



Material Safety Data Sheet  
Diisopropyl fluorophosphate

MSDS# 41368

Section 1 - Chemical Product and Company Identification

MSDS Name: Diisopropyl fluorophosphate  
Catalog Numbers: AC115230000, AC115230010  
Synonyms: DFP; Diisopropyl phosphorofluoridate; Isofluorophate

Company Identification: Acros Organics BVBA  
Janssen Pharmaceuticaaan 3a  
2440 Geel, Belgium

Company Identification: (USA) Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

For information in the US, call: 800-ACROS-01  
For information in Europe, call: +32 14 57 52 11  
Emergency Number, Europe: +32 14 57 52 99  
Emergency Number US: 201-796-7100  
CHEMTREC Phone Number, US: 800-424-9300  
CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

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CAS#: 55-91-4  
Chemical Name: Diisopropyl fluorophosphate  
%: 100.0  
EINECS#: 200-247-6  
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Hazard Symbols: T+



Risk Phrases: 26/27/28

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! May be fatal if swallowed. Harmful if inhaled. Moisture sensitive. May be absorbed through intact skin. Poison!  
May cause central nervous system effects. Causes eye and skin irritation. Causes digestive and respiratory tract irritation.  
Target Organs: Central nervous system.

Potential Health Effects

Eye: Causes eye irritation.  
Skin: Causes skin irritation. May be absorbed through the skin in harmful amounts.  
Ingestion: May be fatal if swallowed.  
Inhalation: Harmful if inhaled. Dust is irritating to the respiratory tract. Causes respiratory tract irritation. May cause effects similar to those described for ingestion. Causes irritation of mucous membrane.  
Chronic: Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

### Section 5 - Fire Fighting Measures

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

Extinguishing Media: For large fires, use water spray, fog, or alcohol-resistant foam. For small fires, use water spray, dry chemical, carbon dioxide or chemical foam. Water may be ineffective.

Autoignition Temperature: Not available

Flash Point: Not available

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: Not published

### Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

### Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Use only in a chemical fume hood.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep refrigerated. (Store below 4°C/39°F.) Do not exceed 30°C (86°F).

### Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Diisopropyl fluorophosphate	none listed	none listed	none listed

OSHA Vacated PELs: Diisopropyl fluorophosphate: None listed

Engineering Controls:

Use only under a chemical fume hood.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: 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.

### Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: clear, colorless

Odor: None reported.

pH: Not available

Vapor Pressure: 0.579 mmHg @ 20

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: 62 deg C @ 9.00mmHg ( 143.60°F)

Freezing/Melting Point: -82 deg C ( -115.60°F)

Decomposition Temperature: Not available

Solubility in water: 1.54 WT% (25°C)

Specific Gravity/Density: 1.0550g/cm3

Molecular Formula: C6H14FO3P

Molecular Weight: 184.15

#### Section 10 - Stability and Reactivity

Chemical Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Incompatible materials, moisture, excess heat, temperatures above 30°C.
Incompatibilities with Other Materials	Not available
Hazardous Decomposition Products	Phosphine, carbon monoxide, oxides of phosphorus, carbon dioxide, hydrogen fluoride gas.
Hazardous Polymerization	Has not been reported.

#### Section 11 - Toxicological Information

RTECS#:	CAS# 55-91-4: TE5075000
	RTECS:
	<b>CAS# 55-91-4:</b> Inhalation, mouse: LC50 = 440 mg/m3/10M; Inhalation, rat: LC50 = 360 mg/m3/10M;
LD50/LC50:	Oral, mouse: LD50 = 2 mg/kg; Oral, rabbit: LD50 = 4 mg/kg; Oral, rat: LD50 = 5 mg/kg; Skin, rabbit: LD50 = >117 mg/kg;
	.
Carcinogenicity:	Diisopropyl fluorophosphate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other:	See actual entry in RTECS for complete information.

#### Section 12 - Ecological Information

Not available

#### Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

#### Section 14 - Transport Information

US DOT

Shipping Name: TOXIC LIQUIDS, ORGANIC, N.O.S.

Hazard Class: 6.1

UN Number: UN2810

Packing Group: I

Canada TDG

Shipping Name: Not available

Hazard Class:

UN Number:

Packing Group:

USA RQ: CAS# 55-91-4: 100 lb final RQ; 45.4 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T+

Risk Phrases:

R 26/27/28 Very toxic by inhalation, in contact with skin and if swallowed.

Safety Phrases:

S 23 Do not inhale gas/fumes/vapour/spray.

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 55-91-4: Not available

Canada

CAS# 55-91-4 is listed on Canada's DSL List

Canadian WHMIS Classifications: Not available

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 55-91-4 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 55-91-4 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 9/02/1997

Revision #5 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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