

Safety data sheet

Printing date 13.03.2019

Version number 1

Revision: 12.02.2019

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

1.1 Product identifier

Trade name: Hexafluoroisopropanol

Article number: HFIP STD

EC number:

213-059-4

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

No further relevant information available.

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 Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

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: Danger

Precautionary statements:

P260 Do not breathe dusts or mists.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P405 Store locked up.

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

SECTION 3: Composition/information on ingredients

Information on ingredients:

CAS: 920-66-1 1,1,1,3,3,3-Hexafluoropropan-2-ol

≥99%

Skin Corr. 1A, H314; Eye Dam. 1, H318

Identification number(s)

EC number: 213-059-4

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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:

Remove contaminated clothes immediately.

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: Use fire extinguishing methods suitable for surrounding conditions.

5.2 Special hazards arising from the substance or mixture:

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

5.3 Advice for firefighters:

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:

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

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:

Ensure good ventilation/exhaustion at the workplace.

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.

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Trade name: Hexafluoroisopropanol**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:

Store in cool, dry conditions in well sealed receptacle.

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.**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:

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.

Protection of hands:

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:	Unpleasant
Odour threshold:	Not determined.

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pH-value at 20 °C:	6.1 (10% aq.)
Melting point/freezing point:	-4 °C
Initial boiling point and boiling range:	59 °C (0.1MPa)
Flash point:	Not applicable.
Flammability (solid, gas):	Not applicable.
Decomposition temperature:	No further information available. Not determined.
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 at 20 °C:	1.596 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with water:	No further information available. Not determined.
Partition coefficient: n-octanol/water:	No further information available. Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
9.2 Other information:	No further relevant information available.

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: 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:

Strong acids, strong alkalis, alkali metals, alkali earth metals, powdered aluminium, zinc, beryllium.

10.6 Hazardous decomposition products: Danger of toxic fluorine based pyrolysis products.

* SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

LD/LC50 values relevant for classification:

CAS: 920-66-1 1,1,1,3,3,3-Hexafluoro-2-propanol

Oral LD50 600 mg/kg (Mouse)

Inhalative LC50/4h 1974 ppm (Rat)

Primary irritant effect

Skin corrosion/irritation

Causes severe skin burns and eye damage.

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Trade name: Hexafluoroisopropanol**Serious eye damage/irritation***Causes serious eye damage.***Respiratory or skin sensitisation** *No further information available.***CMR effects****Carcinogenicity** *No further information available.***Reproductive toxicity** *No further information available.***STOT-single exposure** *Based on available data, the classification criteria are not met.***STOT-repeated exposure** *No further information available.***Aspiration hazard** *No further information available.***Chronic study** *No further information available.**** SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:****CAS: 920-66-1 1,1,1,3,3,3-Hexafluoro-2-propanol**

LC50/96h 244 mg/l (Fish)

LC50/48h 270 mg/l (Fish) (MITI 1992)

902-66-1 1,1,1,3,3,3,-Hexafluoro-2-propanol

LC50/48 h 270 mg/l (Japanese rice fish) (MITI 1992)

LC50/94 h 244 mg/l (fathead minnow)

12.2 Persistence and degradability:*This product will persist in the environment. Handle with care in case of accidental release or disposal.***CAS: 920-66-1 1,1,1,3,3,3-Hexafluoro-2-propanol**Biodegradation 0 % (Microorganisms) (OECD 301C)
(MITI 1992)**12.3 Bioaccumulative potential:****CAS: 920-66-1 1,1,1,3,3,3-Hexafluoro-2-propanol**

BCF < 2.7 (Fish)

12.4 Mobility in soil: *No further relevant information available.***Ecotoxicological effects:** *no data***Additional ecological information:****General notes:** *Must not reach sewage water or drainage ditch undiluted or unneutralised.***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.***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.*

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* SECTION 14: Transport information

14.1 UN-Number:
ADR, IMDG, IATA UN1760

14.2 UN proper shipping name:
ADR, IMDG, IATA CORROSIVE LIQUID, N.O.S.

14.3 Transport hazard class(es):
ADR, IMDG, IATA



Class: 8 Corrosive substances.

14.4 Packing group:
ADR, IMDG, IATA I

14.5 Environmental hazards:
Marine pollutant: No

14.6 Special precautions for user: Warning: Corrosive substances.

EMS Number: F-A,S-B

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

Transport/Additional information: Avoid direct sunlight. Make sure of no damage, corrosion, leaks on the receptacles.
Take necessary measures for preventing cargo shift.

ADR

Limited quantities (LQ): 0

Excepted quantities (EQ): Code: E0
Not permitted as Excepted Quantity

UN "Model Regulation": UN 1760 CORROSIVE LIQUID, N.O.S., 8, I

* 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



GHS05

Signal word Danger

Hazard-determining components of labelling:

1,1,1,3,3,3-Hexafluoro-2-propanol

Hazard statements

H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe dusts or mists.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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P310 Immediately call a POISON CENTER/doctor.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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:

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 Corr. 1A: Skin corrosion/irritation – Category 1A

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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