



## Safety Data Sheet

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<b>Document group:</b>	16-2842-9	<b>Version number:</b>	3.00
<b>Issue Date:</b>	14/08/2018	<b>Supersedes date:</b>	14/08/2018

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™ Bond Handmix Liquid

#### Product Identification Numbers

70-2011-0438-0

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Dental Product, Part of a filling material

##### 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**

<b>Ingredient</b>	<b>CAS Nbr</b>	<b>% by Weight</b>
Water	7732-18-5	80 - 90
Tartaric acid	87-69-4	10 - 20

**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**

Material will not burn. Use a fire fighting agent suitable for the surrounding fire.

**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**

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**

Contain spill. 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. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with water. 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. Avoid release to the environment.

### **7.2. Conditions for safe storage including any incompatibilities**

Store away from heat.

### **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**

Respiratory protection is not required.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

<b>Physical state</b>	Liquid.
<b>Specific Physical Form:</b>	Liquid.
<b>Appearance/Odour</b>	slight characteristic odour, colourless liquid
<b>Odour threshold</b>	<i>No data available.</i>
<b>pH</b>	<i>No data available.</i>
<b>Melting point/Freezing point</b>	± 0 °C
<b>Boiling point/Initial boiling point/Boiling range</b>	± 100 °C
<b>Flash point</b>	No flash point
<b>Evaporation rate</b>	≤1 [Ref Std:BUOAC=1]
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Flammable Limits(LEL)</b>	<i>Not applicable.</i>
<b>Flammable Limits(UEL)</b>	<i>Not applicable.</i>
<b>Vapour pressure</b>	2,133.2 Pa [Ref Std:AIR=1]
<b>Vapour density</b>	≤1 [Ref Std:AIR=1]
<b>Relative density</b>	>=1 [Ref Std:WATER=1]
<b>Water solubility</b>	Complete
<b>Solubility- non-water</b>	<i>No data available.</i>
<b>Partition coefficient: n-octanol/water</b>	<i>No data available.</i>
<b>Autoignition temperature</b>	<i>No data available.</i>
<b>Decomposition temperature</b>	<i>No data available.</i>
<b>Viscosity</b>	<i>No data available.</i>
<b>Molecular weight</b>	<i>No data available.</i>
<b>Volatile organic compounds (VOC)</b>	<i>No data available.</i>
<b>Percent volatile</b>	<i>No data available.</i>
<b>VOC less H2O &amp; exempt solvents</b>	<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

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
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

Name	Species	Value
Overall product	Rabbit	Minimal 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.

#### 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	Type	Exposure	Test endpoint	Test result
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
Tartaric acid	87-69-4	Experimental Biodegradation	28 days	BOD	85 % weight	Other methods

### 12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Tartaric acid	87-69-4	Experimental Bioconcentration		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. Empty and clean product containers may be disposed as non-hazardous waste. Consult your specific regulations and service providers to determine available options and requirements.

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 Not applicable  
Group standard name Not applicable  
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 (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.

<b>Document group:</b>	16-2842-9	<b>Version number:</b>	3.00
<b>Issue Date:</b>	14/08/2018	<b>Supersedes date:</b>	14/08/2018

**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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