# 1. Identification

<table>
<thead>
<tr>
<th><strong>Product Name</strong></th>
<th>Sodium azide</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cat No.</strong></td>
<td>S227I-1; S227I-25; S227I-100; S227I-500; S227I-500LC</td>
</tr>
<tr>
<td><strong>Synonyms</strong></td>
<td>Sodium salt of hydrazoic acid; Smite</td>
</tr>
<tr>
<td><strong>Recommended Use</strong></td>
<td>Laboratory chemicals.</td>
</tr>
<tr>
<td><strong>Uses advised against</strong></td>
<td>No Information available</td>
</tr>
</tbody>
</table>

## Details of the supplier of the safety data sheet

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

**Emergency Telephone Number**
CHEMTREC®, Inside the USA: 800-424-9300  
CHEMTREC®, Outside the USA: 001-703-527-3887

# 2. Hazard(s) Identification

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

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>Category 2</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>Category 1</td>
</tr>
<tr>
<td>Specific target organ toxicity - (repeated exposure)</td>
<td>Category 2</td>
</tr>
<tr>
<td>Target Organs - Central nervous system (CNS), Cardiovascular system, Liver, Kidney, Heart, spleen.</td>
<td></td>
</tr>
</tbody>
</table>

## Label Elements

### Signal Word
Danger

### Hazard Statements
Fatal if swallowed  
Fatal in contact with skin  
May cause damage to organs through prolonged or repeated exposure
Precautionary Statements

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

Response
Get medical attention/advice if you feel unwell

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell

Skin
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN: Gently wash with plenty of soap and water
Remove/Take off immediately all contaminated clothing
Wash contaminated clothing before reuse

Ingestion
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth

Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Very toxic to aquatic life with long lasting effects
Contact with acids liberates very toxic gas

3. Composition / information on ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium azide</td>
<td>26628-22-8</td>
<td>&gt;95</td>
</tr>
</tbody>
</table>

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
Move to fresh air. If breathing is difficult, give oxygen. 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/effects
No information available.

Notes to Physician
Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media
Dry chemical, CO₂, water spray or alcohol-resistant foam. Use water spray or fog; do not use straight streams.
Unsuitable Extinguishing Media
Do not use a solid water stream as it may scatter and spread fire

Flash Point
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
In the event of fire, cool tanks with water spray. Containers may explode when heated or if contaminated with water. Thermal decomposition can lead to release of irritating gases and vapors. Runoff to sewer may create fire or explosion hazard. Flammable/toxic gases may accumulate in confined areas (basements, tanks, hopper/tank cars etc.). Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous Combustion Products
Nitrogen oxides (NOx) Sodium oxides

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 4
Flammability 1
Instability 2
Physical hazards N/A

6. Accidental release measures

Personal Precautions
Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid dust formation. Do not subject to grinding/shock/friction. Do not get in eyes, on skin, or on clothing.

Environmental Precautions
Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

Methods for Containment and Clean Up
Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. Handling and storage

Handling
Wear personal protective equipment. Use only under a chemical fume hood. Avoid dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Keep away from open flames, hot surfaces and sources of ignition.

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

8. Exposure controls / personal protection

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium azide</td>
<td>Ceiling: 0.29 mg/m³</td>
<td>Skin (Vacated) Ceiling: 0.1 ppm</td>
<td>Ceiling: 0.1 ppm</td>
</tr>
<tr>
<td></td>
<td>Ceiling: 0.11 ppm</td>
<td>(Vacated) Ceiling: 0.3 mg/m³</td>
<td>Ceiling: 0.3 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Quebec</th>
<th>Mexico OEL (TWA)</th>
<th>Ontario TWAEV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium azide</td>
<td>Ceiling: 0.11 ppm</td>
<td>CEV: 0.29 mg/m³</td>
<td>CEV: 0.11 ppm</td>
</tr>
<tr>
<td></td>
<td>Ceiling: 0.3 mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Powder Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>10 1M aq.sol</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>275 °C / 527 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>300 °C / 572 °F @ 760 mmHg</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid,gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td>No applicable</td>
</tr>
<tr>
<td>Upper</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.850</td>
</tr>
<tr>
<td>Solubility</td>
<td>420 g/L (17°C)</td>
</tr>
<tr>
<td>Partition coefficient; n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>&gt; 275°C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>N3 Na</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>65.01</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

- **Reactive Hazard**: Yes
- **Stability**: Risk of explosion by shock, friction, fire or other sources of ignition.
- **Conditions to Avoid**: Incompatible products. Heat, flames and sparks. Avoid shock and friction. Avoid dust formation.
- **Incompatible Materials**: Acids, Oxidizing agents, Peroxides, Acid chlorides, Metals
Hazardous Decomposition Products  Nitrogen oxides (NOx), Sodium oxides

Hazardous Polymerization  Hazardous polymerization does not occur.

Hazardous Reactions  Contact with acids liberates very toxic gas. Do not flush down the drain. Sodium azide may react with plumbing systems to form highly explosive compounds.

### 11. Toxicological information

#### Acute Toxicity

**Product Information**

**Component Information**

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium azide</td>
<td>LD50 = 27 mg/kg (Rat)</td>
<td>-</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

**Toxicologically Synergistic Products**  No information available

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

**Irritation**  Irritating to eyes, respiratory system and skin

**Sensitization**  No information available

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

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium azide</td>
<td>26628-22-8</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

**Mutagenic Effects**  Mutagenic effects have occurred in experimental animals.

**Reproductive Effects**  Experiments have shown reproductive toxicity effects on laboratory animals.

**Developmental Effects**  No information available.

**Teratogenicity**  No information available.

**STOT - single exposure**  None known

**STOT - repeated exposure**  Central nervous system (CNS) Cardiovascular system Liver Kidney Heart spleen

**Aspiration hazard**  No information available

**Symptoms / effects, both acute and delayed**  No information available

**Endocrine Disruptor Information**  No information available

**Other Adverse Effects**  See actual entry in RTECS for complete information. Tumorigenic effects have been reported in experimental animals.

### 12. Ecological information

**Ecotoxicity**  Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium azide</td>
<td>Not listed</td>
<td>LC50: = 5.46 mg/L, 96h flow-through (Pimephales promelas) LC50: = 0.7 mg/L, 96h (Lepomis macrochirus) LC50: = 0.8 mg/L, 96h</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>
**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**

<table>
<thead>
<tr>
<th>UN-No</th>
<th>UN1687</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name</td>
<td>SODIUM AZIDE</td>
</tr>
<tr>
<td>Hazard Class</td>
<td>6.1</td>
</tr>
<tr>
<td>Packing Group</td>
<td>II</td>
</tr>
</tbody>
</table>

**TDG**

<table>
<thead>
<tr>
<th>UN-No</th>
<th>UN1687</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name</td>
<td>SODIUM AZIDE</td>
</tr>
<tr>
<td>Hazard Class</td>
<td>6.1</td>
</tr>
<tr>
<td>Packing Group</td>
<td>II</td>
</tr>
</tbody>
</table>

**IATA**

<table>
<thead>
<tr>
<th>UN-No</th>
<th>UN1687</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name</td>
<td>SODIUM AZIDE</td>
</tr>
<tr>
<td>Hazard Class</td>
<td>6.1</td>
</tr>
<tr>
<td>Packing Group</td>
<td>II</td>
</tr>
</tbody>
</table>

**IMDG/IMO**

<table>
<thead>
<tr>
<th>UN-No</th>
<th>UN1687</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name</td>
<td>SODIUM AZIDE</td>
</tr>
<tr>
<td>Hazard Class</td>
<td>6.1</td>
</tr>
<tr>
<td>Packing Group</td>
<td>II</td>
</tr>
</tbody>
</table>

### 15. Regulatory information

**International Inventories**

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium azide</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>247-852-1</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**Legend:**

- **X** - Listed
- **E** - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
- **F** - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- **N** - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- **P** - Indicates a commenced PMN substance
- **R** - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- **S** - Indicates a substance that is identified in a proposed or final Significant New Use Rule
- **T** - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
- **XU** - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).
- **Y1** - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
- **Y2** - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

**TSCA 12(b)**

Not applicable

**SARA 313**
<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium azide</td>
<td>26628-22-8</td>
<td>&gt;95</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories
- Acute Health Hazard: Yes
- Chronic Health Hazard: Yes
- Fire Hazard: No
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: Yes

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Component</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA EHS RQs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium azide</td>
<td>1000 lb</td>
<td>1000 lb</td>
</tr>
</tbody>
</table>

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium azide</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

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

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class
- D1A Very toxic materials
- D2B Toxic materials
- F Dangerously reactive material
16. Other information

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 03-Dec-2010
Revision Date 19-Jan-2016
Print Date 19-Jan-2016
Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

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