

## METRONIDAZOLE

### SECTION 1: CHEMICAL PRODUCT IDENTIFICATION

**Product Name:** Metronidazole  
**Product Code:** 4209  
**CAS#:** 443-48-1  
**Synonym:** 2-Methyl-5-nitroimidazole-1-ethanol  
**Chemical Name:** Not available  
**Chemical Formula:** C<sub>6</sub>H<sub>9</sub>N<sub>3</sub>O<sub>3</sub>  
**Formula weight:** 171.2

### SECTION 2: COMPOSITION AND INFORMATION ON INGREDIENTS

**Composition:**  
**Name:** Metronidazole  
**Toxicological Data on Ingredients:** Muta. 1B; Carc. 1B; STOT RE 2; H340, H350, H373

### SECTION 3: HAZARDS IDENTIFICATION

**Classification of the substance or mixture**  
Classification according to Regulation (EC) No 1272/2008  
**Potential Acute Health Effects:** Not available  
**Potential Chronic Health Effects :** Not available  
**Carcinogenic Effects:** Carcinogenicity (Category 1B), H350  
**Mutagenic Effects:** Germ cell mutagenicity (Category 1B), H340  
**Teratogenic Effects:** Not available.  
**Developmental Toxicity:** Not Available  
**Specific target organ toxicity -**  
Specific target organ toxicity - repeated exposure (Category 2), H373

### 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.  
**If inhaled If breathed in:** Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.  
**In case of skin contact** Wash off with soap and plenty of water. Consult a physician.  
**In case of eye contact:** Flush eyes with water as a precaution.  
**If swallowed:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.  
**Most important symptoms and effects, both acute and delay:** No data available  
**Indication of any immediate medical attention and special treatment needed:** No data available

### SECTION 5: FIRE AND EXPLOSION DATA

**Extinguishing media**  
**Suitable extinguishing media :**  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
**Special hazards arising from the substance or mixture**  
Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Sulfur oxides



Carbon oxides  
Nitrogen oxides (NOx)  
Sulfur oxides  
Not combustible.

Ambient fire may liberate hazardous vapours.

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

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures** Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

**Environmental precautions** Do not let product enter drains.

**Methods and materials for containment and cleaning up** Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers.

#### SECTION 7: HANDLING AND STORAGE

**Precautions for safe handling :** Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

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

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Recommended storage temperature 2 - 8 °C

**Storage Class:**

Not available.

**Specific end use(s) A part from the uses:**

No other specific uses are stipulated.

#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure controls**

**Appropriate engineering controls** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment**

**Eye/face protection** Safety glasses with side-shields conforming to EN166 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** For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure** Do not let product enter drains.

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance Form	: Crystalline
Colour	: light yellow
Odour	: Not available
Odour Threshold	: Not available
pH	: Not available



Melting point/freezing point	: Melting point/range: 159 - 161 °C
Initial boiling point and boiling range	: Not available
Flash point	: Not available
Evaporation rate	: Not available
Flammability (solid, gas)	: Not available
Upper/lower flammability or explosive limits	: Not available
Vapour pressure	: Not available
Vapour density	: Not available
Relative density	: Not available
Water solubility	: Not available
Partition coefficient	: Not available
Auto-ignition temperature	: Not available

#### SECTION 10: STABILITY AND REACTIVITY DATA

**Reactivity:**Not available.

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

Not available

**Conditions to avoid :** Not available

**Incompatible materials:** Strong oxidizing agents

**Hazardous decomposition products Other decomposition products** - In the event of fire

#### SECTION 11: TOXICOLOGICAL INFORMATION

**Information on toxicological effects**

**Acute Toxicity:**

LD50 Oral - Rat - 3.000 mg/kg

**Skin corrosion/irritation :** Not Available.

**Serious eye damage/eye irritation :** Not Available.

**Respiratory or skin sensitization** Not Available.

**Carcinogenicity** no data available

#### SECTION 12: ECOLOGICAL INFORMATION

**Toxicity:**

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96 h  
Toxicity to daphnia EC50 - Daphnia magna (Water flea) - > 1.000 mg/l - 48 h  
and other aquatic  
invertebrates

**Persistence and degradability:** Not Available.

**Bioaccumulative potential :**Not available

**Mobility in soil :** Not Available.

**Results of PBT and vPvB assessment PBT/vPvB assessment** Not available

**Other adverse affects** no data available

#### SECTION 13: DISPOSAL CONSIDERATIONS

**Waste treatment methods** Product Offer surplus and non-recyclable solutions to a licensed disposal company. 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

<b>UN number:</b>		
<b>ADR/RID:</b>	<b>IMDG:</b>	<b>IATA:</b>
<b>UN proper shipping name</b>		
<b>ADR/RID:</b> Not dangerous goods		
<b>IMDG:</b> Not dangerous goods		
<b>IATA:</b> Not dangerous goods		
<b>Transport hazard class(es):</b>		
<b>ADR/RID:</b>	<b>IMDG:</b>	<b>IATA:</b>
<b>Packaging group:</b>		
<b>ADR/RID:</b>	<b>IMDG:</b>	<b>IATA:</b>
<b>Environmental hazards:</b>		
<b>ADR/RID:</b> No	<b>IMDG Marine pollutant:</b> No	<b>IATA:</b> No

#### SECTION 15: OTHER REGULATORY INFORMATION

**Safety, health and environmental regulations/legislation specific for the substance or mixture**  
 This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

**Other regulations**  
 Take note of Dir 94/33/EC on the protection of young people at work.

#### SECTION 16: OTHER INFORMATION

**References: Full text of H AND R-Statements.**  
 H340 May cause genetic defects.  
 H350 May cause cancer.  
 H373 May cause damage to organs through prolonged or repeated exposure.  
**Special Considerations:** Not available

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