

## SAFETY DATA SHEET

Preparation Date: 09/11/2019

Revision date 09/11/2019

Revision Number: G1

### 1. IDENTIFICATION

**Product identifier**

**Product code:** N2330  
**Product Name:** P-NITROBENZENEDIAZONIUM TETRAFLUOROBORATE

**Other means of identification**

**Synonyms:** 4-Nitrobenzenediazonium fluoborate  
 4-Nitrobenzenediazonium tetrafluoroborate(1-)  
 p-Nitrophenyldiazonium fluoborate  
 Benzenediazonium, 4-nitro-, tetrafluoroborate(1-)

**CAS #:** 456-27-9  
**RTECS #** CZ1723000  
**CI#:** Not available

**Recommended use of the chemical and restrictions on use**

**Recommended use:** No information available.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
 14422 South San Pedro St.  
 Gardena, CA 90248  
 (310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>  
**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Tom Tyner (USA - West Coast)  
**Contact Person:** Ibad Tirmiz (USA - East Coast)

### 2. HAZARDS IDENTIFICATION

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

**Label elements**

Danger

**Hazard statements**

Harmful if swallowed, in contact with skin or if inhaled  
Causes severe skin burns and eye damage

**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Not available

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Wear protective gloves/protective clothing/eye protection/face protection  
Use only outdoors or in a well-ventilated area  
Do not breathe dust

**Precautionary Statements - Response**

*Immediately call a POISON CENTER or physician*

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

Immediately call a POISON CENTER or physician.

Call a POISON CENTER or physician if you feel unwell

Wash contaminated clothing before reuse

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. Immediately call a POISON CENTER or physician.

IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell

Rinse mouth

Do NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents and container to an approved waste disposal plant in accordance with local, regional, national and international regulations as applicable

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS No	Weight-%
p-Nitrobenzenediazonium Tetrafluoroborate	456-27-9	100

**4. FIRST AID MEASURES**

Product code: N2330

Product name:  
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## First aid measures

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. First aider needs to protect himself. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
- Skin Contact:** Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician or poison control center immediately.
- Eye Contact:** Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.
- Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention.
- Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

## Most important symptoms and effects, both acute and delayed

- Symptoms**
- Causes skin burns
  - Causes serious eye damage
  - May cause methemoglobinemia and cyanosis
  - Convulsions
  - May cause digestive (gastrointestinal) tract irritation
  - Anemia
  - It may affect the kidneys
  - Coughing
  - Dyspnea (Shortness of breath and difficulty breathing)
  - May cause nausea and headache

## Indication of any immediate medical attention and special treatment needed

- Notes to Physician:** Treat symptomatically.

## Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

## **5. FIRE-FIGHTING MEASURES**

### Extinguishing Media

**Suitable Extinguishing Media:** Dry chemical. Carbon dioxide (CO<sub>2</sub>). Water spray mist, or foam.

**Unsuitable Extinguishing Media:** No information available.

### Specific hazards arising from the chemical

**Hazardous combustion products** Carbon monoxide. Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>). Hydrogen fluoride gas. Borane/Boron oxides.

**Specific hazards** May be combustible at high temperatures.

### **Special Protective Actions for Firefighters**

**Specific Methods:** No information available

**Special Protective Equipment for Firefighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

## **6. ACCIDENTAL RELEASE MEASURES**

### **Personal precautions, protective equipment and emergency procedures**

**Personal Precautions:** Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

### **Methods and material for containment and cleaning up**

**Methods for containment** Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

**Methods for cleaning up** Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

## **7. HANDLING AND STORAGE**

### **Precautions for safe handling**

#### **Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

#### **Safe Handling Advice:**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe dust. Handle in accordance with good industrial hygiene and safety practice.

### **Conditions for safe storage, including any incompatibilities**

#### **Technical Measures/Storage Conditions:**

Sensitive to light. Store in light-resistant containers. Air sensitive. Keep refrigerated. Store at 2-8 deg. C. Keep tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials.

#### **Incompatible Materials:**

Strong oxidizing agents  
Strong bases  
Alkalis

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Control parameters**

### **National occupational exposure limits**

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## United States

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
p-Nitrobenzenediazonium Tetrafluoroborate	456-27-9	None	None	None	None

## Canada

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
p-Nitrobenzenediazonium Tetrafluoroborate	456-27-9	None	None	None	None

## Australia and Mexico

Component	CAS No	Australia	Mexico
p-Nitrobenzenediazonium Tetrafluoroborate	456-27-9	None	None

## Appropriate engineering controls

### Engineering measures to reduce exposure:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

## Individual protection measures, such as personal protective equipment

### Personal Protective Equipment

**Eye protection:** Goggles

**Skin and body protection:** Chemical resistant apron  
Gloves  
Long sleeved clothing

**Respiratory protection:** Wear respirator with dust filter. Be sure to use an approved/certified respirator or equivalent.

**Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:**  
Solid

**Appearance:**  
Crystalline powder.

**Color:**  
Yellow.

**Odor:**  
No information available.

**Taste:**  
No information available.

**Formula:**  
C<sub>6</sub>H<sub>4</sub>N<sub>3</sub>O<sub>2</sub>.BF<sub>4</sub>

**Molecular/Formula weight (g/mole):**  
236.94

**Flammability (solid, gas):**  
no data available

**Flashpoint (°C/°F):**  
No information available

**Flash Point Tested according to:**  
Not available

**Autoignition Temperature (°C/°F):**  
No information available

**Lower Explosion Limit (%):**  
No information available

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**Upper Explosion Limit (%):**  
No information available

**Melting point/range(°C/°F):**  
150°C/ 302°F

**Decomposition temperature(°C/°F):**  
No information available

**Boiling point/range(°C/°F):**  
No information available

**Bulk density:**  
No information available

**Density (g/cm<sup>3</sup>):**  
No information available

**Specific gravity:**  
No information available

**pH**  
No information available

**Vapor pressure @ 20°C (kPa):**  
No information available

**Evaporation rate:**  
No information available

**Vapor density:**  
No information available

**VOC content (g/L):**  
No information available

**Odor threshold (ppm):**  
No information available

**Partition coefficient  
(n-octanol/water):**  
No information available

**Viscosity:**  
No information available

**Miscibility:**  
No information available

**Solubility:**  
Soluble in cold water

## 10. STABILITY AND REACTIVITY

### Reactivity

No information available

### Chemical stability

**Stability:** Sensitive to light. Sensitive to air. Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Heat. Exposure to light. Exposure to air. Ignition sources. Incompatible materials.

**Incompatible Materials:**  
Strong oxidizing agents  
Strong bases  
Alkalis

**Hazardous decomposition products:** Carbon oxides. Nitrogen oxides (NO<sub>x</sub>). Hydrogen fluoride. Boron oxides. Borane.

### Other Information

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**  
Skin. Eyes. Inhalation. Ingestion.

### Acute Toxicity

### Component Information

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p-Nitrobenzenediazonium Tetrafluoroborate	
CAS No	456-27-9

**LD50/oral/rat** = No information available  
**LD50/oral/mouse** = No information available  
**LD50/dermal/rabbit** = No information available  
**LD50/dermal/rat** = No information available  
**LC50/inhalation/rat** = No information available  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50 information** = No information available

**Product Information**

**LD50/oral/rat** =  
**Value - Acute Toxicity** = No information available

**LD50/oral/mouse** =  
**Value - Acute Tox** = No information available

**LD50/dermal/rabbit**  
**Value - Acute Toxicity** = No information available

**LD50/dermal/rat**  
**VALUE - Acute Tox** = No information available

**LC50/inhalation/rat**  
**VALUE-Vapor** = No information available  
**VALUE-Gas** = No information available  
**VALUE-Dust/Mist** = No information available

**LC50/Inhalation/mouse**  
**VALUE-Vapor** = No information available  
**VALUE - Gas** = No information available  
**VALUE - Dust/Mist** = No information available

**Symptoms**

**Skin Contact:** Causes skin burns.

**Eye Contact:** Causes serious eye damage.

**Inhalation** May cause irritation of respiratory tract. May cause cyanosis. It may affect behavior/central nervous system (convulsions/seizures). May cause increased heart rate (tachycardia). May cause dyspnea (difficulty breathing or shortness of breath).

**Ingestion** May cause digestive (gastrointestinal) tract irritation. May cause Methemoglobinemia.

**Aspiration hazard** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Chronic Toxicity** Prolonged or repeated exposure may cause methemoglobinemia with cyanosis, anemia.

**Sensitization:** No information available.

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
p-Nitrobenzenediazonium Tetrafluoroborate	456-27-9	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*IARC (International Agency for Research on Cancer)*

*NTP (National Toxicology Program)*

*OSHA (Occupational Safety and Health Administration of the US Department of Labor)*

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available

**Developmental Effects:** No information available

**Teratogenic Effects:** No information available

**Specific Target Organ Toxicity**

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Target Organs:** Kidneys.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:** No data available.

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available.

**Mobility in soil** No information available

**Other adverse effects** No information available.

**13. DISPOSAL CONSIDERATIONS**

**Disposal Methods**

**Waste from residues / unused products:**

Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**

Empty containers should be taken for local recycling, recovery or waste disposal



Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
p-Nitrobenzenediazonium Tetrafluoroborate	456-27-9	None	None	None	None

## 14. TRANSPORT INFORMATION

### DOT

**UN-No:** UN3261  
**Proper Shipping Name:** Corrosive solid, acidic, organic, n.o.s.  
**Hazard Class** 8  
**Subsidiary Class** No information available  
**Packing group:** III  
**Emergency Response Guide Number** 154  
**Marine Pollutant** No data available  
**DOT RQ (lbs):** No information available  
**Special Provisions** IB8, IP3, T1, TP33  
**Symbol(s):** No information available  
**Description:** UN3261, Corrosive solid, acidic, organic, n.o.s., 8, III

### TDG (Canada)

**UN-No:** UN3261  
**Proper Shipping Name:** Corrosive solid, acidic, organic, n.o.s.  
**Hazard Class** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Marine Pollutant** No Information available  
**Description:** UN3261, Corrosive solid, acidic, organic, n.o.s., 8, III

### ADR

**UN Number** UN3261  
**Proper Shipping Name:** Corrosive solid, acidic, organic, n.o.s.  
**Transport hazard class(es)** 8  
**Packing group** III  
**Subsidiary Risk:** No information available  
**Special Provisions** 274  
**Description:** UN3261, Corrosive solid, acidic, organic, n.o.s., 8, III

### IMDG

**UN-No:** UN3261  
**Proper Shipping Name:** Corrosive solid, acidic, organic, n.o.s.  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Marine Pollutant** No information available  
**EMS:** F-A  
**Special Provisions** 223, 274  
**Description** UN3261, Corrosive solid, acidic, organic, n.o.s. (P-NITROBENZENEDIAZONIUM TETRAFLUOROBORATE), 8, III

### RID

**UN Number** UN3261  
**Proper Shipping Name:** Corrosive solid, acidic, organic, n.o.s.  
**Transport hazard class(es)** 8  
**Subsidiary Risk:** No information available  
**Packing group** III

**Product code:** N2330

**Product name:**  
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**Special Provisions** 274  
**Description:** UN3261, Corrosive solid, acidic, organic, n.o.s., 8, III

**ICAO (air)**  
**UN-No:** UN3261  
**Proper Shipping Name:** Corrosive solid, acidic, organic, n.o.s.  
**Hazard Class** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Description:** UN3261, Corrosive solid, acidic, organic, n.o.s., 8, III  
**Special Provisions** A3

**IATA**  
**UN Number** UN3261  
**Proper Shipping Name:** Corrosive solid, acidic, organic, n.o.s.  
**Transport hazard class(es)** 8  
**Subsidiary Risk:** No information available  
**Packing group** III  
**Precautionary Statements - Response** 8L  
**Special Provisions** No information available  
**Description:** UN3261, Corrosive solid, acidic, organic, n.o.s., 8, III

**15. REGULATORY INFORMATION**

**International Inventories**

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia (AICS)	EINECS-No.
<i>p</i> -Nitrobenzenediazonium Tetrafluoroborate	456-27-9	Present/INACTIVE	Not present	Present	Not present	Not listed	Present	Present 207-261-1

**U.S. Regulations**

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**

**Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
<i>p</i> -Nitrobenzenediazonium Tetrafluoroborate	456-27-9	Not Listed	Not Listed	Not Listed	Not Listed

**CERCLA/SARA**

Component	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
<i>p</i> -Nitrobenzenediazonium Tetrafluoroborate	456-27-9	None	None	None	None	None

## U.S. TSCA

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
p-Nitrobenzenediazonium Tetrafluoroborate	456-27-9	Not Applicable	Not Applicable

## Canada

### WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information: The WHMIS 2015 classification of this product has not been validated or reviewed yet.

**Canada Hazardous Products Regulation** This product has not been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

## DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
p-Nitrobenzenediazonium Tetrafluoroborate	456-27-9	Present	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
p-Nitrobenzenediazonium Tetrafluoroborate	456-27-9	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
p-Nitrobenzenediazonium Tetrafluoroborate	456-27-9	Not listed

## EU Classification

### EU GHS - SV - CLP 1272/2008

Component	CAS No	EU GHS - SV - CLP (1272/2008)
p-Nitrobenzenediazonium Tetrafluoroborate	456-27-9	

### EU - CLP (1272/2008)

#### **R-phrase(s)**

R35 - Causes severe burns

R41 - Risk of serious damage to eyes

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

#### **S -phrase(s)**

S 7 - Keep container tightly closed.

S36 - Wear suitable protective clothing

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

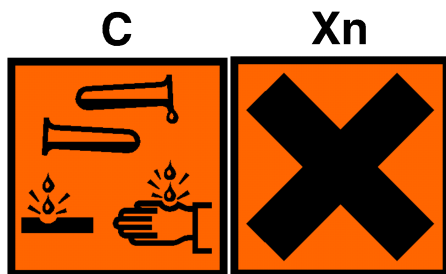
Component	CAS No	Classification	Concentration Limits:	Safety Phrases
p-Nitrobenzenediazonium Tetrafluoroborate	456-27-9		No information	

**The product is classified in accordance with Annex VI to Directive 67/548/EEC**

**Indication of danger:**

C - Corrosive

Xn - Harmful

**16. OTHER INFORMATION**

**Preparation Date:** 09/11/2019  
**Revision date** 09/11/2019  
**Prepared by:** Sonia Owen

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**