

Printing date 24.03.2023

Version number 1

Revision: 24.03.2023

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

### 1.1 Product identifier

**Trade name:** C6SFMA MONOMER

**Article number:** C6SFMA STD

**EC number:**

218-407-9

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

**Sector of Use** SU8 Manufacture of bulk, large scale chemicals (including petroleum products)

### 1.3 Details of the supplier of the safety data sheet

**Manufacturer/Supplier:**

DAIKIN INDUSTRIES, LTD. CHEMICALS DIVISION:

OSAKA UMEDA TWIN TOWERS SOUTH, 1-13-1 Umeda, Kita-ku, Osaka-shi, Osaka, 530-0001, Japan

Phone: +81-6-6147-9702 Fax: +81-6-6147-9807

**Further information obtainable from:** <http://www.daikin.com/>

### 1.4 Emergency telephone number:

Japan: +81-6-6349-7521

China: +86-532-8388-9090, +86-21-34151689

South Korea: +82-2-568-1722

Americas: CHEMTREC +1-800-424-9300 (Outside US/Canada: +1-703-527-3887)

Europe: +49-211-179 225-0

## \* SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008:**

The substance is classified and labelled according to the CLP regulation.

**Signal word:** Warning

**Hazard-determining components of labelling:**

3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluorooctyl methacrylate

**Precautionary statements:**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P314 Get medical advice/attention if you feel unwell.

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

## SECTION 3: Composition/information on ingredients

### Information on ingredients:

CAS: 2144-53-8 3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluorooctyl methacrylate ≥98%

STOT RE 2, H373

Aquatic Chronic 1, H410

CAS: 123-31-9 1,4-Dihydroxybenzene <1%

Muta. 2, H341; Carc. 2, H351

Eye Dam. 1, H318

Aquatic Acute 1, H400 (M=10)

Acute Tox. 4, H302; Skin Sens. 1, H317

CAS: 150-76-5 4-Methoxyphenol <1%

Acute Tox. 4, H302; Eye Irrit. 2, H319; Skin Sens. 1, H317

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**Trade name: C6SFMA MONOMER****Identification number(s)****EC number: 218-407-9****SECTION 4: First aid measures****4.1 Description of first aid measures****General information:** No special measures required.**After inhalation:** Supply fresh air; consult doctor in case of complaints.**After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

Consult a doctor in case of complaints.

**After eye contact:**

Immediately rinse with a lot of water for several minutes. Remove contact lenses if possible. Continue rinsing.

Consult an ophthalmologist in case of complaints.

**After swallowing:**

Rinse mouth with water. Do not induce vomiting.

Consult a doctor in case of complaints.

**4.2 Most important symptoms and effects, both acute and chronic:** No further relevant information available.**4.3 Indication of any immediate medical attention and special treatment needed:**

No further relevant information available.

**\* SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing agents:**

Alcohol resistant foam

Fire-extinguishing powder

Dry sand

CO<sub>2</sub>**For safety reasons unsuitable extinguishing agents:** Water with full jet**5.2 Special hazards arising from the substance or mixture:**

Formation of toxic gases is possible during heating or in case of fire.

Receptacle may explode when heated.

Extremely flammable; can ignite easily with heat, sparks, fire.

**5.3 Advice for firefighters:** Remove receptacles from area of fire if possible.**Protective equipment:**

Wear fully protective suit.

Wear self-contained breathing apparatus and protective suit.

Do not inhale explosion gases or combustion gases.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures:**

Wear protective clothing.

Ensure adequate ventilation before entering the area.

Stay on the windward side.

Keep out unauthorized persons.

Wear appropriate protective devices (See Section 8 Exposure Controls/Personal Protection).

Avoid contact with eyes and skin.

Do not swallow the product.

**6.2 Environmental precautions:**

Do not allow to enter sewers/surface or ground water.

Prevent seepage into sewage system, workpits and cellars.

**6.3 Methods and material for containment and cleaning up:**

For a small amount of leakage: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders) or collect in an empty container that can be sealed tightly.

For a small amount of leakage: Use clean anti-static tools when absorbing the product.

For a large amount of leakage: Enclose with banks to avoid outflow. Lead the leakage to a safe place and collect.

Remove ignition sources immediately.

Ground all equipment when the product leaks.

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*There is a danger of explosion. Prepare fire extinguisher in case of emergency.*

**6.4 Reference to other sections:**

*No dangerous substances are released.*

*See Section 8 for information on personal protection equipment.*

*See Section 13 for disposal information.*

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

*Ensure good ventilation/exhaustion at the workplace.*

*Handle with care. Avoid jolting, friction and impact.*

*Do not handle until all safety precautions have been read and understood.*

**Information about fire - and explosion protection:**

*Keep ignition sources away - Do not smoke.*

*Protect against electrostatic charges.*

*Use flame proof electric/lighting devices and ventilation equipment.*

*Ground/bond container and receiving equipment.*

**7.2 Conditions for safe storage, including any incompatibilities:****Storage****Requirements to be met by storerooms and receptacles:**

*Store in a cool and dry location.*

*Prevent any seepage into the ground.*

*Keep containers tightly sealed.*

**Information about storage in one common storage facility:**

*See section 10 for information on incompatible materials.*

**Further information about storage conditions:**

*Protect from heat and direct sunlight.*

*Store containers in a well ventilated area.*

*Store locked up.*

**7.3 Specific end use(s):** No further relevant information available.**SECTION 8: Exposure controls/personal protection****8.1 Control parameters** No further information available.

**Ingredients with limit values that require monitoring at the workplace:** Not required.

**Additional information:** The lists valid during the making were used as basis.

**8.2 Exposure controls**

**Appropriate engineering controls** No further data; see item 7.

**Individual protection measures, such as personal protective equipment**

**General protective and hygienic measures:**

*Wash hands before breaks and at the end of work.*

*Do not eat or drink while working.*

*Keep away from tobacco products.*

**Respiratory protection:**

*Suitable respiratory protective device recommended.*

*Use respiratory protective device with filters for organic and acid gas (or airline respirators in some cases) if formation of toxic gases is possible while the product is heated.*

*Use respiratory protective device with organic gas cartridge.*

**Hand protection**

*Impervious gloves*



Protective gloves

**Material of gloves:**

*Synthetic rubber gloves*

*Rubber*

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**Trade name: C6SFMA MONOMER**
**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye/face protection**


Goggles are recommended during refilling

Safety glasses

**Body protection:** Protective work clothing

\* **SECTION 9: Physical and chemical properties**
**9.1 Information on basic physical and chemical properties**
**General Information**
**Physical state**

Fluid

**Colour:**

Colourless

**Odour:**

Aromatic

**Odour threshold:**

Not determined.

**Melting point/freezing point:**

Undetermined.

**Boiling point or initial boiling point and boiling range** 92 °C (8mmHg(1.07kPa))

**Flammability**

Not applicable.

**Lower and upper explosion limit**

Not applicable.

**Lower explosive limit:**

No data

**Upper explosive limit:**

Product does not present an explosion hazard.

**Flash point:**

Not applicable.

**Decomposition temperature:**

No further information available.

Not determined.

**pH**

Not applicable.

**Viscosity:**
**Kinematic viscosity**

Not determined.

**Dynamic:**

Not determined.

**Solubility**
**water:**

No further information available.

Not determined.

**Partition coefficient n-octanol/water (log value)**

No further information available.

Not determined.

**Vapour pressure:**

No further information available.

**Density and/or relative density**
**Density at 20 °C:**

1.5 g/cm<sup>3</sup>
**Relative density**

Not determined.

**Vapour density**

Not determined.

**Particle characteristics**

No further information available.

**9.2 Other information:**
**Form:**

Solubility : &gt;50mass% (Acetone , DMSO, methanol)

**Auto-ignition temperature:**

Liquid

**Explosive properties:**

Not determined.

**Evaporation rate**

Product does not present an explosion hazard.

Not determined.

**Information with regard to physical hazard classes**
**Explosives**

Not applicable

**Flammable gases**

Not applicable

**Aerosols**

Not applicable

**Oxidising gases**

Not applicable

**Gases under pressure**

Not applicable

**Flammable liquids**

Not applicable

**Flammable solids**

Not applicable

**Self-reactive substances and mixtures**

Not applicable

**Pyrophoric liquids**

Not applicable

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<b>Pyrophoric solids</b>	Not applicable
<b>Self-heating substances and mixtures</b>	Not applicable
<b>Substances and mixtures, which emit flammable gases</b>	
<b>in contact with water</b>	Not applicable
<b>Oxidising liquids</b>	Not applicable
<b>Oxidising solids</b>	Not applicable
<b>Organic peroxides</b>	Not applicable
<b>Corrosive to metals</b>	Not applicable
<b>Desensitised explosives</b>	Not applicable

**SECTION 10: Stability and reactivity****10.1 Reactivity** No further relevant information available.**10.2 Chemical stability****Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.**10.3 Possibility of hazardous reactions:**

Reacts with peroxides and other radical forming substances.

No dangerous reactions known under normal conditions of use.

**10.4 Conditions to avoid:** Keep away from heat, sparks, flame, high temperature.**10.5 Incompatible materials:** Oxidizing agents**10.6 Hazardous decomposition products:**

Fluorophosgene in contact with naked flame or red hot objects.

Danger of toxic fluorine based pyrolysis products.

**\* SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity** Based on available data, the classification criteria are not met.**LD/LC50 values relevant for classification:****CAS: 2144-53-8 3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluorooctyl methacrylate**

Oral LD50 &gt; 2000 mg/kg (Rat)

**Skin corrosion/irritation:**

No irritant effect.

Slightly irritant

No further information available.

**Serious eye damage/irritation:**

Slightly irritant

No further information available.

**after inhalation:** No further information available.**Respiratory or skin sensitisation:** No sensitizing effect.**Germ cell mutagenicity:** Ames Assay - Negative**STOT-repeated exposure:**

May cause damage to organs through prolonged or repeated exposure.

**CAS: 2144-53-8 3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluorooctyl methacrylate**

Oral NOAEL 5 mg/kg bw/d (Rat)

**Other information (about experimental toxicology):**

No further information available.

Chromosomal Aberration Study in vitro- Negative

**Subacute to chronic toxicity:** No further information available.**Additional toxicological information:** NOAEL 5mg/kg(28days rat)**11.2 Information on other hazards:****Endocrine disrupting properties:**

List II

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## \* SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity:

CAS: 2144-53-8 3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluorooctyl methacrylate

LC50/96h 15 mg/l (Fish)

EC50/48h &gt; 0.0376 mg/l (Daphnia)

(Hazard to the aquatic environment is unclassifiable due to the saturation concentration of 0.0376 mg/L)

EC50/72h &gt; 0.013 mg/l (Daphnia)

### 12.2 Persistence and degradability:

This product will persist in the environment. Handle with care in case of accidental release or disposal.

Other information: The product is slightly biodegradable.

12.3 Bioaccumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

### 12.5 Results of PBT and vPvB assessment

PBT: No further relevant information available.

vPvB: No further relevant information available.

12.6 Endocrine disrupting properties For information on endocrine disrupting properties see section 11.

### 12.7 Other adverse effects:

Ecotoxicological effects: no data

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Recommendation:

Wear appropriate protective devices.

Disposal must be made according to official regulations.

#### Uncleaned packaging

##### Recommendation:

Empty contaminated packaging thoroughly.

Disposal must be made according to official regulations.

## \* SECTION 14: Transport information

### 14.1 UN number or ID number

ADR, IMDG, IATA

UN3082

### 14.2 UN proper shipping name:

ADR, IATA

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluorooctyl methacrylate)

### IMDG:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluorooctyl methacrylate), MARINE POLLUTANT

### 14.3 Transport hazard class(es):

ADR

Class:

9 (M6) Miscellaneous dangerous substances and articles.

Label:

9

ADN/R Class:

Not applicable

IMDG, IATA

Class:

9 Miscellaneous dangerous substances and articles.

Label:

9

### 14.4 Packing group:

ADR, IMDG, IATA

III

### 14.5 Environmental hazards:

Marine pollutant:

No

### 14.6 Special precautions for user:

Warning: Miscellaneous dangerous substances and articles.



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<b>Hazard identification number (Kemler code):</b>	90
<b>EMS Number:</b>	F-A,S-F
<b>Stowage Category</b>	A
<b>14.7 Maritime transport in bulk according to IMO instruments</b>	Not applicable.
<b>Transport/Additional information:</b>	Not dangerous according to the above specifications. Avoid direct sunlight. Make sure of no damage, corrosion, leaks on the receptacles. Take necessary measures for preventing cargo shift.
<b>ADR</b>	
<b>Limited quantities (LQ):</b>	5L
<b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<b>Transport category:</b>	3
<b>Tunnel restriction code:</b>	(-)
<b>IMDG</b>	
<b>Limited quantities (LQ)</b>	5L
<b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<b>UN "Model Regulation":</b>	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (3,3,4,4,5,5,6,6,7,7,8,8,8-TRIDECAFLUOROOCYL METHACRYLATE), 9, III

## \* SECTION 15: Regulatory information

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

No further relevant information available.

#### Dutch List of Substances of Very High Concern (ZZS)

Substance is not listed.

#### Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

#### Hazard pictograms



GHS08

#### Signal word Warning

#### Hazard-determining components of labelling:

3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluorooctyl methacrylate

#### Hazard statements

H373 May cause damage to organs through prolonged or repeated exposure.

#### Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P314 Get medical advice/attention if you feel unwell.

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

Seveso category E1 Hazardous to the Aquatic Environment

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

Substance is not listed.

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

Substance is not listed.

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**Trade name: C6SFMA MONOMER****Annex II - REPORTABLE EXPLOSIVES PRECURSORS***Substance is not listed.***Regulation (EC) No 273/2004 on drug precursors***Substance is not listed.***Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors***Substance is not listed.***National regulations** No further information available.**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**SECTION 16: Other information**

*The product is for the industrial use only. We do not guarantee the safety in case the product is used for the other purposes. When using the product for health-care application or food/feed application, consult us in advance. This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

**Department issuing SDS:** EHS Department**Contact:** <http://www.daikin.com/>**Abbreviations and acronyms:***RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)**ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2***\* Data compared to the previous version altered.**