

Revision Date 30-Apr-2012

Revision Number 3

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Description:

Diisopropyl fluorophosphate

Cat No.

115230000; 115230010

Synonyms

Isofluorophate; DFP; Diisopropyl phosphorofluoridate

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

Recommended Use

Laboratory chemicals

Uses advised against

No Information available

Details of the supplier of the safety data sheet

Company

Acros Organics BVBA
Janssen Pharmaceuticaaan 3a
2440 Geel, Belgium

E-mail address

begel.sdsdesk@thermofisher.com

Emergency Telephone Number

For information in the US, call: 001-800-ACROS-01

For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99

Emergency Number, US: 001-201-796-7100

CHEMTREC Phone Number, US: 001-800-424-9300

CHEMTREC Phone Number, Europe: 001-703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Acute oral toxicity	Category 2
Acute dermal toxicity	Category 1
Acute Inhalation Toxicity - Dusts and Mists	Category 2

Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

Symbol(s)

T+ - Very toxic

R-phrases

none

Risk Combination Phrases

R26/27/28 - Very toxic by inhalation, in contact with skin and if swallowed

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SECTION 2. HAZARDS IDENTIFICATION

Label Elements



Signal Word

Danger

Hazard Statements

H330 - Fatal if inhaled
H300 - Fatal if swallowed
H310 - Fatal in contact with skin

Precautionary Statements - EU (§28, 1272/2008)

P201 - Obtain special instructions before use
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
P361 - Remove/Take off immediately all contaminated clothing
P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

Other Hazards

No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC-No.	Weight %	CAS-No	67/548/EEC Classification	CLP Classification - Regulation (EC) No 1272/2008	REACH No.
Isofluorophate 55-91-4	EEC No. 200-247-6	99	55-91-4	T+; R26/27/28	Acute Tox. 2 (H300) Acute Tox. 1 (H310) Acute Tox. 2 (H330)	-

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

SECTION 4. FIRST AID MEASURES

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SECTION 4. FIRST AID MEASURES**Description of first aid measures****Eye Contact**

Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

Ingestion

Call a physician immediately. Clean mouth with water.

Inhalation

Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required.

Notes to Physician

Treat symptomatically

SECTION 5. FIRE-FIGHTING MEASURES**Extinguishing media****Suitable Extinguishing Media**

Carbon dioxide (CO₂). Dry chemical. chemical foam. Do not use a solid water stream as it may scatter and spread fire.

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

Environmental precautions

Prevent further leakage or spillage if safe to do so

Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal..

SECTION 7. HANDLING AND STORAGE

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SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Do not breathe dust. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Contents may develop pressure upon prolonged storage. Use caution when opening. Container should be opened by a technically qualified person. Use only under a chemical fume hood.

Conditions for safe storage, including any incompatibilities

Keep in a dry place. Keep container tightly closed. Keep refrigerated.

Specific End Uses

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL)

No information available.

Predicted No Effect Concentration (PNEC)

No information available.

Exposure controls

Engineering Measures

Ensure adequate ventilation, especially in confined areas Use only under a chemical fume hood

Personal protective equipment

Eye Protection

Goggles

Hand Protection

Protective gloves

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls

No information available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State

Liquid

Appearance

Colorless

pH

2.5 1.54% aq.sol.

Vapor Pressure

0.579 mmHg @ 20 °C

Boiling Point/Range

62°C / 143.6°F@ 9 mmHg

Melting Point/Range

-82°C / -115.6°F

Flash Point

No information available.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Autoignition Temperature	No information available.
Water Solubility	14.5 g/l in water (25°C) - decomposes
Specific Gravity	1.055
Molecular Formula	C ₆ H ₁₄ F O ₃ P
Molecular Weight	184.15

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Chemical Stability

Stable under normal conditions. Decomposes in contact with water. Moisture sensitive.

Possibility of Hazardous Reactions

Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions .	No information available.

Conditions to Avoid

Heat, flames and sparks, Incompatible products, Exposure to moist air or water.

Incompatible Materials

Strong oxidizing agents, Strong acids, Strong bases.

Hazardous Decomposition Products

Carbon monoxide (CO). Carbon dioxide (CO₂). Oxides of phosphorus. Burning produces obnoxious and toxic fumes. Gaseous hydrogen fluoride (HF).

SECTION 11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Component
Isofluorophate

LD50 Oral	LD50 Dermal	LC50 Inhalation
5 mg/kg (Rat)	117 mg/kg (Rabbit)	

Chronic Toxicity



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Carcinogenicity	There are no known carcinogenic chemicals in this product
Sensitization	No information available.
Mutagenic Effects	No information available
Reproductive Effects	No information available.
Developmental Effects	No information available.
Target Organs	No information available.
Other Adverse Effects	The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information
Endocrine Disruptor Information	None known

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity effects Do not flush into surface water or sanitary sewer system Do not allow material to contaminate ground water system

Persistence and degradability

No information available

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Results of PBT and vPvB assessment

Other adverse effects

No information available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues / Unused Products Dispose of in accordance with local regulations

Contaminated Packaging Empty containers should be taken to local recyclers for disposal

SECTION 14. TRANSPORT INFORMATION

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SECTION 14. TRANSPORT INFORMATION

IMDG/IMO

UN-No 3382
Hazard Class 6.1
Packing Group I
Proper Shipping Name TOXIC BY INHALATION LIQUID, N.O.S.

ADR

UN-No 3382
Hazard Class 6.1
Packing Group I
Proper Shipping Name TOXIC BY INHALATION LIQUID, N.O.S.

IATA

UN-No 3382
Hazard Class 6.1
Proper Shipping Name TOXIC BY INHALATION LIQUID, N.O.S.*, FORBIDDEN FOR IATA TRANSPORT

SECTION 15. REGULATORY INFORMATION

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

International Inventories

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Isofluorophate	200-247-6	-		X	X	-	-	-	X	X	X

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

CHINA - China Inventory of Existing Chemical Substances

AICS - Inventory of Chemical Substances

KECL - Existing and Evaluated Chemical Substances

Chemical Safety Assessment

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SECTION 16. OTHER INFORMATION**Full text of R-phrases referred to under sections 2 and 3**

R26/27/28 - Very toxic by inhalation, in contact with skin and if swallowed

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Revision Summary

Reason for revision (M)SDS sections updated, 14.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet