

## **MATERIAL SAFETY DATA SHEET**

### **Metronidazole**

#### **SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

##### **1.1 Product identifiers :**

Product name : Metronidazole

Product number : 0000443481

Brand : Discovery

Reach No.: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require registration, or the registration is envisaged for a later registration deadline.

Cas No. : 443-48-1

##### **1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses : laboratory chemicals, manufacture of substances

##### **1.3 Details of the supplier of the safety data sheet**

Company: Discovery Fine Chemicals Ltd  
Unit 4A, Old Forge Road, Ferndown Ind. Estate,  
Wimborne, Dorset, BH21 7RR.  
United Kingdom

Telephone: +44 (0)1202 874517

Fax: +44 (0)845 0944 385

E-mail: [discovery@discofinechem.com](mailto:discovery@discofinechem.com)

##### **1.4 Emergency telephone : +44 (0)7912 646956**

#### **SECTION 2. HAZARDS IDENTIFICATION**

##### **2.1 Classification of the substance or mixture**

###### **Classification according to Regulation (EC) No 1272/2008**

Germ Cell Mutagenicity (Category 1B), H340

Carcinogenicity (Category 1B), H350

Specific Target Organ Toxicity – repeated exposure (Category 2) H373

For the full text of the H-Statements mentioned in this section see section 16

###### **Classification according to EU Directives 67/548/EEC or 1999/45/EC**

##### **2.2 Label elements**

###### **Labelling according Regulation (EC) No 1272/2008**

###### **Pictogram**



**Signal word:** Danger

###### **Hazard statement(s)**

H340 May cause genetic defects

H350 May cause cancer.

H373 May cause damage to organs through repeated exposure

###### **Precautionary statement(s)**

P202 Do not handle until all safety precautions have been read and understood

P260 Do not inhale

P280 Wear protective gloves/clothing and eye/face protection

P308+P313 If exposed or concerned get medical attention

P405 Store locked up

P501 Dispose of contents to an approved waste disposal plant

Supplemental hazard: none

Restricted to professional users

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Formula: C<sub>6</sub>H<sub>9</sub>N<sub>3</sub>O<sub>3</sub>

Molecular Weight: 171.15 g/mol

Cas No: 443-48-1

E.C.No: 207-136-1

Component	Classification	Concentration
Metronidazole CAS-No. 569-61-9 E.C.No. 212-321-2	Muta. 1B; Carc. 1.B STOT RE 2; H340, H350, H373	<=100%

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a doctor. Show this safety data sheet to the doctor in attendance.

**If inhaled** - Move person into fresh air. Consult a physician.

**In case of skin contact** – Wash off with soap and water. Consult a physician.

**In case of eye contact** – Flush eyes with water. Remove contact lenses. Consult ophthalmologist.

**If swallowed** – Immediately drink water (max 2 glasses). Consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed** – the most important known symptoms and effects are described in the labelling (see section 2.2 and/or in section 11).

#### 4.3 Indication of any immediate medical attention and special treatment needed

no data available

## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

**Suitable extinguishing media** – use water spray, alcohol resistant foam, dry chemical or carbon dioxide (CO<sub>2</sub>)

**Unsuitable extinguishing media** – for this substance no limitations of extinguishing agents are given.

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides. Nitrogen oxides (NO<sub>x</sub>). Combustible. Development of gases possible in the event of fire.

**5.3 Advice for firefighters** – wear self contained breathing apparatus for firefighting if necessary. Prevent skin contact.

**5.4 Further information** – Suppress gases with a water spray jet. Prevent fire extinguishing water from contamination surface water.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas.

Ensure adequate ventilation. Avoid breathing dust. For personal protection see section 8.

**6.2 Environmental precautions** – Prevent further leakage or spillage. Do not let product enter drains.

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

**6.4 Reference to other sections** - For disposal see section 13.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

#### Advice on safe handling

Avoid formation of dust and aerosols.

#### Advice on protection against fire and explosion

Provide appropriate exhaust ventilation at places where dust is formed.

#### **Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday. For precautions see section 2.2

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

Keep container tightly closed in a dry and well-ventilated place. Store in 4°C temperature.

Storage class (TRGS510) : 6.1c: Combustible, acute toxic Cat.3 / toxic compounds or compounds which cause chronic affects.

#### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.1 no other specific uses are stipulated

### **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### **8.1 Control parameters**

##### **Ingredients with workplace control parameters**

Contains no substances with occupational exposure limit values.

#### **8.2 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** - 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.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 740 Dermatril®

Splash protection

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:Dermatril®

**Body Protection** – Impervious clothing. 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).

### **9. PHYSICAL AND CHEMICAL PROPERTIES**

#### **9.1 Information on basic physical and chemical properties**

- a) Appearance - Form: Crystalline Colour: Light yellow
- b) Odour - no data available
- c) Odour Threshold - no data available
- d) Melting point/freezing point - Melting point/range: - 159-161°C
- e) Initial boiling point and boiling range - no data available
- f) Flammability (solid, gas) - no data available
- g) Upper/lower flammability or explosive limits - no data available
- h) Flash point – no data available
- i) Autoignition temperature - no data available
- j) Decomposition temperature - no data available
- k) pH - no data available
- l) Viscosity – viscosity,kinematic: no data available  
- viscosity dynamic: no data available
- m) Water solubility – no data available
- n) Partition coefficient: no data available
- o) Vapor pressure - no data available
- p) Density - no data available  
Relative density – no data available

- q) Relative vapour density - no data available
  - r) Particle characteristics - no data available
  - s) Explosive properties – no data available
  - t) Oxidizing properties - no data available
- 9.2 Other safety information - no data available

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

In correspondingly fine distribution, when whirled up a dust explosion potential may be assumed.

### 10.2 Chemical stability

The product is chemically stable under recommended storage conditions

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

In the event of fire see section 5

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral – rat – 3000mg/kg

Remarks – depressed activity

Inhalation – no data available

Dermal – no data available

**Skin corrosion/irritation** - no data available

**Serious eye damage/eye irritation** - no data available

**Respiratory or skin sensitization** - no data available.

**Germ cell mutagenicity** - May cause genetic defects

#### Carcinogenicity

This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

#### Reproductive toxicity

No data available

#### Specific target organ toxicity - single exposure

No data available

#### Specific target organ toxicity - repeated exposure

May cause damage to organs

#### Aspiration hazard

No data available

### 11.2 Additional Information

#### Endocrine disrupting properties

The substance does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels 0.1% or higher.

**RTECS** - NI5600000

## 12. ECOLOGICAL INFORMATION

**12.1 Toxicity** - no data available

**12.2 Persistence and degradability** - no data available

**12.3 Bio-accumulative potential** - no data available

**12.4 Mobility in soil** - no data available

#### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 12.6 Endocrine disrupting properties

The substance does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels 0.1% or higher.

## 12.7 Other adverse effects

No data available

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Waste material must be disposed of in accordance with the directive on waste 2008/98/EC. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

## 14. TRANSPORT INFORMATION

### 14.1 UN number

ADR/RID: - IMDG: - IATA: -

### 14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

### 14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

### 14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

### 14.5 Environmental hazards

ADR/RID: no IMDG Marine Pollutant: no IATA: no

### 14.6 Special precautions for user

#### Further Information

Not classified as dangerous in the meaning of transport regulations

## 15. REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

#### Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of DIR 94/33/EC on the protection of young people at work

### 15.2 Chemical Safety Assessment –

For this product a chemical safety assessment was not carried out.

## 16. OTHER INFORMATION

### Text of H-code(s) and R-phrase(s) mentioned in Section 2 and 3

H340 May cause genetic defects

H350 May cause cancer.

H373 May cause damage to organs through repeated exposure

#### Further information

## WARRANTY

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.

## **APPENDIX**

### **ABBREVIATIONS FULL TEXT**

ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
ADR European Agreement concerning the International Carriage of Dangerous Goods by Road  
ALARP As low as is reasonably practicable  
CAS Chemical Abstracts Service  
CLP Classification, Labelling and Packaging Regulations  
COSHH Control of Substances Hazardous to Health EC Number European Community Number  
EC50 Effective Concentration 50%  
ECHA European Chemicals Agency  
ELINCS European List of Notified Chemical Substances  
EINECS European Inventory of Existing Commercial Chemical Substances GHS Globally Harmonised System HSE  
Health & Safety Executive UK  
IATA International Air Transport Association  
IM Intramuscular  
IMDG The International Maritime Dangerous Goods Code  
IP Intraperitoneal  
IV Intravascular  
LD50 Lethal Dose 50%  
LOEC Lowest Observable Effective Concentration  
LTEL Long Term Exposure Limit  
NOEC No Observable Effective Concentration  
OECD Organisation for Economic Cooperations and Development  
OSHA European Agency for Safety and Health at work  
PBT Persistent Bioaccumulative and Toxic substance  
PPE Personal Protective Equipment  
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals  
RID Regulations Concerning the International Carriage of Dangerous Goods by Rail  
SC Subcutaneous  
SDS Safety Data Sheet  
SIEF Substance Information Exchange Forum  
STEL Short Term Exposure Limit  
STOT (RE) Specific Target Organ Toxicity – repeated exposure  
STOT (SE) Specific Target Organ Toxicity – single exposure  
SVHC Substance of Very High Concern  
VOC Volatile Organic Compounds  
vPvB Very Persistent and Very Bioaccumulative  
WEL Workplace Exposure Limits

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