Material Safety Data Sheet
Sodium azide

ACC# 20960

Section 1 - Chemical Product and Company Identification

MSDS Name: Sodium azide
Catalog Numbers: AC190380000, AC190380050, AC190385000, 19038-1000, BP922I-500, NC9812538, S227I-1, S227I-100, S227I-25, S227I-500, S227I-500LC
Synonyms: Sodium salt of hydrazoic acid; Smite; Azium.
Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
26628-22-8	Sodium azide	99+	247-852-1

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white crystalline powder.
Danger! May be fatal if inhaled, absorbed through the skin or swallowed. Reacts with many heavy metals to form explosive compounds. Heating may cause an explosion. Causes eye, skin, and respiratory tract irritation. Contact with acids liberates toxic gas. Readily absorbed through the skin. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Target Organs: Blood, kidneys, heart, central nervous system, liver, spleen, respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes eye irritation. Contact with dust or vapor may cause systemic toxic
Skin: Causes skin irritation. May be fatal if absorbed through the skin. Substance is readily absorbed through the skin.
Ingestion: May be fatal if swallowed. May cause irritation of the digestive tract. May cause low blood pressure, rapid heartbeat, skin discoloration, and possible coma.
Inhalation: May be fatal if inhaled. May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema. The vapor of hydrazoic acid may be present where sodium azide is handled. Symptoms of acute exposure to hydrazoic acid include eye irritation, headache, dramatic decrease in blood pressure, weakness, pulmonary edema, and

collapse.
Chronic: May cause liver and kidney damage. Repeated exposure may cause damage to the spleen. Laboratory experiments have resulted in mutagenic effects. Chronic exposure may cause blood effects. Animal studies have reported the development of tumors.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid imme diately.
Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. SPEEDY ACTION IS CRITICAL!
Ingestion: POISON material. If swallowed, get medical aid immediately. Only induce vomiting if directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. SPEED IS ESSENTIAL, OBTAIN MEDICAL AID IMMEDIATELY. 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.
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Containers may explode in the heat of a fire. Forms explosion sensitive compounds with some metals such as lead and copper. Form hydrazoic acid vapor in contact with acid or water. Hydrazoic acid vapor is highly toxic and a dangerous explosive. Hydrazoic acid is shock sensitive.
Extinguishing Media: Do NOT use water directly on fire. Use dry chemical.
Flash Point: Not applicable.
Autoignition Temperature: Not available.
Explosion Limits, Lower: Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 4; Flammability: 0; Instability: 2

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Avoid generating dusty conditions. Provide ventilation. Evacuate unnecessary personnel. Do not flush down the drain. Over a period of time, sodium azide may react with copper, lead, brass, or solder in plumbing systems to form an accumulation of the highly explosive compounds of lead azide and copper azide. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only in a chemical fume hood. Acids should not be used around this material unless absolutely necessary and then only after careful planning. Contact with acids liberates toxic gas.
Storage: Store in a cool, dry place. Store in a tightly closed container. Keep away from acids. Do not store in metal containers.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Sodium azide	0.29 mg/m3 Ceiling (as NaN3); 0.11 ppm Ceiling (vapor, as hydrazoic acid)	none listed	none listed
Hydrazoic acid	none listed	none listed	none listed

OSHA Vacated PELs: Sodium azide: No OSHA Vacated PELs are listed for this chemical. Hydrazoic acid: No OSHA Vacated PELs are listed for this chemical.
Personal Protective Equipment
Eyes: 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.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: 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.

Section 9 - Physical and Chemical Properties

Physical State: Crystalline powder
Appearance: white
Odor: odorless
pH: 10 (1M aq.sol.)
Vapor Pressure: Not available.
Vapor Density: Not available.
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: 300 deg C @ 760 mmHg
Freezing/Melting Point:275 deg C (decom)
Decomposition Temperature: Not available.
Solubility: Soluble.
Specific Gravity/Density:1.850
Molecular Formula:N3Na
Molecular Weight:65.01

Section 10 - Stability and Reactivity

Chemical Stability: Heating may cause an explosion. Contact with acid liberates gas. Heat sensitive
Conditions to Avoid: Incompatible materials, dust generation, moisture, metals, strong acids, temperatures above 250?C.
Incompatibilities with Other Materials: Acids, metals, halogenated hydrocarbons, acid chlorides.
Hazardous Decomposition Products: Nitrogen oxides, sodium oxide, hydrazoic acid.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 26628-22-8: VY8050000
CAS# 7782-79-8: MW2800000
LD50/LC50:
CAS# 26628-22-8:
Inhalation, mouse: LC50 = 32400 ug/m3;
Inhalation, rat: LC50 = 37 mg/m3;
Oral, mouse: LD50 = 27 mg/kg;
Oral, rat: LD50 = 27 mg/kg;
Skin, rabbit: LD50 = 20 mg/kg;
Skin, rat: LD50 = 50 mg/kg;
.

CAS# 7782-79-8:
Inhalation, mouse: LC50 = 34 mg/m3;
Oral, rat: LD50 = 33 mg/kg;
.

Carcinogenicity:
CAS# 26628-22-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 7782-79-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: Tumorigenic effects have been reported in experimental animals.
Teratogenicity: No information found
Reproductive Effects: No information found
Mutagenicity: Mutagenic effects have occurred in experimental animals.
Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: Fish: Rainbow trout: LC50 = 0.8-1.6 mg/L; 96 Hr.; 13 degrees CFish: Bluegill/Sunfish: LC50 = 0.7-0.8 mg/L; 96 Hr.; 18 degrees C No data available.
Environmental: Aquatic Fate: Photolysis of sodium azide may result in metal nitrides initially, with the eventual formation of the free metal and nitrogen gas.
Physical: No information available.
Other: Harmful to aquatic life in very low concentrations.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: CAS# 26628-22-8: waste number P105.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	SODIUM AZIDE	SODIUM AZIDE
Hazard Class:	6.1	6.1
UN Number:	UN1687	UN1687
Packing Group:	II	II

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 26628-22-8 is listed on the TSCA inventory.
CAS# 7782-79-8 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
CAS# 26628-22-8: 1000 lb final RQ; 454 kg final RQ
SARA Section 302 Extremely Hazardous Substances
CAS# 26628-22-8: 500 lb TPQ (This material is a reactive solid. The TP Q does not default to 10000 pounds for non-powder, non-molten, non-so lvent form)
SARA Codes
CAS # 26628-22-8: immediate, delayed, reactive.
Section 313
This material contains Sodium azide (CAS# 26628-22-8, 99+%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 26628-22-8 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 7782-79-8 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European / International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T+ N

Risk Phrases:

R 28 Very toxic if swallowed.
R 32 Contact with acids liberates very toxic gas.
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 60 This material and its container must be disposed of as hazardou s waste.
S 28A After contact with skin, wash immediately with plenty of water .
S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

WGK (Water Danger / Protection)

CAS# 26628-22-8: 2
CAS# 7782-79-8: No information available.

Canada - DSL / NDSL

CAS# 26628-22-8 is listed on Canada's DSL List.
CAS# 7782-79-8 is listed on Canada's NDSL List.

Canada - WHMIS

This product has a WHMIS classification of D1A, D2B, F.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 26628-22-8 is listed on the Canadian Ingredient Disclosure List.
CAS# 7782-79-8 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 7/01/1999
Revision #16 Date: 9/05/2008

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.