

SAFETY DATA SHEET



1000 Tedia Way
Fairfield, Ohio 45014
USA
Email: tedia@tedia.com
Web: www.tedia.com

24-Hour Emergency Number (CHEMTREC)

USA: 800-424-9300
International: 703-527-3887

All non-emergency numbers should be directed
to Customer Service at 800-PURITY1

1-METHYLIMIDAZOLE

SDS No. M0396

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: 1-Methylimidazole

Synonyms: N-Methylimidazole, 1H-Imidazole

Recommended Use: This product is recommended for laboratory and manufacturing use only. It is not recommended for drug, food or household use.

2. HAZARDS IDENTIFICATION



Classification:

Flammable Liquids: GHS Category 4

Acute Toxicity, Oral: GHS Category 4

Acute Toxicity, Dermal: GHS Category 3

Skin Corrosion: GHS Category 1B

Serious Eye Damage: GHS Category 1

Label Elements

Signal Word: DANGER!

Hazard Statements:

- H227 – Combustible liquid and vapor.
- H302 – Harmful if swallowed.
- H311 – Toxic in contact with skin.
- H314 – Causes severe skin burns and eye damage.
- H318 – Causes serious eye damage.

Precautionary Statements:

- P210 – Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P264 – Wash skin thoroughly after handling.
- P280 – Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P330+P331 – IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 – IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P341 – If inhaled: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P501 – Dispose of contents/ container to an approved waste disposal plant.

Emergency Overview

Causes burns by all exposure routes. May be harmful if swallowed. Combustible liquid. Hygroscopic. Target Organs: Eyes, skin, and mucous membranes.

HMIS Rating:

Health – 3 Flammability – 2 Physical Hazard – 0 PPE – User supplied

NOTE: HMIS ratings use a numbering scale that ranges from 0 - 4 to indicate the degree of hazard. A value of zero means the chemical presents no hazard while a value of four indicates a high hazard. These ratings are based on the inherent properties of this chemical under expected conditions of normal use and are not intended to be used in emergency situations. PPE is determined by the user based on their needs and conditions.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

| <u>Ingredient</u> | <u>CAS No</u> | <u>Percent</u> | <u>Hazardous</u> |
|-------------------|---------------|----------------|------------------|
| 1-Methylimidazole | 616-47-7 | >99% | Yes |

4. FIRST-AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Ingestion: Get medical help immediately. Do not induce vomiting. If vomiting occurs naturally, have victim lean forward. If victim is conscious and alert, give a cupful of water. Never give anything by mouth to an unconscious person. Get medical help.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing. Get medical attention immediately. Wash clothes before reuse.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Notes to Physician: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Flammability: Combustible liquid (GHS Category 4)

Auto-ignition Temperature: 535° C (977.8° F)

Flash Point: 92° C (197.6° F)

Flammable Limits: Lower Limit – 2.70 vol %, Upper Limit – 15.7 vol %

Products of Combustion: May decompose into irritating and highly toxic gases under fire conditions (nitrogen oxides, carbon monoxide, and carbon dioxide).

Specific Fire Hazards: As in any fire, always wear self-contained breathing apparatus in pressure-demand (MSA/NIOSH approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Combustible liquid and vapor. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.

Specific Explosion Hazards: None.

Fire Fighting Media: Use water spray, dry chemical, or carbon dioxide

National Fire Protective Association: Health - 3, Flammability - 2, Reactivity - 1

NOTE: NFPA ratings use a numbering scale that ranges from 0 - 4 to indicate the degree of hazard. A value of zero means the chemical presents no hazard while a value of four indicates a high hazard. They are for use by emergency personnel to address the hazards that are presented by short term, acute exposure to this product under fire, spill, or similar emergencies. Ratings involve data and interpretations that may vary from company to company.

6. ACCIDENTAL RELEASE MEASURES

Clear focus. Consistent results. Complete confidence.

Absorb spilled liquid with sorbent pads, socks, or other inert material such as vermiculite, sand, or earth. Do not use sawdust or any combustible material. Use spark-proof tools. Provide ventilation to the affected area and remove all ignition sources. Approach the spill from upwind and pick up absorbed material and place it in a suitable container. Always use proper personal protective equipment as described in section 8.

7. HANDLING AND STORAGE

Precautions: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Discard contaminated shoes. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Keep away from heat and flame. Do not breathe vapor or mist.

Storage: Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Facilities storing or using the material should be equipped with eyewash station and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protection: Wear protective chemical goggles and face shield for eye and face protection. Use butyl rubber gloves and protective clothing to prevent skin exposure. A respiratory protection program that meets OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever possible. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Exposure Limits: None established.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State and Appearance: Colorless to yellow liquid.

Odor: weak pyridine-like odor

Molecular Formula: C₄H₆N₂

Molecular Weight: 82.11

Auto-ignition Temperature: 535° C (977.8° F)

Flash Point: 92° C (197.6° F)

Flammable Limits: Lower Limit – 2.70 vol %, Upper Limit – 15.7 vol %

pH: 11.3 (100g/l H₂O).

Boiling Point: 198° C @ 760 mm Hg

Freezing/Melting Point: -60° C

Decomposition Temperature: Not available

Specific Gravity: 1.03 g/cm³

Vapor Density (Air=1): 2.83

Vapor Pressure: 0.478 mm Hg @ 25° C.

Evaporation Rate (Butyl acetate = 1): Not available.

Viscosity: Not available

Solubility: Soluble

10. STABILITY AND REACTIVITY

Stability: Stable under normal temperature and pressure.

Conditions to Avoid: Ignition sources, excess heat.

Incompatibility With Various Substances: Carbon dioxide, strong oxidizing agents.

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

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation, skin absorption, skin contact

Acute Exposure Hazards:

INHALATION HAZARD: Causes chemical burn to the respiratory tract.

INGESTION HAZARD: May cause severe and permanent damage to the digestive tract. Harmful if swallowed.

SKIN CONTACT HAZARD: Causes skin burns. Harmful if absorbed through the skin. Contact with skin may cause blackening and hyperkeratosis of the skin of the hands.

EYE CONTACT HAZARD: Causes eye burns.

Chronic Exposure Hazards: No information available.

Animal Toxicity:

Oral, mouse: LD50 = 1400 mg/kg;

Rabbit, eye irritation (unrinsed): corrosive, Rabbit, primary skin irritation: corrosive, Rat, inhalation safety screen: not lethal, sat vapor, room temp. Rabbit, dermal LD50: 400-640 mg/kg moderately toxic. (BASF);

Carcinogenicity: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Mutagenicity: No information available.

Neurotoxicity: Produced neurological effects and convulsions in mice.

12. ECOLOGICAL INFORMATION

Ecotoxicity: No information available.

Environmental Fate: Not readily biodegradable.

13. DISPOSAL CONSIDERATIONS

Material that cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Processing, use or contamination of this product may change the waste management options. Waste generators must decide if discarded material is a hazardous waste. State and local disposal regulations may differ from federal disposal definitions found in 40 CFR 261.3. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

US DOT

Proper Shipping Name: Corrosive Liquid, basic, organic, n.o.s.

Hazard Class: 8

UN Number: UN3267

Packing Group: II

IMDG

Proper Shipping Name: Corrosive Liquid, basic, organic, n.o.s.

Hazard Class: 8

UN Number: UN3267

Packing Group: II

IATA

Proper Shipping Name: Corrosive Liquid, basic, organic, n.o.s.

Hazard Class: 8

UN Number: UN3267

Packing Group: II

15. REGULATORY INFORMATION

US Federal Regulations:

CERCLA Hazardous Substances: CAS# 616-47-7 does not have a final RQ

SARA Section 302: Does not have a TPQ

SARA Codes: Not listed

Section 313: 1-Methylimidazole (CAS# 616-47-7) is not subject to SARA Title III Section 313 and 40 CFR 373 reporting requirements.

Clean Water Act: CAS# 616-47-7 is listed as a Hazardous Substance.

OSHA: Not considered highly hazardous by OSHA.

US State Regulations:

CAS# 616-47-7 is found on the following state right-to-know lists: Massachusetts, New Jersey, and Pennsylvania.

California Prop 65: This product contains no chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Originally Prepared: 5/21/2007

Last Revised: 09/16/2019 – Updated precautionary statement in Section 2.

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.

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