

# SAFETY DATA SHEET

Creation Date 26-Sep-2009

Revision Date 19-Dec-2025

Revision Number 4

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

## 1. Identification

**Product Name** Nitrosonium hexafluorophosphate

**Cat No. :** AC383730000; AC383730050; AC383730250

**CAS No** 16921-91-8  
**Synonyms** Nitrosyl hexafluorophosphate

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.

### Details of the supplier of the safety data sheet

#### Company

Fisher Scientific Company  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

#### **Emergency Telephone Number**

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## 2. Hazard(s) identification

### Classification

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

Skin Corrosion/Irritation  
Serious Eye Damage/Eye Irritation

Category 1 B  
Category 1

### Label Elements

**Signal Word**  
Danger

**Hazard Statements**  
Causes severe skin burns and eye damage

**Precautionary Statements****Prevention**

Do not breathe dust/fume/gas/mist/vapors/spray  
Wash face, hands and any exposed skin thoroughly after handling  
Wear protective gloves/protective clothing/eye protection/face protection

**Response**

Immediately call a POISON CENTER or doctor

**Inhalation**

IF INHALED: Remove person to fresh air and keep comfortable for breathing

**Skin**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower  
Take off contaminated clothing and wash before reuse

**Eyes**

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

**Ingestion**

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

**Storage**

Store locked up

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

**Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available

### 3. Composition/information on Ingredients

Component	CAS No	Weight %
Phosphate(1-), hexafluoro-, nitrosyl	16921-91-8	<=100

### 4. First-aid measures

**Eye Contact**

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

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

**Ingestion**

Do NOT induce vomiting. Call a physician or poison control center immediately.

**Most important symptoms and effects**

Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue

**Notes to Physician** and danger of perforation  
Treat symptomatically

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Carbon dioxide (CO<sub>2</sub>). Dry chemical. Chemical foam.

**Unsuitable Extinguishing Media** No information available

**Flash Point** No information available  
**Method -** No information available

**Autoignition Temperature** No information available

**Explosion Limits**

**Upper** No data available

**Lower** No data available

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

**Specific Hazards Arising from the Chemical**

Keep product and empty container away from heat and sources of ignition.

**Hazardous Combustion Products**

Nitrogen oxides (NO<sub>x</sub>). Oxides of phosphorus. Gaseous hydrogen fluoride (HF).

**Protective Equipment and Precautions for Firefighters**

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

**NFPA**

**Health**  
3

**Flammability**  
1

**Instability**  
1

**Physical hazards**  
N/A

## 6. Accidental release measures

**Personal Precautions** Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid dust formation.

**Environmental Precautions** Should not be released into the environment.

**Methods for Containment and Clean Up** Sweep up and shovel into suitable containers for disposal. Do not let this chemical enter the environment. Avoid dust formation.

## 7. Handling and Storage

**Handling** Use only under a chemical fume hood. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance. Minimize dust generation and accumulation. Wash hands before breaks and immediately after handling the product.

**Storage.** Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible Materials. Strong oxidizing agents.

## 8. Exposure controls / personal protection

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limit established by the region specific regulatory bodies.

**Engineering Measures** Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations

and safety showers are close to the workstation location.

#### Personal Protective Equipment

<b>Eye/face Protection</b>	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.
<b>Skin and body protection</b>	Wear appropriate protective gloves and clothing to prevent skin exposure.
<b>Respiratory Protection</b>	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.
<b>Recommended Filter type:</b>	Particulates filter conforming to EN 143.
<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety practice.

### 9. Physical and chemical properties

#### Appearance

<b>Physical State</b>	Solid
<b>Color</b>	White
<b>Odor</b>	No information available
<b>Odor Threshold</b>	No information available
<b>Property</b>	<b>Values</b>
<b>Melting Point/Range</b>	No data available
<b>Softening Point</b>	No data available
<b>Boiling Point/Range</b>	No information available
<b>Flash Point</b>	No information available
<b>Flammability (liquid)</b>	Not applicable
<b>Flammability (solid,gas)</b>	No information available
<b>Explosion Limits</b>	No data available

#### Remarks

#### • Method

<b>Autoignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>pH</b>	No information available
<b>Viscosity</b>	Not applicable
<b>Water Solubility</b>	decomposes
<b>Solubility in other solvents</b>	No information available
<b>Partition Coefficient (n-octanol/water)</b>	
<b>Vapor Pressure</b>	No data available
<b>Density / Specific Gravity</b>	No data available
<b>Bulk Density</b>	No data available
<b>Vapor Density</b>	Not applicable
<b>Particle characteristics</b>	No data available

**Method -** No information available  
Solid

Solid

Solid

#### Other Information

<b>Molecular Formula</b>	F6 N O P
<b>Molecular Weight</b>	174.97
<b>Evaporation Rate</b>	Not applicable - Solid

### 10. Stability and reactivity

<b>Reactive Hazard</b>	None known, based on information available
<b>Stability</b>	Stable under normal conditions. Moisture sensitive.

<b>Conditions to Avoid</b>	Incompatible products. Exposure to moist air or water. Avoid dust formation.
<b>Incompatible Materials</b>	Strong oxidizing agents
<b>Hazardous Decomposition Products</b>	Nitrogen oxides (NOx), Oxides of phosphorus, Gaseous hydrogen fluoride (HF)
<b>Hazardous Polymerization</b>	No information available.
<b>Hazardous Reactions</b>	None under normal processing.

## 11. Toxicological information

### Information on expected route of exposure

<b>Inhalation</b>	Not an expected route of exposure.
<b>Ingestion</b>	May be harmful if swallowed.
<b>Eyes</b>	Avoid contact with eyes. Corrosive to the eyes and may cause severe damage including blindness.
<b>Skin</b>	Avoid contact with skin. Causes burns. Skin Corrosion/Irritation.

### Toxicology data for the components

<b>Toxicologically Synergistic Products</b>	No information available
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<b>(b) skin corrosion/irritation;</b>	Category 1 B
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<b>(c) serious eye damage/irritation;</b>	Category 1
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<b>(d) respiratory or skin sensitization;</b>	
<b>Respiratory</b>	No data available
<b>Skin</b>	No data available

<b>(e) germ cell mutagenicity;</b>	No data available
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#### **(f) carcinogenicity;**

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Phosphate(1-), hexafluoro-, nitrosyl	16921-91-8	Not listed	Not listed	Not listed	Not listed	Not listed

<b>(g) reproductive toxicity;</b>	No data available
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<b>(h) STOT-single exposure;</b>	No data available
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<b>(i) STOT-repeated exposure;</b>	No data available
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<b>Target Organs</b>	No information available.
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<b>(j) aspiration hazard;</b>	Not applicable Solid
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<b>Other Adverse Effects</b>	The toxicological properties have not been fully investigated.
<b>Symptoms / effects, both acute and delayed</b>	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.
<b>Other Adverse Effects</b>	The toxicological properties have not been fully investigated.
<b>Endocrine Disrupting Properties</b>	This product does not contain any known or suspected endocrine disruptors.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

### DOT

<b>UN-No</b>	UN3260
<b>Proper Shipping Name</b>	Corrosive solid, acidic, inorganic, n.o.s.
<b>Hazard Class</b>	8
<b>Packing Group</b>	III

### TDG

<b>UN-No</b>	UN3260
<b>Proper Shipping Name</b>	Corrosive solid, acidic, inorganic, n.o.s.
<b>Hazard Class</b>	8
<b>Packing Group</b>	III

### IATA

<b>UN-No</b>	UN3260
<b>Proper Shipping Name</b>	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.*
<b>Hazard Class</b>	8
<b>Packing Group</b>	III

### IMDG/IMO

<b>UN-No</b>	UN3260
<b>Proper Shipping Name</b>	Corrosive solid, acidic, inorganic, n.o.s.
<b>Hazard Class</b>	8
<b>Packing Group</b>	III

## 15. Regulatory Information

### United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
Phosphate(1-), hexafluoro-, nitrosyl	16921-91-8	X	INACTIVE	-

### Legend:

**TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed  
'-' - Not Listed

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)**

Not applicable

**TSCA 12(b)** - Notices of Export

Not applicable

**International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Phosphate(1-), hexafluoro-, nitrosyl	16921-91-8	-	X	240-980-9	-	-		-	-	KE-26034

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

Not applicable

**Clean Air Act**

Not applicable

**OSHA** - Occupational Safety and Health Administration

Not applicable

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Not applicable

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

Mexico - Grade

No information available

Authorisation/Restrictions according to EU REACH

Not applicable

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Phosphate(1-), hexafluoro-, nitrosyl	16921-91-8	-	-	-

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

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Phosphate(1-), hexafluoro-, nitrosyl	16921-91-8	Not applicable	Not applicable	Not applicable	Not applicable

Contains component(s) that meet a 'definition' of per &amp; poly fluoroalkyl substance (PFAS)?

Not applicable

Other International Regulations

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Phosphate(1-), hexafluoro-, nitrosyl	16921-91-8	Not applicable	Not applicable	Not applicable	Not applicable

## 16. Other Information

Prepared By

Product stewardship (Regulatory Affairs)  
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26-Sep-2009

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19-Dec-2025

Revision Summary

Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024.

### Disclaimer

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text

**End of SDS**