

Safety data sheet

Printing date 06.12.2018

Version number 1

Revision: 06.12.2018

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

1.1 Product identifier

Trade name: C6EPOXY**Article number:** ST-C6EPOXY STD**EC number:**

254-004-4

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:

Umeda Center Bldg., 4-12, Nakazaki-Nishi 2-chome, Kita-Ku, Osaka, JAPAN

Phone: (+81) 6-6373-4345 Fax: (+81) 6-6373-4281

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

1.4 Emergency telephone number:

Japan: +81-6-6349-7521

China: +86-512-5-232-0949, +86-21-34151689

South Korea: +82-2-568-1722

Americas: +1-256-306-5000

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



Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

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**Precautionary statements:**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves / eye protection / face protection.

P312 Call a POISON CENTER/doctor if you feel unwell.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

* SECTION 3: Composition/information on ingredients

Information on ingredients:

CAS: 38565-52-5 3-Perfluorohexyl-1,2-epoxypropane

100%

Identification number(s)**EC number:** 254-004-4

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* SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Seek medical treatment.

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:

CO₂, powder or water spray. Fight larger fire with alcohol resistant foam.

Alcohol resistant foam

Fire-extinguishing powder

Dry sand

CO₂

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 sewer 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.

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Remove ignition sources immediately.

Ground all equipment when the product leaks.

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

6.4 Reference to other sections:

See Section 7 for information on safe handling.

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:**

Use only in well ventilated areas.

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:

Store away from foodstuffs.

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**

Additional information about design of technical facilities: No further data; see item 7.

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**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.

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Trade name: C6EPOXY**Protection of hands:**

Impervious gloves



Protective gloves

Material of gloves: Rubber**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 protection:

Safety glasses

Body protection: Protective work clothing*** SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Appearance**

Form:	Liquid
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not determined.
Melting point/freezing point:	No further information available.
Initial boiling point and boiling range:	No further information available.
Flash point:	82.2 °C (COC)
Flammability (solid, gas):	Not applicable.
Decomposition temperature:	No further information available.
Auto-ignition temperature:	Not determined.
Explosive properties:	Product does not present an explosion hazard.
Explosion limits:	
Lower explosive limit:	No further information available.
Upper explosive limit:	No further information available.
Vapour pressure:	- No further information available.
Density:	No further information available.
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with water:	No further information available.
Partition coefficient: n-octanol/water:	No further information available.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
9.2 Other information:	No further relevant information available.

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* 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 toxicological effects

Acute toxicity no data

LD/LC50 values relevant for classification: Oral LD50 >300 mg/kg (rat)

Primary irritant effect

Skin corrosion/irritation

No further information available.

Causes skin irritation.

Serious eye damage/irritation

No further information available.

Causes serious eye irritation.

after inhalation: No further information available.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

CMR effects

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

Chronic study No further information available.

* SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

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.

Ecotoxicological effects: no data

12.5 Results of PBT and vPvB assessment

PBT:

No further relevant information available.

Not applicable.

vPvB:

No further relevant information available.

Not applicable.

12.6 Other adverse effects: No further relevant information available.

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* 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 packagings thoroughly.

Disposal must be made according to official regulations.

* SECTION 14: Transport information

14.1 UN-Number:

ADR, ADN, IMDG, IATA

Not applicable

14.2 UN proper shipping name:

ADR, ADN, IMDG, IATA

Not applicable

14.3 Transport hazard class(es):

ADR, ADN, IMDG, IATA

Not applicable

Class:**14.4 Packing group:**

ADR, IMDG, IATA

Not applicable

Not applicable

Not applicable

14.5 Environmental hazards:**Marine pollutant:****14.6 Special precautions for user:****Stowage Category****Stowage Code****14.7 Transport in bulk according to Annex II of****MARPOL73/78 and the IBC Code:****Transport/Additional information:**

No

Not applicable.

A

SW2 Clear of living quarters.

Not applicable.

Avoid direct sunlight. Make sure of no damage, corrosion, leaks on the receptacles.

Take necessary measures for preventing cargo shift.

UN "Model Regulation":

Not applicable

* SECTION 15: Regulatory information

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

No further relevant information available.

Labelling according to Regulation (EC) No 1272/2008

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

Hazard pictograms

GHS07

Signal word Warning**Hazard-determining components of labelling:**

(2,2,3,3,4,4,5,5,6,6,7,7,7-tridecafluoroheptyl)oxirane

Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

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H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves / eye protection / face protection.

P312 Call a POISON CENTER/doctor if you feel unwell.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

National regulations No further information available.

Other regulations, limitations and prohibitive regulations: 1

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)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport 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

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

*** Data compared to the previous version altered.**