1. Identification

Product identifier: SODIUM AZIDE, REAGENT (ACS)

Other means of identification:

Product code: 3512

Recommended use: professional, scientific and technical activities: other professional, scientific and technical activities preservative technical function of substance

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name: GFS Chemicals, Inc.
Address: P.O. Box 245
Powell, OH 43065
United States

Telephone
Phone: 740-881-5501
Toll Free: 800-858-9682
Fax: 740-881-5989

Website: www.gfschemicals.com
E-mail: service@gfschemicals.com

Emergency phone number:
Emergency Assistance: Chemtrec 800-424-9300

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards:
Acute toxicity, oral Category 2
Acute toxicity, dermal Category 1
Specific target organ toxicity, single exposure Category 3 respiratory tract irritation

Environmental hazards:
Hazardous to the aquatic environment, acute hazard Category 1
Hazardous to the aquatic environment, long-term hazard Category 1

OSHA defined hazards: Not classified.

Label elements

Signal word: Danger

Hazard statement: Fatal if swallowed. Fatal in contact with skin. May cause respiratory irritation. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention: Keep/Store away from clothing and other combustible materials. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing.

Response: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. IF ON SKIN: Wash with plenty of soap and water. IF inhaled: Remove person to fresh air and keep comfortable for breathing. Rinse mouth. Take off immediately all contaminated clothing and wash it before reuse. In case of fire: Use water to extinguish. Collect spillage.

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

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

Hazard(s) not otherwise classified (HNOC): None known.

Supplemental information: None.
### 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM AZIDE</td>
<td></td>
<td>26628-22-8</td>
<td>100</td>
</tr>
</tbody>
</table>

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

**Inhalation**
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. Get medical attention.

**Skin contact**
Take off immediately all contaminated clothing. Wash off with soap and water. Call a physician or poison control center immediately. Wash contaminated clothing before reuse.

**Eye contact**
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**Ingestion**
Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**Most important symptoms/effects, acute and delayed**
Dizziness. Headache. Irritation of eyes and mucous membranes. May cause respiratory irritation. Skin irritation.

**Indication of immediate medical attention and special treatment needed**
Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General information**
Take off immediately all contaminated clothing. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Discard any shoes or clothing items that cannot be decontaminated.

### 5. Fire-fighting measures

**Suitable extinguishing media**

**Unsuitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**
During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**
Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

**Fire fighting equipment/instructions**
Use water spray to cool unopened containers.

**Specific methods**
Use standard firefighting procedures and consider the hazards of other involved materials. No unusual fire or explosion hazards noted.

### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**
Refer to attached safety data sheets and/or instructions for use. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Should not be released into the environment. Stop the flow of material, if this is without risk. Avoid dust formation. Clean up in accordance with all applicable regulations. Following product recovery, flush area with water. Sweep up or vacuum up spillage and collect in suitable container for disposal. This material and its container must be disposed of as hazardous waste. For waste disposal, see section 13 of the SDS. Small Dry Spills: With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

**Environmental precautions**
Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.
7. Handling and storage
Precautions for safe handling
Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities
Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>US. ACGIH Threshold Limit Values</th>
<th>Material</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM AZIDE (CAS 26628-22-8)</td>
<td>Ceiling</td>
<td>0.29 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.11 ppm</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. NIOSH: Pocket Guide to Chemical Hazards</th>
<th>Material</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM AZIDE (CAS 26628-22-8)</td>
<td>Ceiling</td>
<td>0.3 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.1 ppm</td>
<td></td>
</tr>
</tbody>
</table>

Biological limit values
No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US - Tennessee OELs: Skin designation
SODIUM AZIDE (CAS 26628-22-8) Can be absorbed through the skin.

US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants
Sodium azide (CAS 26628-22-8) Can be absorbed through the skin.

US. NIOSH: Pocket Guide to Chemical Hazards
SODIUM AZIDE (CAS 26628-22-8) Can be absorbed through the skin.

Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.

Individual protection measures, such as personal protective equipment

Eye/face protection
Wear chemical goggles.

Skin protection

Hand protection
Wear appropriate chemical resistant gloves.

Other
Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations
Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance
Crystalline.

Physical state
Solid.

Form
Solid.

Color
White.

Odor
Not available.

Odor threshold
Not available.

pH
Not available.

Melting point/freezing point
527 °F (275 °C)

Initial boiling point and boiling range
Not available.

Flash point
Not available.

Evaporation rate
Not available.
Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)
Not available.

Flammability limit - upper (%)
Not available.

Explosive limit - lower (%)
Not available.

Explosive limit - upper (%)
Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) 420 g/l

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature 527 - 572 °F (275 - 300 °C)

Viscosity Not available.

Other information

Density 1.85 g/cm³ estimated

Molecular formula NaN₃

Molecular weight 65.01 g/mol

Specific gravity 1.85 at 20 °C

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Decomposes explosively upon heating, shock, concussion, or friction.

Possibility of hazardous reactions Hazardous polymerization does not occur.

Conditions to avoid Lowering the pH below 6 causes generation of very irritating, explosive hydrazoic acid. Mechanical shock. Contact with incompatible materials.


Hazardous decomposition products May include oxides of nitrogen. Hydrazoic acid

11. Toxicological information

Information on likely routes of exposure

Inhalation May cause irritation to the respiratory system. Prolonged inhalation may be harmful.

Skin contact Fatal in contact with skin.

Eye contact Direct contact with eyes may cause temporary irritation.

Ingestion Fatal if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics Dizziness. Headache. Irritation of eyes and mucous membranes. May cause respiratory irritation. Skin irritation.

Information on toxicological effects

Acute toxicity Fatal in contact with skin. Fatal if swallowed. May cause respiratory irritation.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM AZIDE (CAS 26628-22-8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>20 mg/kg</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Bird</td>
<td>23.7 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Mouse</td>
<td>27 mg/kg</td>
</tr>
<tr>
<td>Product</td>
<td>Species</td>
<td>Test Results</td>
</tr>
<tr>
<td>---------</td>
<td>---------</td>
<td>--------------</td>
</tr>
<tr>
<td>TD</td>
<td>Rat</td>
<td>27 mg/kg</td>
</tr>
<tr>
<td>TDL0</td>
<td>Rat</td>
<td>5460 mg/kg</td>
</tr>
<tr>
<td>Other</td>
<td>Mouse</td>
<td>2730 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
<td></td>
<td>19 mg/kg</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

### Skin corrosion/irritation
- Prolonged skin contact may cause temporary irritation.

### Serious eye damage/eye irritation
- Direct contact with eyes may cause temporary irritation.

### Respiratory or skin sensitization
- **Respiratory sensitization**: Not available.
- **Skin sensitization**: This product is not expected to cause skin sensitization.
- **Germ cell mutagenicity**: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
- **Carcinogenicity**: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
- **Reproductive toxicity**: This product is not expected to cause reproductive or developmental effects.
- **Specific target organ toxicity**
  - **- single exposure**: May cause respiratory irritation.
  - **- repeated exposure**: Not classified.
- **Aspiration hazard**: Not available.
- **Chronic effects**: Prolonged inhalation may be harmful.

### Ecological information

#### Ecotoxicity
- Very toxic to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM AZIDE (CAS 26628-22-8)</td>
<td>Ec50</td>
<td>Water flea (Daphnia pulex)</td>
</tr>
<tr>
<td></td>
<td>LC50</td>
<td>Bluegill (Lepomis macrochirus)</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

### Persistence and degradability
- None known.

### Bioaccumulative potential
- No data available.

### Mobility in soil
- No data available.

### Other adverse effects
- No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### Disposal considerations

#### Disposal instructions
- Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Hazardous waste code
- The waste code should be assigned in discussion between the user, the producer and the waste disposal company. P105: Sodium Azide

### US RCRA Hazardous Waste P List: Reference
- SODIUM AZIDE (CAS 26628-22-8) P105

#### Waste from residues / unused products
- Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

#### Contaminated packaging
- Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.
14. Transport information

DOT

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1687</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Sodium azide, MARINE POLLUTANT</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td></td>
</tr>
<tr>
<td>Class</td>
<td>6.1(PGI, II)</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Label(s)</td>
<td>6.1</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td></td>
</tr>
<tr>
<td>Marine pollutant</td>
<td>Yes</td>
</tr>
</tbody>
</table>

| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Special provisions          | IB8, IP2, IP4 |
| Packaging exceptions        | 153 |
| Packaging non bulk           | 212 |
| Packaging bulk               | 242 |

IATA

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1687</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Sodium azide</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td></td>
</tr>
<tr>
<td>Class</td>
<td>6.1(PGI, II)</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No.</td>
</tr>
<tr>
<td>ERG Code</td>
<td>6L</td>
</tr>
</tbody>
</table>

| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Other information            |  |
| Passenger and cargo aircraft | Allowed. |
| Cargo aircraft only          | Allowed. |

IMDG

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1687</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>SODIUM AZIDE, MARINE POLLUTANT</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td></td>
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<tr>
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<td>6.1(PGI, II)</td>
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<tr>
<td>Subsidiary risk</td>
<td>-</td>
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<tr>
<td>Packing group</td>
<td>II</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td></td>
</tr>
<tr>
<td>Marine pollutant</td>
<td>Yes</td>
</tr>
<tr>
<td>EmS</td>
<td>F-A, S-A</td>
</tr>
</tbody>
</table>

| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |

| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable. |

DOT

![TOXIC](image-url)
Marine pollutant

General information
DOT Regulated Marine Pollutant. IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

SODIUM AZIDE (CAS 26628-22-8) Listed.

SARA 304 Emergency release notification

SODIUM AZIDE (CAS 26628-22-8) 1000 LBS

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name | CAS number | Reportable quantity | Threshold planning quantity | Threshold planning quantity, lower value | Threshold planning quantity, upper value
--- | --- | --- | --- | --- | ---
SODIUM AZIDE | 26628-22-8 | 1000 | 500 lbs

SARA 311/312 Hazardous chemical

SARA 313 (TRI reporting)

Chemical name | CAS number | % by wt.
--- | --- | ---
SODIUM AZIDE | 26628-22-8 | 100

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)
Not listed.

Material name: SODIUM AZIDE, REAGENT (ACS)
3512 Version #: 02 Revision date: December-09-2014 Issue date: August-02-2013
US. Massachusetts RTK - Substance List
SODIUM AZIDE (CAS 26628-22-8)

US. New Jersey Worker and Community Right-to-Know Act
SODIUM AZIDE (CAS 26628-22-8)

US. Pennsylvania Worker and Community Right-to-Know Law
SODIUM AZIDE (CAS 26628-22-8)

US. Rhode Island RTK
SODIUM AZIDE (CAS 26628-22-8)

US. California Proposition 65
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date: August-02-2013
Revision date: December-09-2014
Version #: 02

Disclaimer
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. GFS Chemicals cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Revision Information
This document has undergone significant changes and should be reviewed in its entirety.