

NAME OF PRODUCT Sodium Azide

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product/Catalog Number(s):				
	60-103	15 μg/vial		
	60-103.1	10 µg/vial		
	60-103.3	100 µg/vial		
	60-103.6	2 mg/vial		
	60-120	200 μg/vial		
	60-124	100 μg/vial		
Product name:	Sodium azide			
Synonyms:	NaN₃, N₃Na, Azide, azium, sodium salt of hydrazoic acid			
Manufacturer:	Molecular Toxicology Inc.			
Address:	157 Industrial Park Drive, Boone, North Carolina, 28607			
Phone:	(1) 828 264 9099 (8:30 – 17:00 EST)			
Fax:	828 264 0103			
Emergency contact (Chemtrec):		Contact 1800-424-9300 (USA) or 703 527 3887 (International) at other times Email: <u>chemtrec@chemtrec.com; http://www.chemtrec.com/</u>		
Recommended use:		Laboratory, For Research Only		
Restrictions on use:		Not for clinical use		
Section 1 notes	:			

## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture per GSH and EU Directive 1272/2008



Physical hazards	None known
Health hazards	Acute toxicity, Oral (Category 2) Acute toxicity, Dermal (Category 1) Specific target organ toxicity – repeated exposure, Oral (Category 2), Brain Acute aquatic toxicity (Category 1) Chronic aquatic toxicity (Category 1)

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Environmental hazaro	ds See eco-toxicity section 12.			
Labelling				
Signal Word Hazard Statements	Danger H300 + H310 Fatal if swallowed or in contact with skin H410 Very toxic to aquatic life with long lasting effects. H373 May cause damage to organs through prolonged or repeated exposure			
Precautionary Statements	<ul> <li>P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.</li> <li>P262 Do not get in eyes, on skin, or on clothing.</li> <li>P264 Wash hands thoroughly after handling.</li> <li>P270 Do not eat, drink or smoke when using this product.</li> <li>P273 Avoid release to the environment.</li> <li>P280 Wear protective gloves/ protective clothing.</li> <li>P302 + P350 + P310 IF ON SKIN: Gently wash with plenty of soap and water.</li> <li>P301 + P330 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.</li> <li>P314 Get medical advice/ attention if you feel unwell</li> <li>P362 Take off contaminated clothing and wash before reuse.</li> <li>P405 Store locked up.</li> <li>P501 Dispose of contents/ container to an approved waste disposal plant.</li> </ul>			
Other hazards	<ul> <li>P391 Collect spillage</li> <li>OSHA Hazards</li> <li>Target Organ Effect, Highly toxic by ingestion, Highly toxic by skin absorption</li> <li>Target Organs</li> <li>Heart, Central nervous system, Brain.</li> <li>HMIS Classification <ul> <li>Health hazard: 4</li> <li>Chronic Health Hazard: *</li> <li>Flammability: 0</li> <li>Physical hazards: 0</li> </ul> </li> <li>NFPA Rating <ul> <li>Health hazard: 4</li> <li>Fire: 0</li> <li>Reactivity Hazard: 0</li> </ul> </li> </ul>			
	Other hazards Contact with acids liberates very toxic gas. Other hazards which do not result in classification Sodium Azide may react with lead and copper plumbing to form highly explosive metal azides. Rapidly absorbed through skin.			



## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### **Mixtures**

Component	Purpose	CAS-No	EC-No.	Weight %
Sodium Azide	Biochemical used in the study of carcinogenesis	26628-22-8	247-852-1	≥ 99%

## SECTION 4. FIRST AID MEASURES

#### Description of first aid measures

Eye Contact	Flush eyes with water for at least 15 minutes. Requires immediate medical attention
Skin Contact	Wash off immediately with plenty of soap and water and rinse thoroughly. Take victim immediately to hospital. Consult a physician.
Ingestion	Rinse mouth with plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Consult a physician.
Inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Protection of first-aiders	Not required

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. In the event that symptoms develop or persists, obtain medical attention.

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

Acute: Ingestion - May be harmful if swallowed; Skin - May be harmful in contact with skin; Eyes - May cause irritation.

Chronic: May be carcinogenic - duration and level of exposure dependent

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

Seek medical attention if ingested or if breathing difficulties are observed.

## SECTION 5. FIREFIGHTING MEASURES

## Extinguishing media

Not flammable; use media suitable for extinguishing surrounding fire (carbon dioxide, extinguishing powder or water spray). Fight larger fires with water spray or alcohol resistant foam.

## Special hazards arising from the substance or mixture

Hazardous thermal decomposition products: Carbon dioxide, carbon monoxide, sulphur oxides.

## Advice for firefighters

Fire-fighters should wear self-contained breathing apparatus (SCBA).

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# SECTION 6. ACCIDENTAL RELEASE MEASURES

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

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

#### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not release material into drains.

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

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

#### **Reference to other sections**

Refer to Sections 7 for information on safe handling See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

## SECTION 7. HANDLING AND STORAGE

#### Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Provide appropriate exhaust ventilation at places where dust is formed.

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

Keep container tightly closed in a dry and well-ventilated place. Never allow product to get in contact with water during storage. Do not store near acids.



## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **Control parameters**

## Exposure limits

Components	CAS-No.	Value	Control parameters	Basis
Sodium azide	26628-22-8	С	0.1 ppm	USA. OSHA - TABLE Z-1 Limits for Air Contaminants -
				1910.1000
	Skin notation			
		С	0.1 ppm	USA. NIOSH Recommended Exposure Limits
	Potential for dermal absorption			
		с	0.3 mg/m³	USA. NIOSH Recommended Exposure Limits
	Potential for dermal absorption			
		с	0.11 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Lung damage Cardiac impairment Not classifiable as a human carcinogen			
		С	0.29 mg/m3	USA. ACGIH Threshold Limit Values (TLV)

Monitoring methods unknown

## **Exposure controls**

## **Engineering Measures**

Ensure adequate ventilation, especially in confined areas

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimize release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source. Use of a properly operating chemical fume hood designed for hazardous chemicals is recommended.

## Personal protective equipment

*Eye Protection*: Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

## Hand Protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm

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Break through time: 480 min Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

## Skin and body protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

## **Respiratory Protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

*Hygiene Measures* - Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

*Environmental exposure controls* – Properly operating chemical fume hood designed for hazardous chemicals.

## **Exposure limits**

Permissible Exposure Limits and Threshold Limit Values not specified by OSHA.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

## Information on basic physical and chemical properties

Appearance	Crystalline, white	
Auto-ignition temperature	275°C	
Boiling point	N/A	
Decomposition temperature	275°C	
Density	1.85 g/cm <sup>3</sup>	
Evaporation Rate	N/A	
Flammable limits in air	no data available	
Flash point	104ºC (219ºF)	
Formula	NaN₃	

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Melting point	275°C (527°F); N/A to liquid part numbers	
Molecular weight	65.01 g/mol	
Odor threshold	no data available	
Osmolality	no data available	
рН	10 @ 65 g/L, 25ºC (77 ºF)	
Solubility in water	Yes, 65 g/L @ 20ºC (68ºF)	
Specific gravity	no data available	
Vapor density	no data available	
Vapor pressure	0.01 hPa (0.01 mmHg) @ 20ºC (68ºF)	
Viscosity	no data available	

## Other information

## SECTION 10. STABILITY AND REACTIVITY

## Reactivity

Self-reactive, will decompose at 275°C

#### **Chemical stability**

Stable under normal conditions. Decomposition will not occur if used and stored appropriately.

#### Possibility of hazardous reactions

Contact with acids liberates toxic gases. Sodium azide may react with metal in plumbing systems and form explosive compounds

## Conditions to avoid

An explosion occurred when a mixture of sodium azide, methylene chloride, dimethyl sulfoxide, and sulfuric acid were being concentrated on a rotary evaporator.

#### Incompatible materials

Halogenated hydrocarbons, metals, acids, acid chlorides

## Hazardous decomposition products

Hazardous decomposition products formed under fire conditions Sodium oxides, nitrogen oxides, hydrazoic acid

#### Thermal decomposition

300 °C Other decomposition products – unknown

## SECTION 11. TOXICOLOGICAL INFORMATION

## Information on toxicological effects

Acute toxicity: Oral LD50 LD50 Oral - rabbit - 10 mg/kg

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## Inhalation LC50

LC50 Inhalation - rat - 37 mg/m3 Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Other.

Behavioral: Convulsions or effect on seizure threshold.

Lungs, Thorax, or Respiration: Structural or functional change in trachea or bronchi.

## Dermal LD50

LD50 Dermal - rabbit - 20 mg/kg

## Other information on acute toxicity

no data available

## Irritation

Short and long-term exposure to sodium azide causes irritation to eyes, respiratory system, and skin

## Germ cell mutagenicity

no data available

## Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

## Reproductive toxicity

no data available

Teratogenicity no data available

Specific target organ toxicity - single exposure (Globally Harmonized System) no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System) no data available

## Aspiration hazard

no data available

## Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.Ingestion May be fatal if swallowed.Skin May be fatal if absorbed through skin. May cause skin irritation.Eyes May cause eye irritation.

## Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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## Synergistic effects

no data available

Additional Information RTECS: VY8050000

## SECTION 12. ECOLOGICAL INFORMATION

## Toxicity

Toxicity to daphnia and other aquatic invertebrates; EC50 - Daphnia pulex (Water flea) - 4.2 mg/l - 48 h

#### Persistence and degradability

Soluble in water. Persistence is unlikely based on information available.

#### **Bioaccumulative potential:**

no data available

Mobility in soil Likely to be mobile due to solubility in water

#### PBT and vPvB assessment

no data available

#### Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

## **SECTION 13. DISPOSAL CONSIDERATIONS**

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

## **Contaminated packaging**

Dispose of as unused product.

## **SECTION 14. TRANSPORT INFORMATION**

#### DOT (US)

UN number: 1687 Class: 6.1 Packing group: II Proper shipping name: Sodium azide Reportable Quantity (RQ): 1000 lbs Marine pollutant: No Poison Inhalation Hazard: No

## IMDG

UN number: 1687 Class: 6.1 Packing group: II EMS-No: F-A, S-A Proper shipping name: Sodium azide Marine pollutant: No

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## IATA

UN number: 1687 Class: 6.1 Packing group: II Proper shipping name: Sodium azide

## Transport/Additional information:

When sold in quantities of less than or equal to 1 ml, or 1g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10. Therefore, packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.

## **SECTION 15. REGULATORY INFORMATION**

## **OSHA Hazards**

Target Organ Effect, Highly toxic by ingestion, Highly toxic by skin absorption

## SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302: Sodium azide CAS-No.26628-22-8

## SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313: Sodium azide CAS-No.26628-22-8

## SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

## **Massachusetts Right To Know Components**

Sodium azide CAS-No.26628-22-8

## Pennsylvania Right To Know Components

Sodium azide CAS-No.26628-22-8

## New Jersey Right To Know Components

Sodium azide CAS-No.26628-22-8

## California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## **SECTION 16. OTHER INFORMATION**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Molecular Toxicology, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. See <u>www.moltox.com</u> and/or the invoice or packing slip for additional terms and conditions of sale.

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