



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

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Issue Date:	18/03/2024	Supersedes date:	09/09/2022

IDENTIFICATION

1.1. Product identifier

3M™ RelyX™ Temp NE NP (56660)

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Temporary dental luting material.

Restrictions on use

For use by dental professionals only.

1.3. Supplier's details

Address: 3M Technologies (S) Pte Ltd,10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number

Company Emergency Hotline: +65 6591 6601 (8.15am - 5.00pm, Monday - Friday)

This product is a kit or a multipart product which consists of multiple, independently packaged components. An SDS for each of these components is included. Please do not separate the component SDSs from this cover page. The document numbers of the SDSs for components of this product are:

18-0582-9, 18-0590-2

TRANSPORT INFORMATION

International Regulations

UN No.: None assigned

UN Proper shipping name: None assigned

Transportation Class (IMO): None assigned

Transportation Class (IATA): None assigned

Other Dangerous Goods Descriptions (IMO): None assigned

Other Dangerous Goods Descriptions (IATA): None assigned

Packing Group: None assigned

Marine pollutant: None assigned

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Document group:	18-0582-9	Version number:	1.00
Issue Date:	09/09/2022	Supersedes date:	Initial issue.

SECTION 1: Identification

1.1. Product identifier

3M™ RELYX™ Temp NE NP Base Paste

1.2. Recommended use and restrictions on use

Recommended use

Dental Material, Temporary luting material

Restrictions on use

For use by dental professionals only.

1.3. Supplier's details

Address: 3M Technologies (S) Pte Ltd, 10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number

+65 6591 6888 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Acute Aquatic Toxicity: Category 1.

Chronic Aquatic Toxicity: Category 1.

2.2. Label elements

SIGNAL WORD

WARNING!

Symbols

Environment |

Pictograms

**HAZARD STATEMENTS**

H410 Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS**Prevention:**

P273 Avoid release to the environment.

Disposal:

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

2.3. Other hazards

Aspiration classification does not apply due to the viscosity of the product.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Zinc oxide	1314-13-2	80 - 90
White mineral oil (petroleum)	8042-47-5	5 - 15
Petrolatum	8009-03-8	1 - 5

SECTION 4: First aid measures

4.1. Description of first aid measures**Inhalation**

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

Skin contact

Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye contact

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, 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

No critical symptoms or effects. 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. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products**Substance**

Carbon monoxide.

Carbon dioxide.

Condition

During combustion.

During combustion.

5.3. Special protective actions for fire-fighters

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

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Avoid prolonged or repeated skin contact. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat.

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
Zinc oxide	1314-13-2	ACGIH	TWA(respirable fraction):2 mg/m ³ ;STEL(respirable fraction):10 mg/m ³	
Zinc oxide	1314-13-2	Singapore PELs	TWA(as fume)(8 hours):5 mg/m ³ ;TWA(as dust)(8 hours):10 mg/m ³ ;STEL(as fume)(15 minutes):10 mg/m ³	
MINERAL OILS, HIGHLY-REFINED OILS	8009-03-8	ACGIH	TWA(inhalable fraction):5 mg/m ³	A4: Not class. as human carcin

Oil mist mineral	8009-03-8	Singapore PELs	TWA(as mist)(8 hours):5 mg/m ³ ;STEL(as mist)(15 minutes):10 mg/m ³	
MINERAL OILS, HIGHLY-REFINED OILS	8042-47-5	ACGIH	TWA(inhalable fraction):5 mg/m ³	A4: Not class. as human carcin
Oil mist mineral	8042-47-5	Singapore PELs	TWA(as mist)(8 hours):5 mg/m ³ ;STEL(as mist)(15 minutes):10 mg/m ³	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use in a well-ventilated area.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Safety glasses with side shields.

Skin/hand protection

See Section 7.1 for additional information on skin protection.

Respiratory protection

None required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Paste
Color	White
Odor	Odourless
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point	<i>Not applicable.</i>
Boiling point/Initial boiling point/Boiling range	<i>Not applicable.</i>
Flash point	No flash point
Evaporation rate	<i>Not applicable.</i>
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	<i>No data available.</i>
Vapor Density and/or Relative Vapor Density	<i>No data available.</i>
Relative density	> 1 [Ref Std: WATER=1]
Water solubility	Nil

Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>Not applicable.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity/Kinematic Viscosity	<i>No data available.</i>
Volatile organic compounds (VOC)	<i>No data available.</i>
VOC less H2O & exempt solvents	<i>No data available.</i>
Molecular weight	<i>No data available.</i>

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

Substance

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

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

No known health effects.

Skin contact

Contact with the skin during product use is not expected to result in significant irritation.

Eye contact

Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea.

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
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
White mineral oil (petroleum)	Dermal	Rabbit	LD50 > 2,000 mg/kg
White mineral oil (petroleum)	Ingestion	Rat	LD50 > 5,000 mg/kg
Petrolatum	Dermal		LD50 estimated to be > 5,000 mg/kg
Petrolatum	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Zinc oxide	Human and animal	No significant irritation
White mineral oil (petroleum)	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Zinc oxide	Rabbit	Mild irritant
White mineral oil (petroleum)	Rabbit	Mild irritant

Sensitization:**Skin Sensitisation**

Name	Species	Value
Zinc oxide	Guinea pig	Not classified
White mineral oil (petroleum)	Guinea pig	Not classified

Respiratory Sensitisation

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
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
White mineral oil (petroleum)	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
White mineral oil (petroleum)	Dermal	Mouse	Not carcinogenic
White mineral oil (petroleum)	Inhalation	Multiple animal species	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Zinc oxide	Ingestion	Not classified for reproduction and/or development	Multiple animal species	NOAEL 125 mg/kg/day	prematuring & during gestation
White mineral oil (petroleum)	Ingestion	Not classified for female reproduction	Rat	NOAEL 4,350 mg/kg/day	13 weeks
White mineral oil (petroleum)	Ingestion	Not classified for male reproduction	Rat	NOAEL 4,350 mg/kg/day	13 weeks
White mineral oil (petroleum)	Ingestion	Not classified for development	Rat	NOAEL 4,350 mg/kg/day	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

For the component/components, either no data are currently available or the data are not sufficient for classification.

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
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
White mineral oil (petroleum)	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 1,381 mg/kg/day	90 days
White mineral oil (petroleum)	Ingestion	liver immune system	Not classified	Rat	NOAEL 1,336 mg/kg/day	90 days

Aspiration Hazard

Name	Value
White mineral oil (petroleum)	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.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Acute aquatic hazard:

GHS Acute 1: Very toxic to aquatic life.

Chronic aquatic hazard:

GHS Chronic 1: Very toxic to aquatic life with long lasting effects.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
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
White mineral oil (petroleum)	8042-47-5	Water flea	Analogous Compound	48 hours	EL50	>100 mg/l
White mineral oil (petroleum)	8042-47-5	Bluegill	Experimental	96 hours	LL50	>100 mg/l
White mineral oil (petroleum)	8042-47-5	Green algae	Analogous Compound	72 hours	NOEL	100 mg/l
White mineral oil (petroleum)	8042-47-5	Water flea	Analogous Compound	21 days	NOEL	>100 mg/l
Petrolatum	8009-03-8	Fathead minnow	Estimated	96 hours	LL50	>100 mg/l
Petrolatum	8009-03-8	Water flea	Estimated	48 hours	EL50	>10,000 mg/l
Petrolatum	8009-03-8	Green algae	Estimated	72 hours	NOEL	100 mg/l
Petrolatum	8009-03-8	Water flea	Estimated	21 days	NOEL	10 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Zinc oxide	1314-13-2	Data not available-insufficient	N/A	N/A	N/A	N/A
White mineral oil (petroleum)	8042-47-5	Experimental Biodegradation	28 days	CO2 evolution	0 %CO2 evolution/THC O2 evolution	OECD 301B - Modified sturm or CO2
Petrolatum	8009-03-8	Estimated Biodegradation	28 days	BOD	31 %BOD/CO D	OECD 301F - Manometric respirometry

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Zinc oxide	1314-13-2	Experimental BCF - Fish	56 days	Bioaccumulation factor	≤217	OECD305-Bioconcentration
White mineral oil (petroleum)	8042-47-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Petrolatum	8009-03-8	Data not	N/A	N/A	N/A	N/A

		available or insufficient for classification				
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12.4. Mobility in soil

Please contact manufacturer for more details

12.5 Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1. Disposal methods**

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste.

SECTION 14: Transport Information**International Regulations**

UN No.: None assigned

UN Proper shipping name: None assigned

Transportation Class (IMO): None assigned

Transportation Class (IATA): None assigned

Other Dangerous Goods Descriptions (IMO): None assigned

Other Dangerous Goods Descriptions (IATA): None assigned

Packing Group: None assigned

Marine pollutant: None assigned

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Global inventory status**

Contact 3M for more information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

SECTION 16: Other information

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This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

Document group:	18-0590-2	Version number:	3.00
Issue Date:	29/08/2024	Supersedes date:	18/03/2024

SECTION 1: Identification

1.1. Product identifier

3M™ RELYX™ Temp NE NP Catalyst Paste

1.2. Recommended use and restrictions on use

Recommended use

Dental Material, Temporary luting material

Restrictions on use

For use by dental professionals only.

1.3. Supplier's details

Address: 3M Technologies (S) Pte Ltd, 10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number

+65 6591 6601 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Serious Eye Damage/Irritation: Category 2.

Skin Sensitizer: Category 1.

2.2. Label elements

SIGNAL WORD

WARNING!

Symbols

Exclamation mark |

Pictograms

**HAZARD STATEMENTS**

H319 Causes serious eye irritation.
 H317 May cause an allergic skin reaction.

PRECAUTIONARY STATEMENTS**Prevention:**

P280E Wear protective gloves.

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

2.3. Other hazards

This material has been tested for skin corrosion/irritation and the test results do not meet the criteria for classification.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
ROSIN, REACTION PRODUCTS WITH ACRYLIC ACID	83137-13-7	60 - 70
NONANOIC ACID	112-05-0	30 - 40
SILANE TREATED SILICA	68909-20-6	1 - 5

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

Allergic skin reaction (redness, swelling, blistering, and itching).

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Formaldehyde	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.

5.3. Special protective actions for fire-fighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Do not get in eyes. A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

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

8.2. Exposure controls

8.2.1. Engineering controls

Use in a well-ventilated area.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Safety glasses with side shields.

Skin/hand protection

See Section 7.1 for additional information on skin protection.

Respiratory protection

None required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Paste
Color	Transparent Yellow
Odor	Aromatic Solvent, Slight Solvent
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point	<i>Not applicable.</i>
Boiling point/Initial boiling point/Boiling range	<i>No data available.</i>
Flash point	No flash point
Evaporation rate	<i>Not applicable.</i>
Flammability	Not applicable.
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	<i>No data available.</i>
Vapor Density and/or Relative Vapor Density	<i>No data available.</i>
Relative density	> 1 [Ref Std: WATER=1]
Water solubility	Nil
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>Not applicable.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Kinematic Viscosity	10,000 mm ² /sec
Volatile organic compounds (VOC)	<i>No data available.</i>
Percent volatile	<i>No data available.</i>
VOC less H ₂ O & exempt solvents	<i>No data available.</i>
Molecular weight	<i>No data available.</i>

Particle Characteristics	<i>Not applicable.</i>
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SECTION 10: Stability and reactivity

10.1 Reactivity

This material is considered to be non reactive under normal use conditions

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

Substance

Condition

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

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

This product may have a characteristic odour; however, no adverse health effects are anticipated.

Skin contact

Contact with the skin during product use is not expected to result in significant irritation. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact

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.

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg

Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
ROSIN, REACTION PRODUCTS WITH ACRYLIC ACID	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
ROSIN, REACTION PRODUCTS WITH ACRYLIC ACID	Ingestion	Rat	LD50 > 2,000 mg/kg
NONANOIC ACID	Dermal	Rat	LD50 > 2,000 mg/kg
NONANOIC ACID	Ingestion	Rat	LD50 > 2,000 mg/kg
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 2,000 mg/kg
SILANE TREATED SILICA	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	Rabbit	Minimal irritation
ROSIN, REACTION PRODUCTS WITH ACRYLIC ACID	Professional judgement	Irritant
NONANOIC ACID	Rabbit	Irritant
SILANE TREATED SILICA	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
ROSIN, REACTION PRODUCTS WITH ACRYLIC ACID	In vitro data	No significant irritation
NONANOIC ACID	similar health hazards	Corrosive
SILANE TREATED SILICA	Rabbit	No significant irritation

Sensitization:

Skin Sensitisation

Name	Species	Value
ROSIN, REACTION PRODUCTS WITH ACRYLIC ACID	In vitro data	Sensitising
NONANOIC ACID	Mouse	Not classified
SILANE TREATED SILICA	Guinea pig	Not classified

Respiratory Sensitisation

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
ROSIN, REACTION PRODUCTS WITH ACRYLIC ACID	In Vitro	Not mutagenic
NONANOIC ACID	In Vitro	Not mutagenic
NONANOIC ACID	In vivo	Not mutagenic
SILANE TREATED SILICA	In Vitro	Not mutagenic

Carcinogenicity

For the component/components, either no data are currently available or the data are not sufficient for classification.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
NONANOIC ACID	Ingestion	Not classified for development	Rat	NOAEL 1,500 mg/kg/day	during organogenesis
SILANE TREATED SILICA	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

For the component/components, either no data are currently available or the data are not sufficient for classification.

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
NONANOIC ACID	Ingestion	gastrointestinal tract hematopoietic system nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
SILANE TREATED SILICA	Inhalation	respiratory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 0.035 mg/l	13 weeks
SILANE TREATED SILICA	Inhalation	hematopoietic system kidney and/or bladder	Not classified	Rat	NOAEL 0.035 mg/l	13 weeks
SILANE TREATED SILICA	Ingestion	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	5 weeks

Aspiration Hazard

For the component/components, either no data are currently available or the data are 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 be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity**Acute aquatic hazard:**

GHS Acute 3: Harmful to aquatic life.

Chronic aquatic hazard:

Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
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ROSIN, REACTION PRODUCTS WITH ACRYLIC ACID	83137-13-7	Green algae	Experimental	72 hours	EL50	>100 mg/l
ROSIN, REACTION PRODUCTS WITH ACRYLIC ACID	83137-13-7	Water flea	Experimental	48 hours	EL50	>100 mg/l
ROSIN, REACTION PRODUCTS WITH ACRYLIC ACID	83137-13-7	Green algae	Experimental	72 hours	EC10	>100 mg/l
NONANOIC ACID	112-05-0	Green algae	Analogous Compound	72 hours	ErC50	25 mg/l
NONANOIC ACID	112-05-0	Fathead minnow	Experimental	96 hours	LC50	104 mg/l
NONANOIC ACID	112-05-0	Water flea	Experimental	48 hours	EC50	96 mg/l
NONANOIC ACID	112-05-0	Green algae	Analogous Compound	72 hours	NOEC	5.66 mg/l
NONANOIC ACID	112-05-0	Bobwhite quail	Experimental	14 days	LD50	>2,250 mg per kg of bodyweight
NONANOIC ACID	112-05-0	Ciliated protozoa	Experimental	40 hours	IC50	71 mg/l
NONANOIC ACID	112-05-0	Honeybee	Experimental	48 hours	LD50	>25 ug/bee
SILANE TREATED SILICA	68909-20-6	Algae or other aquatic plants	Estimated	72 hours	EC50	>100 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
ROSIN, REACTION PRODUCTS WITH ACRYLIC ACID	83137-13-7	Experimental Biodegradation	28 days	BOD	17-33 %BOD/ThOD	OECD 301F - Manometric respirometry
NONANOIC ACID	112-05-0	Experimental Biodegradation	28 days	CO2 evolution	68 %CO2 evolution/THCO2 evolution	EC C.4.C. CO2 Evolution Test
SILANE TREATED SILICA	68909-20-6	Data not available-insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
ROSIN, REACTION PRODUCTS WITH ACRYLIC ACID	83137-13-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
NONANOIC ACID	112-05-0	Experimental Bioconcentration		Log Kow	3.4	OECD 117 log Kow HPLC method
SILANE TREATED SILICA	68909-20-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil

Please contact manufacturer for more details

12.5 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Disposal methods

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste.

SECTION 14: Transport Information

International Regulations

UN No.: None assigned

UN Proper shipping name: None assigned

Transportation Class (IMO): None assigned

Transportation Class (IATA): None assigned

Other Dangerous Goods Descriptions (IMO): None assigned

Other Dangerous Goods Descriptions (IATA): None assigned

Packing Group: None assigned

Marine pollutant: None assigned

SECTION 15: Regulatory information

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

Global inventory status

Contact 3M for more information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

This product may contain component(s) that are regulated by the following:

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.

SECTION 16: Other information

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 Singapore SDSs are available at www.3m.com.sg