

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

1.1. Product identifier

Product form : Substance
Trade name : THERMASOLV CF2
Name : Hexafluoropropene Trimer
EC-No. : 633-258-3
CAS-No. : 6792-31-0
REACH registration No. : 01-2121004945-56
Product code : 050329400

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

Relevant identified uses

Industrial/Professional use spec : Industrial
Use of the substance/mixture : Immersion cooling

1.3. Details of the supplier of the safety data sheet

Supplier

INVENTEC PERFORMANCE CHEMICALS SAS
26 rue des coulons
P.O. Box BP 27
94363 BRY SUR MARNE
France
T +33 (0)1 43 98 75 00, F +33 (0) 1 48 81 24 40
ContactFDS@inventec.dehon.com

1.4. Emergency telephone number

Emergency number : +33 (0) 1 72 11 00 03 - 24h/24 7j/7

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Multi-constituent

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hexafluoropropene Trimer	CAS-No.: 6792-31-0 EC-No.: 633-258-3 REACH-no: 01-2121004945-56	> 99.5	Not classified

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use.
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4.3. Indication of any immediate medical attention and special treatment needed

No supplementary information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Strong water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Thermal decomposition generates : Hydrogen fluoride, Carbonyl fluoride, Carbon oxides (CO, CO2).

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Avoid contact with skin and eyes.
For non-emergency personnel	
Emergency procedures	: Evacuate unnecessary personnel.
For emergency responders	
Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area. Use appropriate ventilation. Do not breathe vapour.

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6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

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|-------------------------|---|
| Methods for cleaning up | : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.
Collect spillage. Store away from other materials. |
| Other information | : Dispose of contaminated materials in accordance with current regulations. |

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of solid materials or residues refer to section 13 : "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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| Precautions for safe handling | : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Avoid high temperatures. Keep away from naked flames/heat. |
| Hygiene measures | : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. |

7.2. Conditions for safe storage, including any incompatibilities

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|------------------------|---|
| Storage conditions | : Store in dry, cool, well-ventilated area. Store in original container. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking. |
| Incompatible products | : Strong bases. Strong acids. |
| Incompatible materials | : Sources of ignition. Direct sunlight. |

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure that there is a suitable ventilation system.

Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Eye and face protection

Eye protection:

Safety glasses

Skin protection

Skin and body protection:

Use chemically protective clothing.

Hand protection:

Chemically resistant protective gloves

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Respiratory protection

Respiratory protection:

No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation

Environmental exposure controls

Other information:

Do not eat, drink or smoke during use. Safety shower. Eye fountain.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Odour	: odourless.
Odour threshold	: Not available
Melting point	: -109.67 °C
Freezing point	: Not available
Boiling point	: 110 – 115 °C ASTM D 1120
Flammability	: Non flammable.
Explosive properties	: Not explosive.
Oxidising properties	: Non oxidizing.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: The product does not have a flash point
Auto-ignition temperature	: Not available
Decomposition temperature	: 550 °C
pH	: Not applicable.
Viscosity, kinematic	: 1.353 mm ² /s (25°C)
Solubility	: Insoluble in water. Water: < 1.02 mg/l (20°C)
Partition coefficient n-octanol/water (Log Kow)	: 7.04
Vapour pressure	: 1.9 kPa (20°C)
Vapour pressure at 50°C	: Not available
Critical pressure	: 5000 kPa
Density	: 1.815 g/ml (25°C)
Relative density	: 1.84 (20°C)
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

Information with regard to physical hazard classes

Oxidising power (OP)	: Not oxidising
Critical temperature	: 285 °C

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Stable under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Keep away from heat and direct sunlight. Avoid ignition sources.

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10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

On thermal decomposition (pyrolysis), releases : Fluorophosgene, Hydrogen fluoride, Carbon oxides (CO, CO2).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified. (OECD 423 method)
Acute toxicity (dermal) : Not classified. (OECD 402 method)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

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LD50 oral rat	> 2000 mg/kg (OECD 423 method)
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Skin corrosion/irritation : Not classified ((OECD 439 method))
pH: Not applicable.

Additional information : Based on available data, the classification criteria are not met

Serious eye damage/irritation : Not classified ((OECD 429 method))
pH: Not applicable.

Additional information : Based on available data, the classification criteria are not met

Respiratory or skin sensitisation : Not classified (Under assessment)

Additional information : Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified ((OECD 471 method))

Additional information : Based on available data, the classification criteria are not met

Carcinogenicity : Not classified (Lack of data; Under assessment)

Additional information : Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified (Lack of data)

Additional information : Under assessment

STOT-single exposure : Not classified (Lack of data)

Additional information : Under assessment

STOT-repeated exposure : Not classified (Lack of data)

Additional information : Under assessment

Aspiration hazard : Not classified

Additional information : Based on available data, the classification criteria are not met

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Viscosity, kinematic	1.353 mm²/s (25°C)
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11.2. Information on other hazards

Other information

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified (Based on available data, the classification criteria are not met; Under assessment)

Hazardous to the aquatic environment, long-term (chronic) : Not classified (Based on available data, the classification criteria are not met; Under assessment)

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12.2. Persistence and degradability

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Persistence and degradability	(OECD 301D method). Not readily biodegradable.
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12.3. Bioaccumulative potential

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BCF - Fish [1]	< 68 l/kg
Partition coefficient n-octanol/water (Log Kow)	7.04
Bioaccumulative potential	Not potentially bioaccumulable. (OECD 305 method).

12.4. Mobility in soil

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Organic Carbon Normalized Adsorption Coefficient (Log Koc)	4.19 (OECD 121 method)
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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties	: The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.
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12.7. Other adverse effects

Other adverse effects	: ODP (R-11=1)=0. Global Warming Potential (GWP) < 120.
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Other information	Avoid release to the environment.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions. Do not allow product to spread into the environment. Do not allow into drains or water courses.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Additional information	: The user's attention is drawn to the possible existence of specific european, national or local regulations regarding disposal.
Ecological waste information	: Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

ADR	IMDG	IATA
14.1. UN number or ID number		
Not regulated for transport		

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ADR	IMDG	IATA
14.2. UN proper shipping name		
Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)		
Not regulated	Not regulated	Not regulated
14.4. Packing group		
Not regulated	Not regulated	Not regulated
14.5. Environmental hazards		
Not regulated	Not regulated	Not regulated
No supplementary information available		

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Council Regulation (EC) for the control of dual-use items

Not listed on the COUNCIL REGULATION (EC) of dual-use items.

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

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National regulations

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

The components of this product are in compliance with the chemical notification requirements of TSCA. EPA CASE Number P-24-0195

Listed on the Japanese ISHL (Industrial Safety and Health Law)

Not listed on KECL/KECI (Korean Existing Chemicals Inventory)

Not listed on the Canadian DSL (Domestic Substances List)

Not listed on Thailand Existing Chemicals Inventory (DIW)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes		
Section	Changed item	Comments
12.7		Modified

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.