

Safety Data Sheet

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Document group:	16-2775-1	Version number:	2.00
Issue Date:	14/07/2019	Supersedes date:	21/01/2015

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

IDENTIFICATION:

1.1. Product identifier 3M[™] ESPE[™] Ketac-Molar Quick Aplicap

Product Identification Numbers 70-2011-4264-6

1.2. Recommended use and restrictions on use

Recommended use Dental Product, Dental restoratives

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)

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

16-2773-6, 16-2774-4

One or more components of this KIT is classified as a hazardous substance in accordance with the relevant criteria of the HSNO Act 1996, the Hazardous Substances (Classification) Notice 2017 and the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017.

TRANSPORT INFORMATION

NOT HAZARDOUS FOR TRANSPORT

Revision information:

Complete document review.

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Document group:	16-2773-6	Version number:	2.00
Issue Date:	14/07/2019	Supersedes date:	02/11/2014

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 3MTM ESPETM KETAC-MOLAR QUICK APLICAP POWDER

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Restorative

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, the Hazardous Substances (Classification) Notice 2017 and Hazardous Substances (Minimum Degrees of Hazard) Notice 2017. Refer to Section 14 of this Safety Data Sheet for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture

GHS	HSNO
Acute Toxicity (oral): Category 5	6.1E Acute toxicity (oral)

2.2. Label elements SIGNAL WORD WARNING!

3M[™] ESPE[™] KETAC-MOLAR QUICK APLICAP POWDER

Symbols:

Not applicable.

HAZARD STATEMENTS: H303

May be harmful if swallowed.

PRECAUTIONARY STATEMENTS

Response:

P312

Call a POISON CENTRE or doctor/physician if you feel unwell.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
Copolymer of acrylic and maleic acids	29132-58-9	1 - 6
Dichlorodimethylsilane, reaction products with silica	68611-44-9	< 2

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

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

<u>Substance</u> Carbon monoxide. Carbon dioxide. Irritant vapours or gases. **Condition** During combustion. During combustion. During combustion.

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

5.4. Hazchem code: Not applicable.

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. Observe precautions from other sections.

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. Use wet sweeping compound or water to avoid dusting. Sweep up. 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

Refer to Section 15 - Controls for more information

7.1. Precautions for safe handling

Avoid prolonged or repeated skin contact. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements.

7.3. Certified handler

Not required

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.

Page: 3 of 9

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

Physical state	Solid.
Specific Physical Form:	Powder
Appearance/Odour	Different coloured, odourless, powde
Odour threshold	No data available.
рН	No data available.
Melting point/Freezing point	No data available.
Boiling point/Initial boiling point/Boiling range	Not applicable.
Flash point	No flash point
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	Not applicable.
Flammable Limits(UEL)	Not applicable.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Relative density	>=1 [<i>Ref Std</i> :WATER=1]
Water solubility	Nil
Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	No data available.
Autoignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	Not applicable.
Volatile organic compounds (VOC)	Not applicable.
Percent volatile	Not applicable.
VOC less H2O & exempt solvents	Not applicable.

SECTION 10: Stability and reactivit

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

None known.

3MTM ESPETM KETAC-MOLAR QUICK APLICAP POWDER

10.5 Incompatible materials None known.

10.6 Hazardous decomposition products

Condition

None known.

Substance

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.

Skin contact

Mechanical skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

Eye contact

Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

Ingestion

May be harmful if swallowed.

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	Inhalation-		No data available; calculated ATE >12.5 mg/l
	Dust/Mist(4		
	hr)		
Overall product	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
Copolymer of acrylic and maleic acids	Ingestion	Rat	LD50 > 2,000 mg/kg
Copolymer of acrylic and maleic acids	Dermal	similar	LD50 Not available
		health	
		hazards	
Dichlorodimethylsilane, reaction products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Dichlorodimethylsilane, reaction products with silica	Inhalation-	Rat	LC50 > 0.691 mg/l
	Dust/Mist		-
	(4 hours)		
Dichlorodimethylsilane, reaction products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
ATE - aquita taviaity actimata			

ATE = acute toxicity estimate

3MTM ESPETM KETAC-MOLAR QUICK APLICAP POWDER

Skin Corrosion/Irritation

Name	Species	Value
Dichlorodimethylsilane, reaction products with silica	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Dichlorodimethylsilane, reaction products with silica	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Dichlorodimethylsilane, reaction products with silica	Human and	Not classified
	animal	

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
Dichlorodimethylsilane, reaction products with silica	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Dichlorodimethylsilane, reaction products with silica	Not	Mouse	Some positive data exist, but the data are not
	specified.		sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure
					Duration
Dichlorodimethylsilane, reaction products with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Dichlorodimethylsilane, reaction products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Dichlorodimethylsilane, reaction products with silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

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
Dichlorodimethylsilane, reaction products with silica	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure

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	Туре	Exposure	Test endpoint	Test result
Copolymer of acrylic and maleic acids	29132-58-9	Water flea	Experimental	48 hours	EC50	>100 mg/l
Copolymer of acrylic and maleic acids	29132-58-9	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Copolymer of acrylic and maleic acids	29132-58-9	Green algae	Experimental	96 hours	Effect Concentration 10%	32 mg/l
Copolymer of acrylic and maleic acids	29132-58-9	Water flea	Experimental	21 days	NOEC	350 mg/l
Copolymer of acrylic and maleic acids	29132-58-9	Zebra Fish	Experimental	14 days	NOEC	40 mg/l
Dichlorodimeth ylsilane, reaction products with silica	68611-44-9		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Copolymer of	29132-58-9	Experimental	28 days	BOD	< 14 % weight	Other methods
acrylic and		Biodegradation	-		_	
maleic acids						
Dichlorodimeth	68611-44-9	Data not			n/a	
ylsilane,		availbl-				
reaction		insufficient				
products with						
silica						

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Copolymer of acrylic and maleic acids	29132-58-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

3MTM ESPETM KETAC-MOLAR QUICK APLICAP POWDER

Dichlorodimeth	68611-44-9	Data not	N/A	N/A	N/A	N/A
ylsilane,		available or				
reaction		insufficient for				
products with		classification				
silica						

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.

Dispose of waste product in a permitted industrial waste 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.: Not applicable. Proper Shipping Name: Not applicable. Class/Division: Not applicable. Sub Risk: Not applicable. Packing Group: Not applicable.

Hazchem Code: Not applicable. IERG: Not applicable.

International Air Transport Association (IATA) - Air Transport

UN No.: Not applicable. Proper Shipping Name: Not applicable. Class/Division: Not applicable. Sub Risk: Not applicable. Packing Group: Not applicable.

International Maritime Dangerous Goods Code (IMDG) - Marine Transport

UN No.: Not applicable. Proper Shipping Name: Not applicable. Class/Division: Not applicable. Sub Risk: Not applicable. Packing Group: Not applicable. Marine Pollutant: Not applicable.

SECTION 15: Regulatory information

HSNO Approval number HSR002558

3MTM ESPETM KETAC-MOLAR QUICK APLICAP POWDER

Group standard nameDental Products (Subsidiary Hazard) Group Standard 2017HSNO Hazard classificationRefer to Section 2: Hazard identification

NZ Inventory of Chemicals (NZIoC) Status

All ingredients are listed on the New Zealand Inventory of Chemicals.

Controls in accordance with the Health and Safety at Work (Hazardous Substances) Regulations 2017

Certified handler	Not required
Location Compliance Certificate	Not required
Hazardous atmosphere zone	Not required
Fire extinguishers	Not required
Emergency response plan	100 L or 100 kg (for a HSNO 9.1A substance); or 1,000 L or 1,000 kg (for a
	HSNO 6.1D, 6.5A, 6.5B, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg
	(for a HSNO 6.6A, 6.8A, 6.9A, 8.3A, 9.1D substance)
Secondary containment	100 L or 100 kg (for a HSNO 9.1A substance); or 1,000 L or 1,000 kg (for a
	HSNO 6.1D, 6.5A, 6.5B, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg
	(for a HSNO 6.6A, 6.8A, 6.9A, 8.3A, 9.1D substance)
Tracking	Not required
Warning signage	100 L or 100 kg (for a HSNO 9.1A substance); or 1,000 L or 1,000 kg (for a
	HSNO 8.3A, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg (for a HSNO
	6.1D or 9.1D substance)

SECTION 16: Other information

Revision information:

Complete document review.

Document group:	16-2773-6	Version number:	2.00
Issue Date:	14/07/2019	Supersedes date:	02/11/2014

Key to abbreviations and acronyms

GHS means the Globally Harmonised System of Classification and Labelling of Chemicals, 5th revised edition 2013 **HSNO** means Hazardous Substances and New Organisms Act 1996

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Document group:	16-2774-4	Version number:	3.00
Issue Date:	14/07/2019	Supersedes date:	07/10/2014

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[™] ESPE[™] KETAC[™] MOLAR QUICK APLICAP LIQUID

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Dental restorative

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

Not classified as hazardous in accordance with the relevant criteria of the HSNO Act 1996, the Hazardous Substances (Classification) Notice 2017 and Hazardous Substances (Minimum Degrees of Hazard) Notice 2017. Refer to Section 14 of this Safety Data Sheet for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture

GHS	HSNO
Not classified as hazardous.	Not classified as hazardous.

2.2. Label elements SIGNAL WORD Not applicable.

Symbols:

Not applicable.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
Water	7732-18-5	40 - 55
Copolymer of acrylic and maleic acids	29132-58-9	35 - 50
Tartaric acid	87-69-4	5 - 10

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

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

<u>Substance</u> Carbon monoxide. Carbon dioxide. Irritant vapours or gases.

Condition

During combustion. During combustion. During combustion.

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

5.4. Hazchem code: Not applicable.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ventilate the area with fresh air. Observe precautions from other sections.

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. Clean up residue with water. Dispose of collected material as soon as possible in accordance with applicable local/regional/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. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Keep away from reactive metals (eg. Aluminum, zinc etc.) to avoid the formation of hydrogen gas that could create an explosion hazard.

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements.

7.3. Certified handler

Not required

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.

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
Appearance/Odour	Slight characteristic odour, colourless.
Odour threshold	No data available.
рН	< 2
Melting point/Freezing point	No data available.
Boiling point/Initial boiling point/Boiling range	100 °C
Flash point	No flash point
Evaporation rate	No data available.
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	Not applicable.
Flammable Limits(UEL)	Not applicable.
Vapour pressure	No data available.
Vapour density	No data available.
Density	No data available.
Relative density	>=1 [<i>Ref Std</i> :WATER=1]
Water solubility	Complete
Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	No data available.
Autoignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	<=10,000 mPa-s
Volatile organic compounds (VOC)	No data available.
Percent volatile	No data available.
VOC less H2O & exempt solvents	No data available.

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 None known.

10.5 Incompatible materials None known.

10.6 Hazardous decomposition products

Substance None known. **Condition**

3MTM ESPETM KETACTM MOLAR QUICK APLICAP LIQUID

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.

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
Copolymer of acrylic and maleic acids	Ingestion	Rat	LD50 > 2,000 mg/kg
Copolymer of acrylic and maleic acids	Dermal	similar	LD50 Not available
		health	
		hazards	
Tartaric acid	Dermal	Rat	LD50 > 5,000 mg/kg
Tartaric acid	Ingestion	Rat	LD50 > 2,000, < 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

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

Serious Eye Damage/Irritation

Name	Species	Value
Tartaric acid	In vitro data	Corrosive

Skin Sensitisation

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

3MTM ESPETM KETACTM MOLAR QUICK APLICAP LIQUID

Respiratory Sensitisation

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

Germ Cell Mutagenicity

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

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

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

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

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

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	Туре	Exposure	Test endpoint	Test result
Copolymer of	29132-58-9	Water flea	Experimental	48 hours	EC50	>100 mg/l
acrylic and						
maleic acids						
Copolymer of	29132-58-9	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
acrylic and						
maleic acids						
Copolymer of	29132-58-9	Green algae	Experimental	96 hours	Effect	32 mg/l
acrylic and					Concentration	
maleic acids					10%	
Copolymer of	29132-58-9	Water flea	Experimental	21 days	NOEC	350 mg/l
acrylic and						
maleic acids						
Copolymer of	29132-58-9	Zebra Fish	Experimental	14 days	NOEC	40 mg/l
acrylic and						

3MTM ESPETM KETACTM MOLAR QUICK APLICAP LIQUID

maleic acids						
Tartaric acid	87-69-4	Green Algae	Experimental	72 hours	EC50	51.4 mg/l
Tartaric acid	87-69-4	Water flea	Experimental	48 hours	EC50	93.3 mg/l
Tartaric acid	87-69-4	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Tartaric acid	87-69-4	Green Algae	Experimental	72 hours	NOEC	3.1 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Copolymer of	29132-58-9	Experimental	28 days	BOD	< 14 % weight	Other methods
acrylic and		Biodegradation				
maleic acids						
Tartaric acid	87-69-4	Experimental	28 days	BOD	85 % weight	Other methods
		Biodegradation			_	

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Copolymer of acrylic and maleic acids	29132-58-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Tartaric acid	87-69-4	Experimental Bioconcentrati on		Log Kow	-1.91	Other methods

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.

Dispose of waste product in a permitted industrial waste 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.: Not applicable. Proper Shipping Name: Not applicable. Class/Division: Not applicable. Sub Risk: Not applicable. Packing Group: Not applicable.

Hazchem Code: Not applicable. IERG: Not applicable.

3MTM ESPETM KETACTM MOLAR QUICK APLICAP LIQUID

International Air Transport Association (IATA) - Air Transport UN No.: Not applicable. Proper Shipping Name: Not applicable. Class/Division: Not applicable. Sub Risk: Not applicable. Packing Group: Not applicable.

International Maritime Dangerous Goods Code (IMDG) - Marine Transport UN No.: Not applicable. Proper Shipping Name: Not applicable. Class/Division: Not applicable. Sub Risk: Not applicable. Packing Group: Not applicable. Marine Pollutant: Not applicable.

SECTION 15: Regulatory information

HSNO Approval numberNot applicableGroup standard nameNot applicableHSNO Hazard classificationRefer 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 (Hazardous Substances) Regulations 2017

Certified handler	Not required
Location Compliance Certificate	Not required
Hazardous atmosphere zone	Not required
Fire extinguishers	Not required
Emergency response plan	Not required
Secondary containment	Not required
Tracking	Not required
Warning signage	Not required

SECTION 16: Other information

Revision information:

Complete document review.

Document group:	16-2774-4	Version number:	3.00
Issue Date:	14/07/2019	Supersedes date:	07/10/2014

Key to abbreviations and acronyms

GHS means the Globally Harmonised System of Classification and Labelling of Chemicals, 5th revised edition 2013 **HSNO** means Hazardous Substances and New Organisms Act 1996

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