



## Safety Data Sheet

Copyright, 2015, 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.

<b>Document group:</b>	29-0805-1	<b>Version number:</b>	4.00
<b>Revision date:</b>	22/06/2015	<b>Supersedes date:</b>	16/03/2015
<b>Transportation version number:</b> 1.00 (23/09/2011)			

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 Easy Clean Coating ECC-7000

#### Product Identification Numbers

ZF-0002-1713-1

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

##### Identified uses

Coating.

#### 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

##### CLASSIFICATION:

Hazardous to the Aquatic Environment (Chronic), Category 4 - Aquatic Chronic 4; H413

For full text of H phrases, see Section 16.

#### 2.2. Label elements

CLP REGULATION (EC) No 1272/2008

##### HAZARD STATEMENTS:

H413 May cause long lasting harmful effects to aquatic life.

**PRECAUTIONARY STATEMENTS****Disposal:**

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

**SUPPLEMENTAL INFORMATION****Supplemental Hazard Statements:**

EUH018 In use, may form flammable/explosive vapour-air mixture.

15% of the mixture consists of components of unknown acute oral toxicity.

Contains 15% of components with unknown hazards to the aquatic environment.

**2.3. Other hazards**

None known.

**SECTION 3: Composition/information on ingredients**

<b>Ingredient</b>	<b>CAS Nbr</b>	<b>EU Inventory</b>	<b>% by Wt</b>	<b>Classification</b>
Ethyl nonafluorobutyl ether	163702-05-4	ELINCS 425-340-0	20 - 80	Aquatic Chronic 4, H413 (CLP)
Ethyl nonafluoroisobutyl ether	163702-06-5	ELINCS 425-340-0	20 - 80	Aquatic Chronic 4, H413 (CLP)
Polymer solids	Trade Secret		5 - 15	

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

Please refer to section 15 for any applicable Notas that have been applied to the above components

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

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

Exposure to extreme heat can give rise to thermal decomposition.

### Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Amine compounds.	During combustion.
Tetrafluoroethylene	During combustion.
Hexafluoropropylene	During combustion.
Hydrocarbons.	During combustion.
Formaldehyde	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Crystalline Silica	During combustion.
Hydrogen Fluoride	During combustion.
Oxides of nitrogen.	During combustion.
Toxic vapour, gas, particulate.	During combustion.

### 5.3. Advice for fire-fighters

When fire fighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, tunic and trousers (leggings), bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust 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. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

### 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 detergent and water. 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 eye contact. Avoid inhalation of thermal decomposition products. For industrial or professional use only. Do not use

## 3M Easy Clean Coating ECC-7000

in a confined area with minimal air exchange. Avoid 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. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

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

Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from acids. Store away from strong bases. Store away from oxidising agents.

### 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
Ethyl nonafluorobutyl ether	163702-05-4	Manufacturer determined	TWA(as total isomers):200 ppm	
Ethyl nonafluoroisobutyl ether	163702-06-5	Manufacturer determined	TWA(as total isomers):200 ppm	

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

Provide appropriate local exhaust when product is heated. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

#### 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

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

Gloves made from the following material(s) are recommended:

Material	Thickness (mm)	Breakthrough Time
----------	----------------	-------------------

## 3M Easy Clean Coating ECC-7000

Polymer laminate

No data available

No data available

### Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

During heating:

Use a positive pressure supplied-air respirator if there is a potential for over exposure from an uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

Half facepiece or full facepiece supplied-air respirator

For questions about suitability for a specific application, consult with your respirator manufacturer.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Appearance/Odour	Colourless to yellow faint odour.
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Boiling point/boiling range	76 °C
Melting point	<i>Not applicable.</i>
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	<i>Not applicable.</i>
Autoignition temperature	<i>No data available.</i>
Flammable Limits(LEL)	210 g/m <sup>3</sup> [ <i>Details:ASTM E681-94 Method</i> ]
Flammable Limits(UEL)	1,070 g/m <sup>3</sup> [ <i>Details:ASTM E681-94 Method</i> ]
Vapour pressure	14,532.1 Pa
Relative density	1.44 [ <i>@ 20 °C</i> ] [ <i>Ref Std:WATER=1</i> ]
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Evaporation rate	33 [ <i>Ref Std:BUOAC=1</i> ]
Vapour density	9.1 [ <i>Ref Std:AIR=1</i> ]
Decomposition temperature	<i>No data available.</i>
Viscosity	<i>No data available.</i>
Density	1.44 g/ml [ <i>@ 20 °C</i> ]

### 9.2. Other information

Percent volatile	90 %
------------------	------

## 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

## 3M Easy Clean Coating ECC-7000

Hazardous polymerisation will not occur.

### 10.4 Conditions to avoid

None known.

### 10.5 Incompatible materials

Strong acids.

Strong bases.

Strong oxidising agents.

Reducing agents.

Alcohols.

Water

### 10.6 Hazardous decomposition products

#### Substance

#### Condition

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

Extreme heat arising from situations such as misuse or equipment failure can generate hydrogen fluoride as a decomposition product.

## 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

No known health effects.

#### Skin contact

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

#### Eye contact

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

#### Ingestion

May be harmful if swallowed.

#### 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 ATE2,000 - 5,000

**3M Easy Clean Coating ECC-7000**

			mg/kg
Ethyl nonafluoroisobutyl ether	Inhalation-Vapor (4 hours)	Rat	LC50 > 989 mg/l
Ethyl nonafluoroisobutyl ether	Ingestion	Rat	LD50 > 2,000 mg/kg
Ethyl nonafluorobutyl ether	Inhalation-Vapor (4 hours)	Rat	LC50 > 989 mg/l
Ethyl nonafluorobutyl ether	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Ethyl nonafluoroisobutyl ether	Rabbit	No significant irritation
Ethyl nonafluorobutyl ether	Rabbit	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
Ethyl nonafluoroisobutyl ether	Rabbit	No significant irritation
Ethyl nonafluorobutyl ether	Rabbit	No significant irritation

**Skin Sensitisation**

Name	Species	Value
Ethyl nonafluoroisobutyl ether	Guinea pig	Not sensitising
Ethyl nonafluorobutyl ether	Guinea pig	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**

Name	Route	Value
Ethyl nonafluoroisobutyl ether	In Vitro	Not mutagenic
Ethyl nonafluoroisobutyl ether	In vivo	Not mutagenic
Ethyl nonafluorobutyl ether	In Vitro	Not mutagenic
Ethyl nonafluorobutyl ether	In vivo	Not mutagenic

**Carcinogenicity**

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

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

Name	Route	Value	Species	Test result	Exposure Duration
Ethyl nonafluoroisobutyl ether	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	28 days
Ethyl nonafluoroisobutyl ether	Inhalation	Not toxic to female reproduction	Rat	NOAEL 260.1 mg/l	during gestation
Ethyl nonafluoroisobutyl ether	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	28 days
Ethyl nonafluoroisobutyl ether	Inhalation	Not toxic to male reproduction	Rat	NOAEL 263.4 mg/l	4 weeks
Ethyl nonafluoroisobutyl ether	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 260 mg/l	during gestation
Ethyl nonafluorobutyl ether	Ingestion	Not toxic to female reproduction	Rat	NOAEL	28 days

**3M Easy Clean Coating ECC-7000**

				1,000 mg/kg/day	
Ethyl nonafluorobutyl ether	Inhalation	Not toxic to female reproduction	Rat	NOAEL 260.1 mg/l	during gestation
Ethyl nonafluorobutyl ether	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	28 days
Ethyl nonafluorobutyl ether	Inhalation	Not toxic to male reproduction	Rat	NOAEL 263.4 mg/l	4 weeks
Ethyl nonafluorobutyl ether	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 260 mg/l	during gestation

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Ethyl nonafluoroisobutyl ether	Inhalation	cardiac sensitization	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 204 mg/l	17 minutes
Ethyl nonafluoroisobutyl ether	Inhalation	respiratory irritation	All data are negative	Rat	NOAEL 989 mg/l	4 hours
Ethyl nonafluorobutyl ether	Inhalation	cardiac sensitization	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 204 mg/l	17 minutes
Ethyl nonafluorobutyl ether	Inhalation	respiratory irritation	All data are negative	Rat	NOAEL 989 mg/l	4 hours

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Ethyl nonafluoroisobutyl ether	Inhalation	liver   kidney and/or bladder   respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 263.4 mg/l	4 weeks
Ethyl nonafluoroisobutyl ether	Inhalation	heart   endocrine system   bone marrow   hematopoietic system   immune system   nervous system	All data are negative	Rat	NOAEL 263.4 mg/l	4 weeks
Ethyl nonafluoroisobutyl ether	Ingestion	blood   liver   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	28 days
Ethyl nonafluoroisobutyl ether	Ingestion	heart   endocrine system   bone marrow   hematopoietic system   immune system   nervous system   respiratory system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
Ethyl nonafluorobutyl ether	Inhalation	liver   kidney and/or bladder   respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 263.4 mg/l	4 weeks
Ethyl nonafluorobutyl ether	Inhalation	heart   endocrine system   bone marrow   hematopoietic system   immune system   nervous system	All data are negative	Rat	NOAEL 263.4 mg/l	4 weeks
Ethyl nonafluorobutyl ether	Ingestion	blood   liver   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	28 days
Ethyl nonafluorobutyl ether	Ingestion	heart   endocrine	All data are negative	Rat	NOAEL	28 days



**3M Easy Clean Coating ECC-7000**

ether		system   bone marrow   hematopoietic system   immune system   nervous system   respiratory system			1,000 mg/kg/day	
-------	--	---	--	--	-----------------	--

**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
Ethyl nonafluorobutyl ether	163702-05-4	Water flea	Experimental	48 hours	EC50	>100 mg/l
Ethyl nonafluorobutyl ether	163702-05-4	Fathead minnow	Experimental	96 hours	LC50	>100 mg/l
Ethyl nonafluorobutyl ether	163702-05-4	Green Algae	Experimental	96 hours	EC50	>100 mg/l
Ethyl nonafluoroisobutyl ether	163702-06-5	Water flea	Experimental	48 hours	EC50	>100 mg/l
Ethyl nonafluoroisobutyl ether	163702-06-5	Green Algae	Experimental	96 hours	EC50	>100 mg/l
Ethyl nonafluoroisobutyl ether	163702-06-5	Fathead minnow	Experimental	96 hours	LC50	>100 mg/l

**12.2. Persistence and degradability**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Ethyl nonafluorobutyl ether	163702-05-4	Experimental Biodegradation	28 days	BOD	0 % weight	OECD 301D - Closed bottle test
Ethyl nonafluorobutyl ether	163702-05-4	Estimated Hydrolysis		Hydrolytic half-life	648 days (t <sub>1/2</sub> )	Other methods
Ethyl nonafluoroisobutyl ether	163702-06-5	Estimated Hydrolysis		Hydrolytic half-life	648 days (t <sub>1/2</sub> )	Other methods

**3M Easy Clean Coating ECC-7000**

ethyl ether						
Ethyl nonafluoroisobutyl ether	163702-06-5	Experimental Biodegradation	28 days	BOD	0 % weight	OECD 301D - Closed bottle test

**12.3 : Bioaccumulative potential**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Ethyl nonafluorobutyl ether	163702-05-4	Experimental BCF-Carp	56 days	Bioaccumulation factor	919	OECD 305E - Bioaccumulation flow-through fish test
Ethyl nonafluoroisobutyl ether	163702-06-5	Experimental BCF-Carp	56 days	Bioaccumulation factor	919	OECD 305E - Bioaccumulation flow-through fish test

**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. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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)**

070103\* Organic halogenated solvents, washing liquids and mother liquors

**SECTION 14: Transportation information**

ZF-0002-1713-1

Not hazardous for transportation

**SECTION 15: Regulatory information**

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

#### **Global inventory status**

Contact 3M for more information.

#### **15.2. Chemical Safety Assessment**

Not applicable

## **SECTION 16: Other information**

### **List of relevant H statements**

H413 May cause long lasting harmful effects to aquatic life.

#### **Revision information:**

Revision Changes:

Section 01: 1.3. Details of the supplier of the safety data sheet heading information was modified.

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

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

Section 11: Skin Sensitization Table information was modified.

Section 6: Accidental release personal information information was modified.

Section 03: Reference to H statement explanation in Section 016 information was added.

Risk phrase information was deleted.

Safety phrase information was deleted.

Section 2: Contains heading information was deleted.

Section 2: Safety phrases heading information was deleted.

Section 16: List of relevant R-phrases information was deleted.

Section 2: Indication of danger heading information was deleted.

Section 16: List of relevant R phrase information information was deleted.

Section 2: Risk phrases heading information was deleted.

Section 2: Indication of danger information information was deleted.

Section 2: Label ingredient information information was deleted.

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

Section 2: 2.2 & 2.3. DSD/DPD heading information was deleted.

Section 2: R phrase reference information was deleted.

Label: Graphic information was deleted.

Section 02: Graphic information 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](http://www.3M.com/uk)**