



Safety Data Sheet

Copyright, 2016, 3M Company All rights reserved. Copying and/or downloading of this information for the purpose of properly utilising 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

Document group:	16-2874-2	Version number:	4.00
Revision date:	16/05/2016	Supersedes date:	25/10/2011
Transportation version number:	1.00 (25/10/2011)		

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

3M™ ESPE™ COJET SAND

Product Identification Numbers

70-2011-0054-5

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

Identified uses

Dental Product

Restrictions on Use

For use only by dental professionals

1.3. Details of the supplier of the safety data sheet

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

This product is a medical device as defined in Directive 93/42/EEC (MDD), which is invasive or used in direct physical contact with the human body, and therefore is exempt from the requirements of classification and labelling according to Regulation (EC) No. 1272/2008 (CLP; Article 1, paragraph 5). Although not required, the classification and label information, as applicable, is provided below.

CLASSIFICATION:

This material is not classified as hazardous according to Regulation (EC) No. 1272/2008, as amended, on classification,

labelling, and packaging of substances and mixtures.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

Not applicable

2.3. Other hazards

For information on hazards and safe use, please consider the corresponding sections of this document.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Aluminium oxide	1344-28-1	215-691-6	> 97	
Synthetic amorphous silica, fumed, crystalline free	112945-52-5		< 5	
Titanium dioxide	13463-67-7	236-675-5	< 0.6	

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

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

Skin contact

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. Extinguishing media

Material will not burn.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance

None known.

Condition

During combustion.

5.3. Advice for fire-fighters

No special protective actions for fire-fighters are anticipated.

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 vapours, 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. 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.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

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

Avoid prolonged or repeated skin contact. Do not handle until all safety precautions have been read and understood. Avoid breathing 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. Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements.

7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Occupational exposure limits**

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Silicon dioxide	112945-52-5	UK HSC	TWA(as inhalable dust):6 mg/m ³ ;TWA(as respirable dust):2.4 mg/m ³	
Aluminium oxide	1344-28-1	UK HSC	TWA(as inhalable dust):10 mg/m ³ ;TWA(as respirable dust):4 mg/m ³	
Titanium dioxide	13463-67-7	UK HSC	TWA(Inhalable):10	

mg/m³;TWA(respirable):4
mg/m³

UK HSC : UK Health and Safety Commission
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

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:	Powder
Appearance/Odour	Odourless, light grey
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Boiling point/boiling range	<i>Not applicable.</i>
Melting point	1,950 °C
Flammability (solid, gas)	Not classified
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	No flash point
Autoignition temperature	<i>No data available.</i>
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapour pressure	<i>Not applicable.</i>
Relative density	3.96 [<i>Ref Std: WATER=1</i>]
Water solubility	Nil
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Evaporation rate	<i>Not applicable.</i>
Vapour density	<i>Not applicable.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	<i>No data available.</i>

Density

No data available.

9.2. Other information

Percent volatile

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

Condition

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from 3M assessments.

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

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

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

Additional Health Effects:

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

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-Dust/Mist(4 hr)		No data available; calculated ATE >12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Aluminium oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminium oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.3 mg/l
Aluminium oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Synthetic amorphous silica, fumed, crystalline free	Dermal	Rabbit	LD50 > 5,000 mg/kg
Synthetic amorphous silica, fumed, crystalline free	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Synthetic amorphous silica, fumed, crystalline free	Ingestion	Rat	LD50 > 5,110 mg/kg
Titanium dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Aluminium oxide	Rabbit	No significant irritation
Synthetic amorphous silica, fumed, crystalline free	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Aluminium oxide	Rabbit	No significant irritation
Synthetic amorphous silica, fumed, crystalline free	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Synthetic amorphous silica, fumed, crystalline free	Human and animal	Not sensitising
Titanium dioxide	Human and animal	Not sensitising

Respiratory Sensitisation

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

Germ Cell Mutagenicity

3M™ ESPE™ COJET SAND

Name	Route	Value
Aluminium oxide	In Vitro	Not mutagenic
Synthetic amorphous silica, fumed, crystalline free	In Vitro	Not mutagenic
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Aluminium oxide	Inhalation	Rat	Not carcinogenic
Synthetic amorphous silica, fumed, crystalline free	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium dioxide	Inhalation	Rat	Carcinogenic.

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

Name	Route	Value	Species	Test result	Exposure Duration
Synthetic amorphous silica, fumed, crystalline free	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline free	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline free	Ingestion	Not toxic to 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 is currently available or the data is not sufficient for classification.

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Aluminium oxide	Inhalation	pneumoconiosis pulmonary fibrosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Synthetic amorphous silica, fumed, crystalline free	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Titanium dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium dioxide	Inhalation	pulmonary fibrosis	All data are negative	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

For the component/components, either no data is currently available or the data is 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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from

3M assessments.**12.1. Toxicity**

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Synthetic amorphous silica, fumed, crystalline free	112945-52-5	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Synthetic amorphous silica, fumed, crystalline free	112945-52-5	Water flea	Experimental	24 hours	EC50	>100 mg/l
Synthetic amorphous silica, fumed, crystalline free	112945-52-5	Green Algae	Experimental	72 hours	EC50	>100 mg/l
Synthetic amorphous silica, fumed, crystalline free	112945-52-5	Green Algae	Experimental	72 hours	NOEC	60 mg/l
Aluminium oxide	1344-28-1	Fish	Experimental	96 hours	LC50	>100 mg/l
Aluminium oxide	1344-28-1	Water flea	Experimental	48 hours	EC50	>100 mg/l
Aluminium oxide	1344-28-1	Green algae	Experimental	72 hours	EC50	>100 mg/l
Aluminium oxide	1344-28-1	Green algae	Experimental	72 hours	NOEC	>100 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium dioxide	13463-67-7	Sheepshead Minnow	Experimental	96 hours	LC50	>240 mg/l
Titanium dioxide	13463-67-7	Fish	Experimental	30 days	NOEC	>100 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	30 days	NOEC	3 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Synthetic amorphous silica, fumed, crystalline free	112945-52-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Aluminium oxide	1344-28-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

3M™ ESPE™ COJET SAND**12.3 : Bioaccumulative potential**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Synthetic amorphous silica, fumed, crystalline free	112945-52-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Experimental BCF-Carp	42 days	Bioaccumulation factor	9.6	Other methods
Aluminium oxide	1344-28-1	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. Results of the PBT and vPvB assessment

No information available at this time, contact manufacturer for more details

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

See Section 11.1 Information on toxicological effects

Dispose of waste product in a permitted industrial waste facility.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product as sold)

180107 Chemicals other than those mentioned in 18 01 06

SECTION 14: Transportation information

70-2011-0054-5

Not hazardous for transportation

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

Titanium dioxide

CAS Nbr

13463-67-7

Classification

Grp. 2B: Possible human carc.

Regulation

International Agency for Research on Cancer

Global inventory status

Contact 3M for more information. The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA.

15.2. Chemical Safety Assessment

Not applicable

SECTION 16: Other information

Revision information:

Company Telephone information was added.

Section 1: Restrictions on use information information was added.

Section 2.1: Classification information information was deleted.

Label: CLP Classification information was added.

Section 02: Label Elements: CLP Medical Device information was added.

Section 2: Label ingredient information information was deleted.

Section 2: Other hazards phrase information was modified.

Risk phrase - None information was deleted.

Section 3: Composition/ Information of ingredients table information was modified.

Section 3: Reference to H statement explanation in Section 016 information was added.

Section 3: Reference to R and H statement explanation in Section 16 information was deleted.

Section 3: Reference to section 15 for Nota info information was deleted.

Section 5: Fire - Advice for fire fighters information information was modified.

Section 6: Accidental release clean-up information information was modified.

Section 6: Accidental release personal information information was modified.

Section 7: Precautions safe handling information information was modified.

Section 8: Appropriate Engineering controls information information was modified.

Section 8: BLV information was added.

Section 8: Eye/face protection text information was deleted.

Section 8: mg/m³ key information was deleted.

Section 8: Occupational exposure limit table information was added.

Section 8: Occupational exposure limit table information was modified.

OEL Reg Agency Desc information was modified.

Section 8: Personal Protection - Eye information information was added.

Section 8: Personal Protection - Skin/hand information information was added.

Section 8: ppm key information was deleted.

Section 8: Skin/hand protection information information was deleted.

Section 9: Decomposition Temperature information was added.

Section 9: Odour Threshold information was added.

Section 9: Property description for optional properties information was added.

Section 9: Property description for optional properties information was deleted.

Section 9: Solubility (non-water) information was added.

Section 9: Specific physical form information information was modified.

Section 10.1: Reactivity information information was modified.

Section 10: Hazardous decomposition products during combustion text information was added.

Section 11: Acute Toxicity table information was modified.

Section 11: Aspiration Hazard Table information was deleted.

Section 11: Aspiration Hazard text information was added.

Section 11: Cancer Hazards information information was added.

Section 11: Carcinogenicity Table information was modified.

Section 11: Classification disclaimer information was added.

Section 11: Classification disclaimer information was deleted.
Section 11: Disclosed components not in tables text information was added.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Eye information information was modified.
Section 11: Health Effects - Inhalation information information was modified.
Section 11: Health Effects - Skin information information was modified.
Section 11: Reproductive and/or Developmental Effects text information was added.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Respiratory Sensitization Table information was deleted.
Section 11: Respiratory Sensitization text information was added.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Specific Target Organ Toxicity - single exposure text information was added.
Section 11: Target Organs - Repeated Table information was modified.
Section 11: Target Organs - Single Table information was deleted.
Section 12: Acute aquatic hazard information information was deleted.
Section 12: Chronic aquatic hazard information information was deleted.
Section 12: Classification Warning information was added.
Section 12: Classification Warning information was deleted.
Section 12: Component ecotoxicity information information was added.
Prints No Data if Bioaccumulative potential information is not present information was deleted.
Prints No Data if Component ecotoxicity information is not present information was deleted.
Prints No Data if Persistence and Degradability information is not present information was deleted.
Section 12: Persistence and Degradability information information was added.
Section 12: Bioaccumulative potential information information was added.
Section 13: 13.1. Waste disposal note information was modified.
Section 13: EU waste code (product as sold) information information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 15: Regulations - Inventories information was modified.
Section 15: Symbol information information was deleted.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material.
information was deleted.

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 United Kingdom MSDSs are available at www.3M.com/uk