



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the New Zealand, Hazardous Substances (Safety Data Sheets) Notice 2017.

SECTION 1: Identification

1.1. Product identifier

3M™ RelyX™ Ceramic Primer (2721)

Product Identification Numbers

70-2010-2492-7

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Primer

Restrictions on use

For use by dental professionals only.

1.3. Supplier's details

Address: 3M New Zealand Ltd, 94 Apollo Drive, Rosedale 0632, Auckland
Telephone: (09) 477 4040
E Mail: innovation@nz.mmm.com
Website: 3m.co.nz

1.4. Emergency telephone number

24 hr Medical Emergency, National Poisons Centre, 0800 764 766 (0800 POISON)

SECTION 2: Hazard identification

Classified as hazardous in accordance with the relevant criteria of the HSNO Act 1996 and the Hazardous Substances (Hazard Classification) Notice 2020.

Refer to Section 14 of this Safety Data Sheet for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture

Flammable Liquid: Category 2

Serious Eye Damage/Irritation: Category 2

Specific Target Organ Toxicity (repeated exposure): Category 2

2.2. Label elements

SIGNAL WORD

Danger

Symbols:

Flame | Exclamation mark | Health Hazard |

Pictograms



HAZARD STATEMENTS:

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H373	May cause damage to organs through prolonged or repeated exposure: respiratory system.

PRECAUTIONARY STATEMENTS

Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.

Response

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314	Get medical advice/attention if you feel unwell.
P337 + P313	IF eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage

P403 + P235	Store in a well-ventilated place. Keep cool.
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Disposal

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.
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SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
Ethanol	64-17-5	70 - 80
Water	7732-18-5	20 - 30

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.

A product risk assessment is recommended to determine if eye wash facilities may be required when using this product in the workplace.

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:

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 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

Carbon monoxide.

Carbon dioxide.

Condition

During combustion.

During combustion.

5.3. Special protective actions 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.

5.4. Hazchem code: -2YE

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. 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. Warning! A motor could be an ignition source and could cause flammable gases or vapors 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.

6.3. Methods and material for containment and cleaning up

Cover spill area with a fire extinguishing foam that is resistant to polar solvents. 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 water. 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

Refer to Section 15 - Controls for more information

7.1. Precautions for safe handling

Avoid prolonged or repeated skin contact. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. 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.)

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. Certified handler

Not required

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
Ethanol	64-17-5	ACGIH	STEL:1000 ppm	A3: Confirmed animal carcinogen.
Ethanol	64-17-5	New Zealand WES	TWA(8 hours):1880 mg/m ³ (1000 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

New Zealand WES : New Zealand Workplace Exposure Standards.

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

ppm: parts per million

mg/m³: milligrams per cubic metre

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.

Refer AS/NZS 1336 - Recommended practices for occupational eye protection and for performance specifications AS/NZS 1337, Parts 1 - 6 - Personal eye-protection.

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	Liquid.
Specific Physical Form:	Liquid.
Colour	Colourless
Odour	Characteristic Odour
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	82.2 °C
Flash point	21.1 °C [Test Method: Closed Cup]
Evaporation rate	<i>No data available.</i>
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	3.3 % [Details: for Ethanol]
Flammable Limits(UEL)	19 % [Details: for Ethanol]
Vapour pressure	7,332.7 Pa [@ 25 °C]
Vapor Density and/or Relative Vapor Density	<i>No data available.</i>
Density	0.86 g/ml
Relative density	0.86 [Ref Std: WATER=1]
Water solubility	Complete
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	1.1 mPa-s
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>

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

None known.

10.6 Hazardous decomposition products

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

Refer to Section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not 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

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

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

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.

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:

Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure.

Additional information:

This product contains ethanol. Alcoholic beverages and ethanol in alcoholic beverages have been classified by the International Agency for Research on Cancer as carcinogenic to humans. There are also data associating human consumption of alcoholic beverages with developmental toxicity and liver toxicity. Exposure to ethanol during the foreseeable use of this product is not expected to cause cancer, developmental toxicity, or liver toxicity.

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
Ethanol	Dermal	Rabbit	LD50 > 15,800 mg/kg
Ethanol	Inhalation-Vapor (4 hours)	Rat	LC50 124.7 mg/l
Ethanol	Ingestion	Rat	LD50 17,800 mg/kg
3-Methacryloxypropyltrimethoxysilane	Dermal	Rabbit	LD50 > 20,900 mg/kg
3-Methacryloxypropyltrimethoxysilane	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.28 mg/l
3-Methacryloxypropyltrimethoxysilane	Ingestion	Rat	LD50 > 5,225 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Ethanol	Rabbit	No significant irritation
3-Methacryloxypropyltrimethoxysilane	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Ethanol	Rabbit	Severe irritant
3-Methacryloxypropyltrimethoxysilane	Rabbit	Mild irritant

Sensitisation:

Skin Sensitisation

Name	Species	Value
Ethanol	Human	Not classified
3-Methacryloxypropyltrimethoxysilane	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
Ethanol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Ethanol	In vivo	Some positive data exist, but the data are not sufficient for classification
3-Methacryloxypropyltrimethoxysilane	In Vitro	Not mutagenic
3-Methacryloxypropyltrimethoxysilane	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Ethanol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification

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

Name	Route	Value	Species	Test result	Exposure Duration
Ethanol	Inhalation	Not classified for development	Rat	NOAEL 38 mg/l	during gestation
Ethanol	Ingestion	Not classified for development	Rat	NOAEL 5,200 mg/kg/day	prematuring & during gestation
3-Methacryloxypropyltrimethoxysilane	Ingestion	Not classified for development	Rat	NOAEL 2,100 mg/kg/day	during organogenesis

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

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Ethanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	LOAEL 9.4 mg/l	not available
Ethanol	Inhalation	central nervous system depression	Not classified	Human and animal	NOAEL not available	
Ethanol	Ingestion	central nervous system depression	Not classified	Multiple animal species	NOAEL not available	
Ethanol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Ethanol	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rabbit	LOAEL 124 mg/l	365 days
Ethanol	Inhalation	hematopoietic system immune system	Not classified	Rat	NOAEL 25 mg/l	14 days
Ethanol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 8,000 mg/kg/day	4 months
Ethanol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg/day	7 days
3-Methacryloxypropyltrimethoxysilane	Dermal	skin liver kidney and/or bladder	Not classified	Rabbit	NOAEL 2,100 mg/kg/day	17 days
3-Methacryloxypropyltrimethoxysilane	Inhalation	respiratory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 0.05 mg/l	14 weeks
3-Methacryloxypropyltrimethoxysilane	Inhalation	liver hematopoietic system eyes kidney and/or bladder	Not classified	Rat	NOAEL 0.244 mg/l	14 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

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Ethanol	64-17-5	Fathead minnow	Experimental	96 hours	LC50	14,200 mg/l
Ethanol	64-17-5	Fish	Experimental	96 hours	LC50	11,000 mg/l
Ethanol	64-17-5	Green algae	Experimental	72 hours	EC50	275 mg/l
Ethanol	64-17-5	Water flea	Experimental	48 hours	LC50	5,012 mg/l
Ethanol	64-17-5	Green algae	Experimental	72 hours	ErC10	11.5 mg/l
Ethanol	64-17-5	Water flea	Experimental	10 days	NOEC	9.6 mg/l
3-Methacryloxypropyltrimethoxysilane	2530-85-0	Green algae	Experimental	72 hours	EC50	>100 mg/l
3-Methacryloxypropyltrimethoxysilane	2530-85-0	Water flea	Experimental	48 hours	EC50	>100 mg/l
3-Methacryloxypropyltrimethoxysilane	2530-85-0	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
3-Methacryloxypropyltrimethoxysilane	2530-85-0	Green algae	Experimental	72 hours	NOEC	>=100 mg/l
3-Methacryloxypropyltrimethoxysilane	2530-85-0	Activated sludge	Experimental	3 hours	EC50	>=1,000 mg/l
3-Methacryloxypropyltrimethoxysilane	2530-85-0	Redworm	Experimental	14 days	LC50	>1,000 mg/kg (Dry Weight)

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Ethanol	64-17-5	Experimental Biodegradation	14 days	BOD	89 %BOD/ThOD	OECD 301C - MITI test (I)

3-Methacryloxypropyltrimethoxysilane	2530-85-0	Experimental Biodegradation	28 days	BOD	69 %BOD/ThOD (< 10 day window)	OECD 301F - Manometric respirometry
3-Methacryloxypropyltrimethoxysilane	2530-85-0	Experimental Hydrolysis		Hydrolytic half-life	4 hours (t 1/2)	

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Ethanol	64-17-5	Experimental Bioconcentration		Log Kow	-0.35	
3-Methacryloxypropyltrimethoxysilane	2530-85-0	Experimental BCF - Fish	42 days	Bioaccumulation factor	<34	OECD305-Bioconcentration
3-Methacryloxypropyltrimethoxysilane	2530-85-0	Experimental Bioconcentration		Log Kow	2.1	

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

In accordance with the Hazardous Substances (Disposal) Notice 2017 and the relevant criteria of the HSNO Act 1996.

Incinerate in a permitted waste incineration facility.

Packaging (that may or may not contain any residual substance) may be lawfully disposed of by householders or other consumers through public or commercial waste collection services.

SECTION 14: Transport Information

New Zealand Land Transport Rule: Dangerous Goods - Road/Rail Transport

UN No.: UN1170

Proper Shipping Name: ETHANOL SOLUTION

Class/Division: 3

Sub Risk: Not applicable.

Packing Group: II

Special Instructions: Dangerous goods in Excepted Quantities, Class 3

Hazchem Code: -2YE

IERG: 14

International Air Transport Association (IATA) - Air Transport

UN No.: UN1170

Proper Shipping Name: ETHANOL SOLUTION
Class/Division: 3
Sub Risk: Not applicable.
Packing Group: II
Special Instructions: Dangerous goods in Excepted Quantities, Class 3

International Maritime Dangerous Goods Code (IMDG) - Marine Transport

UN No.: UN1170
Proper Shipping Name: ETHANOL SOLUTION
Class/Division: 3
Sub Risk: Not applicable.
Packing Group: II
Marine Pollutant: Not applicable.
Special Instructions: FORBIDDEN BY THIS MODE OF TRANSPORT, 3M DIVISION POLICY

SECTION 15: Regulatory information

HSNO Approval number HSR002556
 Group standard name Dental Products (Flammable) Group Standard 2020
 HSNO Hazard classification Refer to Section 2: Hazard identification

NZ Inventory of Chemicals (NZIoC) Status

All applicable chemical ingredients in this material are in compliance with NZIoC listing requirements.

Controls in accordance with The Health and Safety at Work Act 2015, Health and Safety at Work (Hazardous Substances) Regulations 2017 and the HSNO Act 1996, Hazardous Substances (Hazardous Property Controls) Notice 2017

Certified handler	Not required
Location Compliance Certificate	100 L (closed containers greater than 5 L) 250 L (closed containers up to and including 5 L) 50 L (open containers)
Hazardous atmosphere zone	100 L (closed containers) 25 L (decanting) 5 L (open occasionally) 1 L (open containers in continuous use)
Fire extinguishers	Two required for 250 L
Emergency response plan	100 L (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L (for all other substances)
Secondary containment	100 L (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L (for all other substances)
Tracking	Not required
Warning signage	100 L (for Hazardous to the aquatic environment Category 1 substances); or 250 L (for all other substances)

SECTION 16: Other information

Revision information:

Complete document review.

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Key to abbreviations and acronyms

GHS refers to the Globally Harmonised System of Classification and Labelling of Chemicals, 7th revised edition of 2017
HSNO means Hazardous Substances and New Organisms Act 1996

The information in this Safety Data Sheet (SDS) is believed to be correct as of the date of issue. TO THE EXTENT

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