SAFETY DATA SHEET

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

1.1. Product identifier

Product Description: Sodium hexafluorophosphate
Cat No. : 196820000; 196820100; 196820500; 196822500
CAS-No 21324-39-0
EC-No. 244-333-1
Molecular Formula F6 Na P

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

Recommended Use Laboratory chemicals
Uses advised against No Information available

1.3. Details of the supplier of the safety data sheet

Company Acros Organics BVBA
Janssen Pharmaceuticalalaan 3a
2440 Geel, Belgium
E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information US call: 001-800-ACROS-01 / 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

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards
Based on available data, the classification criteria are not met

Health hazards
Acute oral toxicity Category 4
Acute dermal toxicity Category 4
Acute Inhalation Toxicity - Dusts and Mists Category 4
Skin Corrosion/irritation Category 1 B
Serious Eye Damage/Eye Irritation Category 1

Environmental hazards
Based on available data, the classification criteria are not met

Classification according to EU Directives 67/548/EEC or 1999/45/EC
Symbol(s) C - Corrosive
R-phrase(s) R34 - Causes burns
R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16
SECTION 2: HAZARDS IDENTIFICATION

2.2. Label elements

Signal Word Danger

Hazard Statements
- H302 - Harmful if swallowed
- H332 - Harmful if inhaled
- H312 - Harmful in contact with skin
- H314 - Causes severe skin burns and eye damage

Precautionary Statements
- P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
- P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
- 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 or doctor/ physician
- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray

2.3. Other hazards

No information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>EC-No.</th>
<th>Weight %</th>
<th>CLP Classification - Regulation (EC) No 1272/2008</th>
<th>DSD Classification - 67/548/EEC</th>
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</thead>
<tbody>
<tr>
<td>Sodium hexafluorophosphate</td>
<td>21324-39-0</td>
<td>EEC No. 244-333-1</td>
<td>&gt; 98.5</td>
<td>Skin Corr. 1B (H314) Eye Dam. 1 (H318) Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332)</td>
<td>Xn; R20/21/22 C; R34</td>
</tr>
</tbody>
</table>

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

SECTION 4: FIRST AID MEASURES

4.1. 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

Do not induce vomiting. 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.

Protection of First-aiders
Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

4.2. Most important symptoms and effects, both acute and delayed
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 and danger of perforation.

4.3. Indication of any immediate medical attention and special treatment needed
Notes to Physician
Treat symptomatically

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media
Suitable Extinguishing Media
Carbon dioxide (CO₂). Dry chemical. chemical foam.

Extinguishing media which must not be used for safety reasons
No information available.

5.2. Special hazards arising from the substance or mixture
Thermal decomposition can lead to release of irritating gases and vapors

Hazardous Combustion Products
Carbon monoxide (CO), Carbon dioxide (CO₂), Oxides of phosphorus, Phosphorus trihydride (phosphine), Gaseous hydrogen fluoride (HF).

5.3. Advice for firefighters
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

6.1. Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation

6.2. Environmental precautions
See Section 12 for additional ecological Information.

6.3. Methods and material for containment and cleaning up
Sweep up or vacuum up spillage and collect in suitable container for disposal. Do not let this chemical enter the environment.

6.4. Reference to other sections
Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling
Sodium hexafluorophosphate

Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest. Use only in area provided with appropriate exhaust ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Corrosives area.

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. 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.

Monitoring methods
BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

Derived No Effect Level (DNEL) No information available.

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Acute effects (local)</th>
<th>Acute effects (systemic)</th>
<th>Chronic effects (local)</th>
<th>Chronic effects (systemic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Measures
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.
Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

Personal protective equipment

Eye Protection
Goggles (European standard - EN 166)

Hand Protection
Protective gloves

<table>
<thead>
<tr>
<th>Glove material</th>
<th>Breakthrough time</th>
<th>Glove thickness</th>
<th>EU standard</th>
<th>Glove comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butyl rubber</td>
<td>See manufacturers</td>
<td>-</td>
<td>EN 374</td>
<td>(minimum requirement)</td>
</tr>
</tbody>
</table>

Skin and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure
Inspect gloves before use. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Remove gloves with care avoiding skin contamination.

**Respiratory Protection**
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly.

**Large scale/emergency use**
Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Recommended Filter type:** Particulates filter conforming to EN 143.

**Small scale/Laboratory use**
Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Recommended half mask:-** Valve filtering: EN405 or Half mask: EN140 plus filter, EN 141
When RPE is used a face piece Fit Test should be conducted.

**Hygiene Measures**
Handle in accordance with good industrial hygiene and safety practice

**Environmental exposure controls**
No information available.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Beige</td>
</tr>
<tr>
<td>Physical State</td>
<td>Powder, Solid.</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>200°C / 392°F</td>
</tr>
<tr>
<td>Softening Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable Solid</td>
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<tr>
<td>Flammability (solid,gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Explosion Limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable Solid</td>
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<tr>
<td>Specific Gravity / Density</td>
<td>2.3690</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>soluble</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition Coefficient (n-octanol/water)</td>
<td></td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>450 °C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable Solid</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>No information available</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No information available</td>
</tr>
</tbody>
</table>

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**9.2. Other information**

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Molecular Formula: F6 Na P
Molecular Weight: 167.95

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
None known, based on information available.

10.2. Chemical stability
Stable under normal conditions. Hygroscopic.

10.3. Possibility of hazardous reactions

Hazardous Polymerization
Hazardous polymerization does not occur.

Hazardous Reactions
No information available.

10.4. Conditions to avoid
To avoid thermal decomposition, do not overheat, Excess heat, Incompatible products, Exposure to moist air or water.

10.5. Incompatible materials
Acids. Strong oxidizing agents.

10.6. Hazardous decomposition products
Carbon monoxide (CO), Carbon dioxide (CO2), Oxides of phosphorus, Phosphorus trihydride (phosphine), Gaseous hydrogen fluoride (HF).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information

(a) acute toxicity;
   Oral Category 4
   Dermal Category 4
   Inhalation Category 4

(b) skin corrosion/irritation;
   Category 1 B

(c) serious eye damage/irritation;
   Category 1

(d) respiratory or skin sensitization;
   Respiratory No data available
   Skin No data available

(e) germ cell mutagenicity;
   No data available

(f) carcinogenicity;
   No data available

   There are no known carcinogenic chemicals in this product

(g) reproductive toxicity;
   No data available

(h) STOT-single exposure;
   No data available
SAFETY DATA SHEET

(i) STOT-repeated exposure;
   Target Organs: No information available.

(j) aspiration hazard;
   Solid
   Not applicable

Other Adverse Effects
   Symptoms / effects, both acute and delayed:
   The toxicological properties have not been fully investigated.
   The 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.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
   Ecotoxicity effects
   Do not empty into drains.

12.2. Persistence and degradability
   Soluble in water, Persistence is unlikely, based on information available.

12.3. Bioaccumulative potential
   Bioaccumulation is unlikely

12.4. Mobility in soil
   The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Highly mobile in soils.

12.5. Results of PBT and vPvB assessment
   No data available for assessment

12.6. Other adverse effects
   Endocrine Disruptor Information
   This product does not contain any known or suspected endocrine disruptors.
   Persistent Organic Pollutant
   This product does not contain any known or suspected substance.
   Ozone Depletion Potential
   This product does not contain any known or suspected substance.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
   Waste from Residues / Unused Products
   Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.
   Contaminated Packaging
   Dispose of this container to hazardous or special waste collection point.
   European Waste Catalogue (EWC)
   According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
   Other Information
   Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not dispose of waste into sewer. Large amounts will affect pH and harm aquatic organisms.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

14.1. UN number
14.2. UN proper shipping name
   CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
14.3. Transport hazard class(es)
   8
14.4. Packing group
   II

ADR

14.1. UN number
14.2. UN proper shipping name
   CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
14.3. Transport hazard class(es)
   8

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Sodium hexafluorophosphate

Revision Date 28-Jan-2014

14.4. Packing group

IATA

14.1. UN number 3260
14.2. UN proper shipping name CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.*
14.3. Transport hazard class(es) 8
14.4. Packing group II
14.5. Environmental hazards No hazards identified
14.6. Special precautions for user No special precautions required
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

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

International Inventories X = listed

<table>
<thead>
<tr>
<th>Component</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>PICCS</th>
<th>ENCS</th>
<th>CHINA</th>
<th>AICS</th>
<th>KECL</th>
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</thead>
<tbody>
<tr>
<td>Sodium hexafluorophosphate</td>
<td>244-333-1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

National Regulations

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment
Take note of Dir 94/33/EC on the protection of young people at work
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

R34 - Causes burns
R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed

Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed
H312 - Harmful in contact with skin
H314 - Causes severe skin burns and eye damage
H332 - Harmful if inhaled

Legend

CAS - Chemical Abstracts Service
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Existing and Evaluated Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals
**SAFETY DATA SHEET**

**Key literature references and sources for data**
Suppliers safety data sheet,
Chemadvisor - LOLI,
Merck index,
RTECS

**Training Advice**
Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.
Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.
First aid for chemical exposure, including the use of eye wash and safety showers.
Chemical incident response training.

**Creation Date** 07-Mar-2012
**Revision Date** 28-Jan-2014
**Revision Summary** (M)SDS sections updated, 2, 3.

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