

Section 1. Product and Company Identification

Product Name 1-Methylimidazole
CAS Number 616-47-7

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Section 2. Hazards Identification

Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Flammable liquids (Category 4), H227
Acute toxicity, Oral (Category 4), H302
Acute toxicity, Dermal (Category 3), H311
Skin corrosion (Category 1B), H314
Serious eye damage (Category 1), H318

GHS Label Elements

Pictograms:



Signal word: DANGER

Hazard and precautionary statements

Hazard Statement

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

Precautionary Statements (Prevention)

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260 Do not breathe dust or mist.
P270 Do not eat, drink or smoke when using this product.



P264 Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response)

P310 Immediately call a POISON CENTER or doctor/physician.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P303 + P361 + P352 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P301 + P330 IF SWALLOWED: rinse mouth.

P370 + P378 In case of fire: Use water spray, dry powder, foam or carbon dioxide for extinction.

Precautionary Statements (Storage)

P405 Store locked up.

P403 + P235 Store in a well-ventilated place. Keep cool.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified (HNOC) or not covered by GHS: None

Section 3. Composition / Information on Ingredients

Common Name 1-Methylimidazole
Formula $C_4H_6N_2$
CAS Number 616-47-7

COMPONENT	CAS NUMBER	CONCENTRATION
1-Methylimidazole	616-47-7	≤ 100%

Section 4. First Aid Measures

Description of first-aid measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.



Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Indication of any immediate medical attention and special treatment needed: No data available

Section 5. Firefighting Measures

Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture: Carbon oxides, Nitrogen oxides (NO_x); vapors may form explosive mixture with air.

Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further information: Use water spray to cool unopened containers

Section 6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Wear respiratory protection. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

Reference to other sections: For disposal see section 13.

Section 7. Handling and Storage

Precautions for safe handling: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.

Conditions for safe storage, including any incompatibilities

Handle under nitrogen, protect from moisture. Store under nitrogen. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Hygroscopic.

Storage class (TRGS 510): Non-combustible, acute toxic Cat.3/toxic hazardous materials or hazardous materials causing chronic effects



Section 8. Exposure Controls / Personal Protection

Control parameters

Components with workplace control parameters: Contains no substances with occupational exposure limit values.

Exposure controls

Appropriate engineering controls: Avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection: Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin 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.

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 respirator with multipurpose combination (US) or type ABEK (EN 14387) 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).

Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Section 9. Physical and Chemical Properties

Appearance: Liquid, clear

Color: Colorless

Odor: No data available

Odor Threshold: No data available

pH: 9.5 - 11.5 at 100 g/l at 20°C (68°F)

Melting point/freezing point: -6°C (21°F)

Initial boiling point and boiling range: 198°C (388°F)

Flash point (Closed Cup): 92°C (198°F)

Evaporation rate: No data available

Flammability (solid, gas): No data available

Upper/lower flammability or explosive limits

Upper explosion limit: 15.7% (V)

Lower explosion limit: 2.7% (V)



Vapor pressure: 0.5 hPa (0.4 mmHg) at 20°C (68°F)

Vapor density: No data available

Relative density: 1.03 g/mL at 25°C (77°F)

Water solubility: Soluble

Partition coefficient (n-Octanol/Water): log Pow: -0.189 at 25°C (77°F)

Auto-ignition temperature: 488°C (910°F) at 1,013 - 1,019 hPa (760 - 764 mmHg)

Decomposition temperature: No data available

Viscosity: No data available

Explosive properties: No data available

Oxidizing properties: No data available

Other safety information: No data available

Section 10. Stability and Reactivity

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: No data available

Conditions to avoid: Exposure to moisture; Heat, flames, and sparks.

Incompatible materials: Carbon dioxide (CO₂), Strong oxidizing agents

Hazardous decomposition products

Other decomposition products: No data available

In the event of fire: see section 5

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female: 1,144 mg/kg
(OECD Test Guideline 401)

Inhalation: No data available

LD50 Dermal - Rabbit - male and female: 400 - 600 mg/kg
(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Corrosive

(OECD Test Guideline 405)



Respiratory or skin sensitization: No data available

Germ cell mutagenicity

Chromosome aberration test in vitro
Chinese hamster lung cells
Result: Negative

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.

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

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

Reproductive toxicity - Rat - male and female - Oral
No toxicity to reproduction

Specific Target Organ Toxicity - Single Exposure: No data available

Specific Target Organ Toxicity - Repeated Exposure: No data available

Aspiration hazard: No data available

Additional Information

Repeated dose
toxicity
Rat - male and female - Oral - NOAEL: 30 mg/kg

RTECS: NI7000000

Burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

Section 12. Ecological Information

Toxicity

Toxicity to fish

Static test LC50 - Leuciscus idus (Golden orfe): > 100 - 215 mg/l (96 h)

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea): 267.94 mg/l (48 h)



Toxicity to algae

Static test EC50 - Desmodesmus subspicatus (Scenedesmus subspicatus): 180.7 mg/l (72 h) (OECD Test Guideline 201)

Persistence and degradability

Biodegradability aerobic - Exposure time 28 d
Result: 0 - 10% - Not readily biodegradable.
(OECD Test Guideline 301F)

Bioaccumulative potential: No data available

Mobility in soil: No data available

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: May be harmful to aquatic organisms due to the shift of the pH.

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

Land transport

USDOT

Hazard class: 8

Packing group: II

ID number: UN2922

Hazard label: 8, 6.1

Proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (contains 1-METHYLIMIDAZOLE)

Sea transport

IMDG

Hazard class: 8

Packing group: II

ID number: UN2922

Hazard label: 8, 6.1

Marine pollutant: NO

Proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (contains 1-METHYLIMIDAZOLE)



Air transport

IATA/ICAO

Hazard class: 8

Packing group: II

ID number: UN2922

Hazard label: 8, 6.1

Proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (contains 1-METHYLIMIDAZOLE)

Section 15. Regulatory Information

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards: Fire Hazard, Acute Health Hazard

Massachusetts Right to Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right to Know Components

1-Methylimidazole (CAS-No. 616-47-7)

New Jersey Right to Know Components

1-Methylimidazole (CAS-No. 616-47-7)

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.

HMIS Rating

Health: 3

Flammability: 2

Reactivity: 0

NFPA Rating

Health: 3

Flammability: 2

Reactivity: 0

Section 16. Other Information

Disclaimer: 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 and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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