for one worker]: 8 hours/day; Emission days per year: 20 days per year;
Risk management measures	Under the operational conditions described above the following risk management measures apply: **General risk management measures:** **Human health:** None needed; **Environmental:** None needed;
Waste management measures	Do not release to waterways or sewers; Incinerate in a permitted hazardous waste incinerator;
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.

1. Title	
Substance identification	zinc oxide; EC No. 215-222-5; CAS Nbr 1314-13-2;
Exposure Scenario Name	Industrial Use of Adhesives
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 07 -Industrial spraying ERC 06d -Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)
Processes, tasks and activities covered	Spraying of substances/mixtures.
2. Operational conditions and risk management measures	
Operating Conditions	**Physical state:**Liquid. **General operating conditions:** Continuous release; Frequency of exposure at workplace [for one worker]: 8 hours/day; Used amount or applied quantity per task/application by worker: 50 tonnes 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; Protective clothing / Wear suitable protective clothing; 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	Do not release to waterways or sewers; Incinerate in a permitted hazardous waste incinerator; Send to a municipal sewage treatment plant;
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.

1. Title

Substance identification	zinc oxide; EC No. 215-222-5; CAS Nbr 1314-13-2;
Exposure Scenario Name	Industrial Use of Adhesives
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 10 -Roller application or brushing PROC 13 -Treatment of articles by dipping and pouring ERC 06d -Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)
Processes, tasks and activities covered	Application of product with a roller or brush.
2. Operational conditions and risk management measures	
Operating Conditions	**Physical state:**Liquid. **General operating conditions:** Continuous release; Frequency of exposure at workplace [for one worker]: 8 hours/day; Used amount or applied quantity per task/application by worker: 50 tonnes 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; Protective clothing / Wear suitable protective clothing; 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	Do not release to waterways or sewers; Incinerate in a permitted hazardous waste incinerator; Send to a municipal sewage treatment plant;
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.

1. Title	
Substance identification	butanone; EC No. 201-159-0; CAS Nbr 78-93-3;
Exposure Scenario Name	Industrial Use of Coatings
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 05 -Mixing or blending in batch processes PROC 07 -Industrial spraying PROC 10 -Roller application or brushing 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. Mixing operations (open systems). Transfer of substances/mixtures into small containers e.g. tubes , bottles or small reservoirs.
2. Operational conditions and risk management measures	
Operating Conditions	**Physical state:**Liquid. **General operating conditions:** Duration of exposure per day at workplace [for one worker]: 8 hours/day; **Task: PROC07**;

	Air exchange rate:: 10 - 15 ;
Risk management measures	Under the operational conditions described above the following risk management measures apply: **General risk management measures:** **Human health:** Goggles - Chemical resistant; **Environmental:** None needed; ; The following task-specific risk management measures apply in addition to those listed above: **Task: Transferring Material**; **Human Health**; Half-facepiece air-purifying respirator; **Task: PROC05**; **Human Health**; Local exhaust ventilation; **Task: PROC07**; **Human Health**; Half-facepiece air-purifying respirator; **Task: PROC10**; **Human Health**; Provide extract ventilation to points where emissions occur;
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.

1. Title	
Substance identification	Hydrocarbons, C6, isoalkanes, < 5% n- hexane; EC No. 931-254-9; Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics; EC No. 927-510-4;
Exposure Scenario Name	Professional Use of Adhesives
Lifecycle Stage	Widespread use by professional workers
Contributing activities	PROC 11 -Non industrial spraying ERC 08a -Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
Processes, tasks and activities covered	Spraying of substances/mixtures.
2. Operational conditions and risk management measures	
Operating Conditions	**Physical state:**Liquid. **General operating conditions:** Assumes use at not more than 20°C above ambient temperature; Continuous release; Duration of exposure per day at workplace [for one worker]: 8 hours/day; Emission days per year: 365 days/year;
Risk management measures	Under the operational conditions described above the following risk management measures apply: **General risk management measures:** **Human health:** None needed; **Environmental:** None needed;

Waste management measures	Do not release to waterways or sewers;
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.

1. Title	
Substance identification	Hydrocarbons, C6, isoalkanes, < 5% n- hexane; EC No. 931-254-9; Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics; EC No. 927-510-4;
Exposure Scenario Name	Professional Use of Adhesives
Lifecycle Stage	Widespread use by professional workers
Contributing activities	PROC 10 -Roller application or brushing ERC 08a -Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
Processes, tasks and activities covered	Application of product with a roller or brush.
2. Operational conditions and risk management measures	
Operating Conditions	**Physical state:**Liquid. **General operating conditions:** Assumes use at not more than 20°C above ambient temperature; Continuous release; Duration of exposure per day at workplace [for one worker]: 8 hours/day; Emission days per year: 365 days/year;
Risk management measures	Under the operational conditions described above the following risk management measures apply: **General risk management measures:** **Human health:** None needed; **Environmental:** None needed;
Waste management measures	Do not release to waterways or sewers;
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.

1. Title	
Substance identification	zinc oxide; EC No. 215-222-5; CAS Nbr 1314-13-2;
Exposure Scenario Name	Professional Use of Adhesives
Lifecycle Stage	Widespread use by professional workers
Contributing activities	PROC 11 -Non industrial spraying ERC 08c -Widespread use leading to inclusion into/onto article (indoor)
Processes, tasks and activities covered	Spraying of substances/mixtures.
2. Operational conditions and risk management measures	
Operating Conditions	**Physical state:**Liquid. **General operating conditions:** Continuous release; Frequency of exposure at workplace [for one worker]: 8 hours/day; Used amount or applied quantity per task/application by worker: 50 tonnes 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; Protective clothing / Wear suitable protective clothing; 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	Do not release to waterways or sewers;
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.

1. Title	
Substance identification	zinc oxide; EC No. 215-222-5; CAS Nbr 1314-13-2;
Exposure Scenario Name	Professional Use of Adhesives
Lifecycle Stage	Widespread use by professional workers
Contributing activities	PROC 10 -Roller application or brushing PROC 13 -Treatment of articles by dipping and pouring ERC 08c -Widespread use leading to inclusion into/onto article (indoor)
Processes, tasks and activities covered	Application of product with a roller or brush.
2. Operational conditions and risk management measures	
Operating Conditions	**Physical state:**Liquid. **General operating conditions:** Continuous release; Frequency of exposure at workplace [for one worker]: 8 hours/day; Used amount or applied quantity per task/application by worker: 50 tonnes 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; Protective clothing / Wear suitable protective clothing; 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	Do not release to waterways or sewers;
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.

1. Title	
Substance identification	butanone; EC No. 201-159-0;

	CAS Nbr 78-93-3;
Exposure Scenario Name	Professional Use of Coatings
Lifecycle Stage	Widespread use by professional workers
Contributing activities	PROC 05 -Mixing or blending in batch processes PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC 10 -Roller application or brushing ERC 08a -Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
Processes, tasks and activities covered	Application of product. Mixing operations (open systems). Transfer of substances/mixtures into small containers e.g. tubes , bottles or small reservoirs.
2. Operational conditions and risk management measures	
Operating Conditions	**Physical state:**Liquid. **General operating conditions:** Duration of exposure per day at workplace [for one worker]: 8 hours/day;
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); **Environmental:** None needed; ; The following task-specific risk management measures apply in addition to those listed above: **Task: Transferring Material**; **Human Health**; Half-facepiece air-purifying respirator; **Task: Mixing**; **Human Health**; Half-facepiece air-purifying respirator;
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.

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