

Material Safety Data Sheet

1H-Benzotriazole, 98%

ACC# 99374

Section 1 - Chemical Product and Company Identification

MSDS Name: 1H-Benzotriazole, 98%

Catalog Numbers: AC183880000, AC183881000, AC183885000, AC9879335, XXAC18388-10

Synonyms: 1H-Benzotriazole; 1,2,-Aminozophenylene; 1,2,3-Benzotriazole.

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
95-14-7	1H-Benzotriazole	98%	202-394-1

Hazard Symbols: XN

Risk Phrases: 20/22 36/38 5

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: yellow-beige. May cause respiratory and digestive tract irritation. May be harmful if swallowed. **Warning!** Causes eye and skin irritation. May cause central nervous system effects. May be harmful if inhaled.

Target Organs: Central nervous system, autonomic nervous system.

Potential Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation.

Ingestion: May cause irritation of the digestive tract. Moderately toxic to humans by ingestion. May be harmful if swallowed. May cause central, peripheral, and autonomic nervous system effects.

Inhalation: May cause respiratory tract irritation. May be harmful if inhaled. May cause central, peripheral, and autonomic nervous system effects.

Chronic: Effects may be delayed.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear. Do NOT use mouth-to-mouth resuscitation.

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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion. Containers may explode when heated.

Extinguishing Media: In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

Flash Point: 195 deg C (383.00 deg F)

Autoignition Temperature: 400 deg C (752.00 deg F)

Explosion Limits, Lower:Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 1; Instability: 0

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. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Remove all sources of ignition. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Wash clothing before reuse.

Storage: Keep away from heat, sparks, and flame. Store in a cool, dry place. Keep from contact with oxidizing materials.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Good general ventilation should be sufficient to control airborne levels. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
1H-Benzotriazole	none listed	none listed	none listed

OSHA Vacated PELs: 1H-Benzotriazole: 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 gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: yellow-beige

Odor: characteristic odor - weak odor

pH: Not available.

Vapor Pressure: .04 mm Hg @ 20C

Vapor Density: 4.1 (air=1)

Evaporation Rate: Negligible.

Viscosity: Not available.

Boiling Point: 201 - 204 deg C @ 15.00mmHg

Freezing/Melting Point: 96.00 - 97.00 deg C

Decomposition Temperature: Not available.

Solubility: 20 g/l (20 c)

Specific Gravity/Density: Not available.

Molecular Formula: C₆H₅N₃

Molecular Weight: 119.13

Section 10 - Stability and Reactivity

Chemical Stability: Stable. However, may decompose if heated.

Conditions to Avoid: High temperatures, incompatible materials, ignition sources, dust generation.

Incompatibilities with Other Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 95-14-7: DM1225000

LD50/LC50:

CAS# 95-14-7:

Inhalation, rat: LC50 = 1910 mg/m³/3H;

Oral, mouse: LD50 = 615 mg/kg;

Oral, rat: LD50 = 560 mg/kg;

Skin, rat: LD50 = >1 gm/kg;

Carcinogenicity:

CAS# 95-14-7: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology: Mutation data has been reported. Inadequate evidence for carcinogenicity in humans according to IARC.

Teratogenicity: No information found.

Reproductive Effects: No information found.

Neurotoxicity: No information found.

Mutagenicity: Mutation data reported.

Other Studies: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.

Environmental: Expected to biodegrade but not bioconcentrate.

Physical: No information available.

Other: For more information, see "HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."

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: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	FLAMMABLE SOLIDS, TOXIC, ORGANIC, N.O.S.				No information available.
Hazard Class:	4.1				
UN Number:	UN2926				
Packing Group:	II				

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 95-14-7 is listed on the TSCA inventory.

Health & Safety Reporting List

CAS# 95-14-7: Effective Date: 4/13/89; Sunset Date: 12/19/95

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.

SARA

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 95-14-7: acute, reactive.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

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# 95-14-7 can be found on the following state right to know lists: Massachusetts.

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:

XN

Risk Phrases:

R 20/22 Harmful by inhalation and if swallowed.

R 36/38 Irritating to eyes and skin.

R 5 Heating may cause an explosion.

Safety Phrases:

S 15 Keep away from heat.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

WGK (Water Danger/Protection)

CAS# 95-14-7: 2

Canada - DSL/NDSL

CAS# 95-14-7 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D2B.

Canadian Ingredient Disclosure List

Exposure Limits

CAS# 95-14-7: OEL-RUSSIA:STEL 5 mg/m³;Skin

Section 16 - Additional Information

MSDS Creation Date: 3/18/1998

Revision #4 Date: 3/18/2003

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.