

# Material Safety Data Sheet

| HAZARD WARNINGS   | RISK PHRASES  | PROTECTIVE CLOTHING   |
|---|---|---|
|  | Irritating to skin, eyes, and the respiratory system.<br>Harmful compound, minimize exposure. |  |

## Section I. Chemical Product and Company Identification

|                  |  |                                 |   |
|------------------|--|---------------------------------|---|
| Chemical Name    | <b>1,2,3-Benzotriazole</b>                   |                                 |   |
| Catalog Number   | B0094  | Supplier                        | TCI America<br>9211 N. Harborgate St.<br>Portland OR<br>1-800-423-8616                    |
| Synonym          | Azimidobenzene; 1,2-Aminozophenylene         |                                 |   |
| Chemical Formula | C <sub>6</sub> H <sub>5</sub> N <sub>3</sub> |                                 |   |
| CAS Number       | 95-14-7                                      | In case of<br>Emergency<br>Call | <b>Chemtrec®</b><br><b>(800) 424-9300 (U.S.)</b><br><b>(703) 527-3887 (International)</b> |

## Section II. Composition and Information on Ingredients

| Chemical Name       | CAS Number | Percent (%)   | TLV/PEL        | Toxicology Data  |
|---------------------|------------|---------------|----------------|--|
| 1,2,3-Benzotriazole | 95-14-7    | Min. 98.0 (T) | Not available. | Rat LD <sub>50</sub> (oral) 560 mg/kg<br>Mouse LD <sub>50</sub> (oral): 615 mg/kg<br>Mouse LD <sub>50</sub> (intraperitoneal): 400 mg/kg |

## Section III. Hazards Identification

|                        |  |
|------------------------|--|
| Acute Health Effects   | Harmful if ingested or inhaled. Central nervous system depression may result from ingestion. Minimize exposure to this material. Severe overexposure can result in injury or death. Irritating to eyes and skin on contact. May burn eyes on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound. |
| Chronic Health Effects | <b>CARCINOGENIC EFFECTS</b> : Not available.<br><b>MUTAGENIC EFFECTS</b> : Equivocal tumorigenic agent by RTECS criteria. Tumorigenic data:<br>Rat (oral): 220 gm/kg/78W-I<br>Mouse (oral): 770 gm/kg/78W-I<br><b>TERATOGENIC EFFECTS</b> : Not available.<br>Toxicity to the reproductive system: Not available.  |

## Section IV. First Aid Measures

|              |   |
|--------------|---|
| Eye Contact  | Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used. DO NOT use an eye ointment. Flush eyes with running water for a minimum of 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention. Treat symptomatically and supportively.  |
| Skin Contact | If the chemical gets spilled on a clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical touches the victim's exposed skin, such as the hands: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. COLD water may be used. Cover the irritated skin with an emollient. Seek medical attention. Treat symptomatically and supportively. Wash any contaminated clothing before reusing. |
| Inhalation   | If the victim is not breathing, perform artificial respiration. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention. Treat symptomatically and supportively.  |
| Ingestion    | Remove dentures if any. Have conscious person drink several glasses of water or milk. INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. NEVER give an unconscious person anything to ingest. Seek medical attention. Treat symptomatically and supportively.  |

## Section V. Fire and Explosion Data

|                     |   |                  |                |
|---------------------|---|------------------|----------------|
| Flammability        | Combustible.  | Auto-Ignition    | Not available. |
| Flash Points        | 112°C (233.6°F)   | Flammable Limits | LOWER: 2.4%    |
| Combustion Products | These products are toxic carbon oxides (CO, CO <sub>2</sub> ), toxic nitrogen oxides (NO, NO <sub>2</sub> ).<br>WARNING: Very toxic cyanide gas is produced in a fire. Do not inhale. |                  |                |
| Fire Hazards        | No specific information is available regarding the flammability of this compound in the presence of various materials.  |                  |                |

Continued on Next Page

Emergency phone number (800) 424-9300

|                                      |  |
|--------------------------------------|--|
| Explosion Hazards                    | Risks of explosion of the product in presence of mechanical impact: Not available.<br>Risks of explosion of the product in presence of static discharge: Not available.<br><b>May explode when heated or during vacuum distillation.</b> |
| Fire Fighting Media and Instructions | SMALL FIRE: Use DRY chemicals, CO <sub>2</sub> , water spray or foam.<br>LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.   |

### Section VI. Accidental Release Measures

|                            |   |
|----------------------------|---|
| Spill Cleanup Instructions | In case of a spill and/or a leak, always shut off any sources of ignition, ventilate the area, and exercise caution. Use a shovel to put the material into a convenient waste disposal container. Finish cleaning the spill by rinsing any contaminated surfaces with copious amounts of water. |
|----------------------------|---|

### Section VII. Handling and Storage

|                                  |   |
|----------------------------------|---|
| Handling and Storage Information | IRRITANT. HARMFUL. Minimize exposure. Keep away from heat and sources of ignition. Mechanical exhaust required. When not in use, tightly seal the container and store in a dry, cool place. Avoid excessive heat and light. DO NOT breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Treat symptomatically and supportively. Avoid contact with skin and eyes. Always store away from incompatible compounds such as oxidizing agents. |
|----------------------------------|---|

### Section VIII. Exposure Controls/Personal Protection

|                      |  |
|----------------------|--|
| Engineering Controls | Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.  |
| Personal Protection  | Splash goggles. Lab coat. Dust respirator. Boots. Gloves. A MSHA/NIOSH approved respirator should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.<br> |
| Exposure Limits      | Not available.   |

### Section IX. Physical and Chemical Properties

|                       |                                    |                       |   |
|-----------------------|------------------------------------|-----------------------|---|
| Physical state @ 20°C | White to beige crystals or powder. | Solubility            | Partially soluble in cold water, hot water. Soluble in alcohol, benzene, toluene, and chloroform. |
| Specific Gravity      | 1.36 (Water = 1)                   |                       |   |
| Molecular Weight      | 119.13                             | Partition Coefficient | Not available.  |
| Boiling Point         | 204°C                              | Vapor Pressure        | 0.04 mm of Hg (@ 20°C)  |
| Melting Point         | 98-99°C                            | Vapor Density         | 4.1 (Air = 1)   |
| Refractive Index      | Not available.                     | Volatility            | 0% (v/v).   |
| Critical Temperature  | Not available.                     | Odor                  | Not available.  |
| Viscosity             | Not available.                     | Taste                 | Not available.  |

### Section X. Stability and Reactivity Data

|                           |   |
|---------------------------|---|
| Stability                 | This material is stable if stored under proper conditions. (See Section VII for instructions) |
| Conditions of Instability | Avoid excessive heat and light.   |
| Incompatibilities         | Reactive with strong oxidizing agents, heavy metals.  |

### Section XI. Toxicological Information

|                       |   |
|-----------------------|---|
| RTECS Number          | DM1225000   |
| Routes of Exposure    | Ingestion. Inhalation. Eye contact. Skin contact.   |
| Toxicity Data         | Rat LD <sub>50</sub> (oral) 560 mg/kg<br>Mouse LD <sub>50</sub> (oral): 615 mg/kg<br>Mouse LD <sub>50</sub> (intraperitoneal): 400 mg/kg  |
| Chronic Toxic Effects | <b>CARCINOGENIC EFFECTS</b> : Not available.<br><b>MUTAGENIC EFFECTS</b> : Equivocal tumorigenic agent by RTECS criteria. Tumorigenic data:<br>Rat (oral): 220 gm/kg/78W-I<br>Mouse (oral): 770 gm/kg/78W-I<br><b>TERATOGENIC EFFECTS</b> : Not available.<br>Toxicity to the reproductive system: Not available. |

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| Acute Toxic Effects | Harmful if ingested or inhaled. Central nervous system depression may result from ingestion. Minimize exposure to this material. Severe overexposure can result in injury or death. Irritating to eyes and skin on contact. May burn eyes on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound. |
|---------------------|--|

### Section XII. Ecological Information

|                    |                |
|--------------------|----------------|
| Ecotoxicity        | Not available. |
| Environmental Fate | Not available. |

### Section XIII. Disposal Considerations

|                |  |
|----------------|--|
| Waste Disposal | Recycle to process, if possible. Consult your local or regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state, and local regulations when disposing of this substance. |
|----------------|--|

### Section XIV. Transport Information

|                      |   |
|----------------------|---|
| DOT Classification   | Not a DOT controlled material (United States).                                    |
| PIN Number           | NONE  |
| Proper Shipping Name | NONE  |
| Packing Group (PG)   | NONE  |
| DOT Pictograms       |  |

### Section XV. Other Regulatory Information and Pictograms

|                               |  |
|-------------------------------|--|
| TSCA Chemical Inventory (EPA) | This product is <b>ON</b> the EPA Toxic Substances Control Act (TSCA) inventory.       |
| WHMIS Classification (Canada) | Not controlled under WHMIS (Canada).   |
| EINECS Number (EEC)           | 202-394-1  |
| EEC Risk Statements           | 22- Harmful if ingested.<br>36/37/38- Irritating to eyes, respiratory system and skin. |
| Japanese Regulatory Data      | Not available.   |

### Section XVI. Other Information

**Version 1.0**  
**Validated on 1/7/1997.**  
**Printed 1/21/2005.**

#### Notice to Reader

TCI laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.