# Safety Data Sheet



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| **Document group:** | 30-8246-8 | **Version number:** | 7.00 |
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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (1907/2006), as amended for GB.

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

### 1.1. Product identifier

3M™ Novec™ 2708 Electronic Grade Coating

**Product Identification Numbers**

98-0212-3668-6

7100003813

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

**Identified uses**

Protective barrier coating. For industrial use only. Not intended for use as a medical device or drug.

**Restrictions on Use**

Approved commercial use(s): Protective coating on electronic components. 3M Electronics Materials Solutions Division (EMSD) will not knowingly sample, support, or sell its products for incorporation in medical and pharmaceutical products and applications in which the 3M product will be temporarily or permanently implanted into humans or animals. The customer is responsible for evaluating and determining that a 3M EMSD product is suitable and appropriate for its particular use and intended application. The conditions of evaluation, selection, and use of a 3M product can vary widely and affect the use and intended application of a 3M product. Because many of these conditions are uniquely within the user's knowledge and control, it is essential that the user evaluate and determine whether the 3M product is suitable and appropriate for a particular use and intended application, and complies with all local applicable laws, regulations, standards, and guidance.

### 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**
**The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain**

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

**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**
**The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain**

**HAZARD STATEMENTS:**
H413 May cause long lasting harmful effects to aquatic life.

**SUPPLEMENTAL INFORMATION:**

**Supplemental Hazard Statements:**
EUH018 In use, may form flammable/explosive vapour-air mixture.

**Supplemental Precautionary Statements:**
Provide ventilation adequate to maintain vapour concentration below lower explosive concentration.

**2.3. Other hazards**

None known.
This material does not contain any substances that are assessed to be a PBT or vPvB

# SECTION 3: Composition/information on ingredients

**3.1. Substances**
Not applicable

**3.2. Mixtures**

| Ingredient | Identifier(s) | % | Classification according to Regulation (EC) No. 1272/2008 [CLP], as amended for GB |
|---|---|---|---|
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | (EC-No.) 425-340-0 | 55 - 100 | Aquatic Chronic 4, H413<br>EUH018 |
| Fluorinated polymer | Trade Secret | 5 - 10 | Substance not classified as hazardous |
| 2-methoxy-1-methylethyl acetate | (CAS-No.) 108-65-6<br>(EC-No.) 203-603-9 | 3 - 5 | Flam. Liq. 3, H226<br>STOT SE 3, H336 |

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 you feel unwell, get medical attention.

**Eye contact**
If exposed, flush eyes with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms develop, 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**
No critical symptoms or effects. 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**
Use a fire fighting agent suitable for the surrounding fire.

**5.2. Special hazards arising from the substance or mixture**
Exposure to extreme heat can give rise to thermal decomposition. No closed-cup flash point but flam/expl. vapor air mixture Material displays no closed-cup flash point but may form flammable/explosive vapor air mixture.

**5.3. Advice for fire-fighters**
Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**
Keep away from sparks/flames/extreme heat Keep away from sparks, flames, and extreme heat. Evacuate area. 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**
Eliminate ignition sources when cleaning spill Eliminate all potential ignition sources when cleaning up spill. 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 an appropriate solvent selected by a

qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. 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 inhalation of thermal decomposition products. Store work clothes separately from other clothing, food and tobacco products. 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. No smoking: Smoking while using this product can result in contamination of the tobacco and/or smoke and lead to the formation of hazardous decomposition products. Keep away from sparks/flames/extreme heat Keep away from sparks, flames, and extreme heat.

**7.2. Conditions for safe storage including any incompatibilities**
Store away from heat.

**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 |
|---|---|---|---|---|
| 2-methoxy-1-methylethyl acetate | 108-65-6 | UK HSC | TWA:274 mg/m3(50 ppm);STEL:548 mg/m3(100 ppm) | SKIN |
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | 425-340-0 | Manufacturer determined | TWA(as total isomers):200 ppm(2160 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**
For those situations where the material might be exposed to extreme overheating due to misuse or equipment failure, use with appropriate local exhaust ventilation sufficient to maintain levels of thermal decomposition products below their exposure guidelines. 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. Provide ventilation adequate to maintain vapor concentration below lower explosive concentration.

**8.2.2. Personal protective equipment (PPE)**

**Eye/face protection**
None required.

**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 |
|---|---|---|
| Butyl rubber. | .36 | =>8 hours |
| Neoprene. | No data available | =>8 hours |

The glove data presented are based on the substance driving dermal toxicity and the conditions present at the time of testing. Breakthrough time may be altered when the glove is subjected to use conditions that place additional stress on the glove.

*Applicable Norms/Standards*
Use gloves tested to EN 374

**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:
For those situations where the material might be exposed to extreme overheating due to misuse or equipment failure, use a positive pressure supplied-air respirator.
Half facepiece or full facepiece air-purifying respirator suitable for organic vapours

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

*Applicable Norms/Standards*
Use a respirator conforming to EN 140 or EN 136: filter type A

## SECTION 9: Physical and chemical properties

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

| | |
|---|---|
| **Physical state** | Liquid. |
| **Colour** | Yellow-Orange |
| **Odor** | Slight Ether |
| **Odour threshold** | *No data available.* |
| **Melting point/freezing point** | *Not applicable.* |
| **Boiling point/boiling range** | 76 ºC |
| **Flammability (solid, gas)** | Not applicable. |
| **Flammable Limits(LEL)** | 2.14 % [*Details:*ASTM E681 Method at 175 °C ] |
| **Flammable Limits(UEL)** | 15.96 % [*Details:*ASTM E681 Method at 175 °C ] |
| **Flash point** | No flash point [*Test Method:*Closed Cup] [*Details:*ASTM D3278-96e1] |
| **Autoignition temperature** | 375 ºC |
| **Decomposition temperature** | *No data available.* |
| **pH** | *substance/mixture is non-polar/aprotic* |
| **Kinematic Viscosity** | *No data available.* |
| **Water solubility** | *No data available.* |

| | |
|---|---|
| **Solubility- non-water** | *No data available.* |
| **Partition coefficient: n-octanol/water** | *No data available.* |
| **Vapour pressure** | 14,532.1 Pa [@ 25 ºC ] |
| **Density** | 1.4 g/ml |
| **Relative density** | 1.4 [*Ref Std:*WATER=1] |
| **Relative Vapour Density** | *No data available.* |

**9.2. Other information**

**9.2.2 Other safety characteristics**

| | |
|---|---|
| **EU Volatile Organic Compounds** | 1,288 g/l |
| **Evaporation rate** | *No data available.* |
| **Molecular weight** | *No data available.* |
| **Percent volatile** | 89 - 92 % |

## SECTION 10: Stability and reactivity

**10.1 Reactivity**
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

**10.2 Chemical stability**
Stable.

**10.3 Possibility of hazardous reactions**
Hazardous polymerisation will not occur.

**10.4 Conditions to avoid**
Heat.
Sparks and/or flames.

**10.5 Incompatible materials**
None known.

**10.6 Hazardous decomposition products**

| Substance | Condition |
|---|---|
| Hydrocarbons. | At elevated temperatures. - Extreme conditions of heat |
| Carbon monoxide | At elevated temperatures. - Extreme conditions of heat |
| Carbon dioxide. | At elevated temperatures. - Extreme conditions of heat |
| Hydrogen Fluoride | At elevated temperatures. - Extreme conditions of heat |
| Perfluoroisobutylene (PFIB). | At elevated temperatures. - Extreme conditions of heat |
| Toxic vapour, gas, particulate. | At elevated temperatures. - Extreme conditions of heat |

If the product is exposed to extreme conditions of heat from misuse or equipment failure, toxic decomposition products that include hydrogen fluoride and perfluoroisobutylene can occur.

## SECTION 11: Toxicological information

**The information below may not agree with the 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 hazard classes as defined in the retained CLP Regulation (EU) No 1272/2008, as amended for Great Britain.**

**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**
May be harmful in contact with skin. 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 | Dermal | | No data available; calculated ATE >2,000 - =5,000 mg/kg |
| Overall product | Ingestion | | No data available; calculated ATE >2,000 - =5,000 mg/kg |
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | Dermal | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | Inhalation-Vapour (4 hours) | Rat | LC50 > 989 mg/l |
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | Ingestion | Rat | > 2,000 mg/kg |
| Fluorinated polymer | Ingestion | Rat | LD50 > 2,000 mg/kg |
| 2-methoxy-1-methylethyl acetate | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| 2-methoxy-1-methylethyl acetate | Inhalation-Vapour (4 hours) | Rat | LC50 > 28.8 mg/l |
| 2-methoxy-1-methylethyl acetate | Ingestion | Rat | LD50 8,532 mg/kg |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name | Species | Value |
|---|---|---|
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | Rabbit | No significant irritation |
| Fluorinated polymer | Rabbit | No significant irritation |
| 2-methoxy-1-methylethyl acetate | Rabbit | No significant irritation |

**Serious Eye Damage/Irritation**

| Name | Species | Value |
|---|---|---|
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | Rabbit | No significant irritation |
| 2-methoxy-1-methylethyl acetate | Rabbit | Mild irritant |

**Skin Sensitisation**

| Name | Species | Value |
|---|---|---|
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | Guinea pig | Not classified |
| 2-methoxy-1-methylethyl acetate | Guinea pig | Not classified |

**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 |
|---|---|---|
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | In Vitro | Not mutagenic |
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | In vivo | Not mutagenic |
| 2-methoxy-1-methylethyl acetate | In Vitro | 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 |
|---|---|---|---|---|---|
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | Inhalation | Not classified for development | Rat | NOAEL 260 mg/l | during gestation |
| 2-methoxy-1-methylethyl acetate | Ingestion | Not classified for female reproduction | Rat | NOAEL 1,000 mg/kg/day | premating & during gestation |
| 2-methoxy-1-methylethyl acetate | Ingestion | Not classified for male reproduction | Rat | NOAEL 1,000 mg/kg/day | premating & during gestation |
| 2-methoxy-1-methylethyl acetate | Ingestion | Not classified for development | Rat | NOAEL 1,000 mg/kg/day | premating & during gestation |
| 2-methoxy-1-methylethyl acetate | Inhalation | Not classified for development | Rat | NOAEL 21.6 mg/l | during organogenesis |

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|---|---|---|---|---|---|---|
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | Inhalation | cardiac sensitisation | Some positive data exist, but the data are not sufficient for classification | Dog | NOAEL 204 mg/l | 17 minutes |

| | | | | | | |
|---|---|---|---|---|---|---|
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | Inhalation | respiratory irritation | Not classified | Rat | NOAEL 989 mg/l | 4 hours |
| 2-methoxy-1-methylethyl acetate | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | NOAEL Not available | |
| 2-methoxy-1-methylethyl acetate | Ingestion | central nervous system depression | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL not available | |

**Specific Target Organ Toxicity - repeated exposure**

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|---|---|---|---|---|---|---|
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | Inhalation | liver \| kidney and/or bladder \| respiratory system \| heart \| endocrine system \| gastrointestinal tract \| bone marrow \| hematopoietic system \| immune system \| nervous system | Not classified | Rat | NOAEL 263.4 mg/l | 4 weeks |
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | Ingestion | blood \| liver \| kidney and/or bladder \| heart \| endocrine system \| bone marrow \| hematopoietic system \| immune system \| nervous system \| respiratory system | Not classified | Rat | NOAEL 1,000 mg/kg/day | 28 days |
| 2-methoxy-1-methylethyl acetate | Inhalation | kidney and/or bladder | Not classified | Rat | NOAEL 16.2 mg/l | 9 days |
| 2-methoxy-1-methylethyl acetate | Inhalation | olfactory system | Not classified | Mouse | LOAEL 1.62 mg/l | 9 days |
| 2-methoxy-1-methylethyl acetate | Inhalation | blood | Not classified | Multiple animal species | NOAEL 16.2 mg/l | 9 days |
| 2-methoxy-1-methylethyl acetate | Ingestion | endocrine system | Not classified | Rat | NOAEL 1,000 mg/kg/day | 44 days |

**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.**

**11.2. Information on other hazards**

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

# SECTION 12: Ecological information

**The information below may not agree with the 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 # | Organism | Type | Exposure | Test endpoint | Test result |
|---|---|---|---|---|---|---|
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | 425-340-0 | Fathead minnow | Analogous Compound | 96 hours | No tox obs at lmt of water sol | >100 mg/l |
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | 425-340-0 | Green algae | Analogous Compound | 72 hours | No tox obs at lmt of water sol | >100 mg/l |
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | 425-340-0 | Water flea | Analogous Compound | 48 hours | No tox obs at lmt of water sol | >100 mg/l |
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | 425-340-0 | Green algae | Endpoint not reached | 72 hours | EC50 | >100 mg/l |
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | 425-340-0 | Fathead minnow | Experimental | 96 hours | No tox obs at lmt of water sol | >100 mg/l |
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | 425-340-0 | Water flea | Experimental | 48 hours | No tox obs at lmt of water sol | >100 mg/l |
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | 425-340-0 | Green algae | Analogous Compound | 72 hours | EC10 | 2.37 mg/l |
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4- | 425-340-0 | Green algae | Experimental | 72 hours | EC10 | 2.37 mg/l |

| | | | | | | |
|---|---|---|---|---|---|---|
| nonafluoro-butane | | | | | | |
| Fluorinated polymer | Trade Secret | N/A | Data not available or insufficient for classification | N/A | N/A | N/A |
| 2-methoxy-1-methylethyl acetate | 108-65-6 | Activated sludge | Experimental | 30 minutes | EC10 | >1,000 mg/l |
| 2-methoxy-1-methylethyl acetate | 108-65-6 | Green algae | Experimental | 72 hours | ErC50 | >1,000 mg/l |
| 2-methoxy-1-methylethyl acetate | 108-65-6 | Rainbow trout | Experimental | 96 hours | LC50 | 134 mg/l |
| 2-methoxy-1-methylethyl acetate | 108-65-6 | Water flea | Experimental | 48 hours | EC50 | 370 mg/l |
| 2-methoxy-1-methylethyl acetate | 108-65-6 | Green algae | Experimental | 72 hours | NOEC | 1,000 mg/l |
| 2-methoxy-1-methylethyl acetate | 108-65-6 | Water flea | Experimental | 21 days | NOEC | 100 mg/l |

### 12.2. Persistence and degradability

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|---|---|---|---|---|---|
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | 425-340-0 | Estimated Biodegradation | 28 days | BOD | 0 %BOD/ThOD | OECD 301D - Closed bottle test |
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | 425-340-0 | Analogous Compound Biodegradation | 28 days | BOD | 0 %BOD/ThOD | OECD 301D - Closed bottle test |
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | 425-340-0 | Estimated Photolysis | | Photolytic half-life (in air) | 0.55 years (t 1/2) | |
| Fluorinated polymer | Trade Secret | Data not availbl-insufficient | N/A | N/A | N/A | N/A |
| 2-methoxy-1-methylethyl acetate | 108-65-6 | Experimental Biodegradation | 28 days | BOD | 87.2 %BOD/ThOD | OECD 301C - MITI test (I) |
| 2-methoxy-1-methylethyl acetate | 108-65-6 | Experimental Aquatic Inherent Biodegrad. | | Dissolv. Organic Carbon Deplet | >100 %removal of DOC | similar to OECD 302B |

### 12.3 : Bioaccumulative potential

| Material | Cas No. | Test type | Duration | Study Type | Test result | Protocol |
|---|---|---|---|---|---|---|
| Reaction Mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | 425-340-0 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Reaction Mass of 2- | 425-340-0 | Data not available or insufficient for | N/A | N/A | N/A | N/A |

| | | | | | | |
|---|---|---|---|---|---|---|
| (ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | | classification | | | | |
| Fluorinated polymer | Trade Secret | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| 2-methoxy-1-methylethyl acetate | 108-65-6 | Experimental Bioconcentration | | Log Kow | 0.36 | OECD 107 log Kow shke flsk mtd |

### 12.4. Mobility in soil

| Material | Cas No. | Test type | Study Type | Test result | Protocol |
|---|---|---|---|---|---|
| 2-methoxy-1-methylethyl acetate | 108-65-6 | Experimental Mobility in Soil | Koc | 4 l/kg | Episuite™ |

### 12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

### 12.6. Other adverse effects

| Material | CAS Nbr | Ozone Depletion Potential | Global Warming Potential |
|---|---|---|---|
| reaction mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-butane | 425-340-0 | 0 | |

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

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

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 HF. 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)**

070703* Organic halogenated solvents, washing liquids and mother liquors

## SECTION 14: Transportation information

Not hazardous for transportation.

| | Ground Transport (ADR) | Air Transport (IATA) | Marine Transport (IMDG) |
|---|---|---|---|
| **14.1 UN number** | No data available. | No data available. | No data available. |
| **14.2 UN proper shipping name** | No data available. | No data available. | No data available. |
| **14.3 Transport hazard class(es)** | No data available. | No data available. | No data available. |
| **14.4 Packing group** | No data available. | No data available. | No data available. |
| **14.5 Environmental hazards** | No data available. | No data available. | No data available. |
| **14.6 Special precautions for user** | Please refer to the other sections of the SDS for further information. | Please refer to the other sections of the SDS for further information. | Please refer to the other sections of the SDS for further information. |
| **14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code** | No data available. | No data available. | No data available. |
| **Control Temperature** | No data available. | No data available. | No data available. |
| **Emergency Temperature** | No data available. | No data available. | No data available. |
| **ADR Classification Code** | No data available. | No data available. | No data available. |
| **IMDG Segregation Code** | No data available. | No data available. | No data available. |

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

## 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. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

**COMAH Regulation, SI 2015/483**
Seveso hazard categories, Annex 1, Part 1
None

Seveso named dangerous substances, Annex 1, Part 2

| Dangerous Substances | Identifier(s) | Qualifying quantity (tonnes) for the application of |
|---|---|---|

| | | Lower-tier requirements | Upper-tier requirements |
|---|---|---|---|
| 2-methoxy-1-methylethyl acetate | 108-65-6 | 10 | 50 |

**Regulation (EU) No 649/2012, as amended for GB**
No chemicals listed

**15.2. Chemical Safety Assessment**
A chemical safety assessment has not been carried out for this substance/mixture in accordance with Regulation (EC) No 1907/2006, as amended for GB.

## SECTION 16: Other information

**List of relevant H statements**

| | |
|---|---|
| EUH018 | In use, may form flammable/explosive vapour-air mixture. |
| H226 | Flammable liquid and vapour. |
| H336 | May cause drowsiness or dizziness. |
| H413 | May cause long lasting harmful effects to aquatic life. |

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

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. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into the European Union, you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration.

**3M SDSs for Great Britain are available at www.3M.com/uk**
For Northern Ireland documents, please contact your 3M representative to obtain a copy.