



MATERIAL SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Date of issue: 03/11/2013

Version 1.0

SECTION 1. Identification

Product identifier

Product number	822335
Product name	Sodium azide for synthesis

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

Identified uses	Chemical for synthesis
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Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation 290 Concord Road, Billerica, MA 01821, United States of America SDS Phone Support: +1-978-715-1335 General Inquiries: +1-978-715-4321 Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) e-mail: mm_sds@merckgroup.com
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Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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SECTION 2. Hazards identification

GHS Classification

Acute toxicity, Category 2, Oral, H300
Acute aquatic toxicity, Category 1, H400
Chronic aquatic toxicity, Category 1, H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling

Hazard pictograms



Signal Word
Danger

Hazard Statements
H300 Fatal if swallowed.
H410 Very toxic to aquatic life with long lasting effects.

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Precautionary Statements

P273 Avoid release to the environment.

P309 + P310 IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/physician.

OSHA Hazards

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Other hazards

None known.

SECTION 3. Composition/information on ingredients

Formula	NaN ₃	N ₃ Na (Hill)
CAS-No.	26628-22-8	
Molar mass	65.01 g/mol	

Hazardous ingredients

Chemical Name (Concentration)

CAS-No.

sodium azide (>= 90 % - <= 100 %)
26628-22-8

SECTION 4. First aid measures

Description of first-aid measures

Inhalation

After inhalation: fresh air.

Skin contact

After skin contact: wash off with plenty of water. Remove contaminated clothing.

Eye contact

After eye contact: rinse out with plenty of water with the eyelid held wide open. Call in ophthalmologist if necessary.

Ingestion

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

irritant effects, Cough, Shortness of breath, Dizziness, Unconsciousness, Nausea, Vomiting, collapse, Circulatory collapse, Headache, Convulsions, CNS disorders

Indication of any immediate medical attention and special treatment needed

No information available.

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SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Special powder against metal fire, Sand, Cement

Unsuitable extinguishing media

Water, Foam

Special hazards arising from the substance or mixture

Combustible.

Development of hazardous combustion gases or vapors possible in the event of fire.

Risk of dust explosion.

Fire may cause evolution of:

nitrous gases, nitrogen oxides

Advice for firefighters

Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact.

Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

Environmental precautions

Do not empty into drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

Sodium azide and other inorganic azides (including explosive heavy metal azides) can be rendered harmless by spraying with or immersion into a 0.1 N solution of ammonium(IV) nitrate in 2 N perchloric acid.

SECTION 7. Handling and storage

Precautions for safe handling

Keep workplace dry. Do not allow product to come into contact with water.

Observe label precautions.

Conditions for safe storage, including any incompatibilities

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Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Store at +15°C to +25°C (+59°F to +77°F).

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Ingredients

Basis	Value	Threshold limits	Remarks
<i>sodium azide 26628-22-8</i>			
ACGIH	Ceiling Limit Value:	0.29 mg/m ³	Expressed as: as NaN ₃
	Ceiling Limit Value:	0.11 ppm	Expressed as: as hydrazoic acid vapor
NIOSH/GUIDE	Ceiling Limit Value and Time Period (if specified):	0.1 ppm	Expressed as: as HN ₃
	Ceiling Limit Value and Time Period (if specified):	0.3 mg/m ³	Expressed as: as NaN ₃
	Skin designation:		Can be absorbed through the skin. Expressed as: as HN ₃
	Skin designation:		Can be absorbed through the skin. Expressed as: as NaN ₃
Z1A	Ceiling Limit Value:	0.1 ppm	Expressed as: as HN ₃
	Ceiling Limit Value:	0.3 mg/m ³	Expressed as: as NaN ₃
	Skin designation (Final Rule Limit applies):		Can be absorbed through the skin. Expressed as: as HN ₃
	Skin designation (Final Rule Limit applies):		Can be absorbed through the skin. Expressed as: as NaN ₃

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures

Change contaminated clothing. Application of skin- protective barrier cream recommended.
Wash hands after working with substance.

Eye/face protection

Safety glasses

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

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Other protective equipment:
protective clothing

Respiratory protection

required when dusts are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. Physical and chemical properties

Physical state	solid
Color	white
Odor	odorless
Odor Threshold	not applicable
pH	No information available.
Melting point	275 °C (decomposition)
Boiling point/boiling range	572 °F (300 °C) (rigorous decomposition)
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapor pressure	No information available.
Relative vapor density	No information available.
Relative density	1.85 g/cm ³ at 68 °F (20 °C)
Water solubility	420 g/l at 63 °F (17 °C)
Partition coefficient: n-octanol/water	log Pow: 0.3 OECD Test Guideline 117 (External MSDS) Bioaccumulation is not expected (log Pow <1).

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Autoignition temperature	No information available.
Decomposition temperature	> 527 °F (> 275 °C)
Viscosity, dynamic	No information available.
Explosive properties	No information available.

SECTION 10. Stability and reactivity

Reactivity

highly reactive
Risk of dust explosion.

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions

A risk of explosion and/or of toxic gas formation exists with the following substances:
acids, Water, Heavy metals, metallic salts, Bromine, dimethylsulfate, Acid, dichloromethane,
carbon disulfide, sulfuric acid, Halogenated hydrocarbon, Copper
Violent reactions possible with:
nitrates

Conditions to avoid

Strong heating.
Exposure to moisture.

Incompatible materials

Aluminum

Hazardous decomposition products

in the event of fire: See section 5.

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure
Eye contact, Skin contact, Ingestion

Target Organs
Eyes
Skin
Central nervous system
cardiovascular system
Kidneys

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Acute oral toxicity

LD50 rat: 27 mg/kg (RTECS)

absorption

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute inhalation toxicity

Symptoms: Irritation symptoms in the respiratory tract., Inhalation may lead to the formation of oedemas in the respiratory tract., Symptoms may be delayed.

Acute dermal toxicity

LD50 rabbit: 20 mg/kg
(RTECS) (Regulation (EC) No 1272/2008, Annex VI)

Skin irritation

Possible damages: slight irritation

Eye irritation

Possible damages: slight irritation

Specific target organ systemic toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information

Systemic effects:

CNS disorders, Circulatory collapse, tachycardia, drop in blood pressure, Cough, Shortness of breath, Convulsions, Headache, Dizziness, Nausea, Vomiting, collapse, Unconsciousness

This substance should be handled with particular care.

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SECTION 12. Ecological information

Ecotoxicity

Toxicity to fish

LC50 *Lepomis macrochirus* (Bluegill sunfish): 0.7 mg/l; 96 h (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates

EC50 *Daphnia pulex* (Water flea): 4.2 mg/l; 48 h (ECOTOX Database)

Toxicity to algae

IC50 mixed culture of green algae: 272 mg/l (Lit.)

Toxicity to bacteria

EC50 *Photobacterium phosphoreum*: 38.5 mg/l (Lit.)

Persistence and degradability

No information available.

Bioaccumulative potential

Partition coefficient: n-octanol/water

log Pow: 0.3

OECD Test Guideline 117

(External MSDS) Bioaccumulation is not expected (log Pow <1).

Mobility in soil

No information available.

Other adverse effects

Additional ecological information

Biological effects:

Forms toxic mixtures in water, dilution measures notwithstanding.

Herbicide

Nematocidal effect.

Further information on ecology

Discharge into the environment must be avoided.

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)

UN number	UN 1687
Proper shipping name	SODIUM AZIDE
Class	6.1
Packing group	II
Environmentally hazardous	--

Air transport (IATA)

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UN number UN 1687
Proper shipping name SODIUM AZIDE
Class 6.1
Packing group II
Environmentally hazardous --
Special precautions for user no

Sea transport (IMDG)

UN number UN 1687
Proper shipping name SODIUM AZIDE
Class 6.1
Packing group II
Environmentally hazardous --
Special precautions for user yes
EmS F-A S-A

SECTION 15. Regulatory information

United States of America

OSHA Hazards

Water Reactive
Highly toxic by ingestion
Highly toxic by skin absorption
Target organ effects

This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS, and may deviate from the GHS information on the label and in section 2.

SARA 311/312 Hazards

Reactivity Hazard
Acute Health Hazard
Chronic Health Hazard

SARA 313

The following components are subject to reporting levels established by SARA Title III, Section 313:

Ingredients

sodium azide

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Product name

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SARA 302

The following components are subject to reporting levels established by SARA Title III, Section 302:

Ingredients

sodium azide

26628-22-8

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

DEA List I

Not listed

DEA List II

Not listed

Massachusetts Right To Know

Ingredients

sodium azide

Pennsylvania Right To Know

Ingredients

sodium azide

New Jersey Right To Know

Ingredients

sodium azide

Notification status

TSCA:

On TSCA Inventory

DSL:

All components of this product are on the Canadian DSL.

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

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

H300

Fatal if swallowed.

H400

Very toxic to aquatic life.

H410

Very toxic to aquatic life with long lasting effects.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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