

# Metronidazole

## Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 04/01/2011      Revision date 31/10/2018  
Supersedes 01/11/2017

**M0131**

Version: 2.1

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance  
Trade name : Metronidazole  
IUPAC name : 2-(2-methyl-5-nitro-1H-imidazol-1-yl)ethan-1-ol  
EC-No. : 207-136-1  
CAS-No. : 443-48-1  
Product code : M0131  
Formula : C<sub>6</sub>H<sub>9</sub>N<sub>3</sub>O<sub>3</sub>  
Product group : Raw material

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

##### 1.2.1. Relevant identified uses

Main use category : Professional use  
Industrial/Professional use spec : For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

##### 1.2.2. Uses advised against

No additional information available

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

##### Supplier

Duchefa Biochemie B.V.  
A. Hofmanweg 71  
2031 BH Haarlem - The Netherlands  
T +31(0)23-5319093 - F +31(0)23-5318027  
[info@duchefa.nl](mailto:info@duchefa.nl)

#### 1.4. Emergency telephone number

Emergency number : Supplier contact information:  
+31(0)23-5319093 (M-F 09:00-17:00)  
+31(0)6-30109355 (outside office hours)

Organisation/Company	Address	Comment
World Health Organization world directory of poison centres	<a href="http://apps.who.int/poisoncentres/">http://apps.who.int/poisoncentres/</a>	Consult website for a local poison centre

### SECTION 2: Hazards identification

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

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Carcinogenicity, Category 2 : H351  
Specific target organ toxicity — Single exposure, Category 2 : H371

Full text of H statements : see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS08

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H351 - Suspected of causing cancer.  
H371 - May cause damage to organs.

Precautionary statements (CLP) :

P202 - Do not handle until all safety precautions have been read and understood.  
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.  
P281 - Use personal protective equipment as required.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name : Metronidazole

CAS-No. : 443-48-1

EC-No. : 207-136-1

Name	Product identifier	%
Metronidazole	(CAS-No.) 443-48-1 (EC-No.) 207-136-1	> 99

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Symptoms of poisoning may not appear for several hours.

First-aid measures after inhalation : Assure fresh air breathing  
Get medical advice/attention.

First-aid measures after skin contact : Wash skin with plenty of water  
Get medical advice/attention.

First-aid measures after eye contact : Rinse with water  
Remove contact lenses, if present and easy to do. Continue rinsing.

First-aid measures after ingestion : Rinse mouth out with water  
Get immediate medical advice/attention.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : Sleepiness.  
Exposure may produce an allergic reaction.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Alcohol resistant foam.  
Dry chemical powder.  
Carbon dioxide (CO<sub>2</sub>).  
Water spray.

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

Hazardous decomposition products in case of fire : Under fire conditions, hazardous fumes will be present  
- CO<sub>x</sub>  
- NO<sub>x</sub>.

### 5.3. Advice for firefighters

Protection during firefighting : Self-contained breathing apparatus.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Measures in case of dust release : Use good housekeeping practices to avoid rendering dust airborne.

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Do not allow product to spread into the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid dust formation. Ensure good ventilation of the work station.

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

Storage conditions : Store in dry, well-ventilated area  
Store at room temperature  
Keep container tightly closed.

### 7.3. Specific end use(s)

For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Metronidazole (443-48-1)		
Netherlands	Local name	Metronidazol
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	0,00012 mg/m <sup>3</sup>

### 8.2. Exposure controls

#### Hand protection:

Type	Material	Permeation	Thickness (mm)	Standard
Gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0,11	EN 374

#### Eye protection:

Safety glasses (to European standard EN 166 or equivalent)

#### Skin and body protection:

Long sleeved protective clothing. Chemical resistant apron

#### Respiratory protection:

Wear approved mask. Filter type P3 (EN 143)

## SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Appearance	: Crystalline powder.
Molecular mass	: 171,2 g/mol
Colour	: White to slightly yellow.
Odour	: Odourless.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 159 - 163 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Poorly soluble in water Partially soluble: acetone, ethanol, methylene chloride.
Log Pow	: -0,02
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available

Oxidising properties : No data available

Explosive limits : No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions of storage, handling and use.

### 10.2. Chemical stability

No additional information available

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

- Heat

Moisture

Light (daylight).

### 10.5. Incompatible materials

Oxidising agents.

### 10.6. Hazardous decomposition products

When heated to decomposition, emits dangerous fumes:

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Metronidazole (443-48-1)	
LD50 oral rat	3000 mg/kg

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Suspected of causing cancer.

Reproductive toxicity : Not classified

STOT-single exposure : May cause damage to organs.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Other information : See actual entry in RTECS for complete information: NI5600000.

## SECTION 12: Ecological information

### 12.1. Toxicity

Metronidazole (443-48-1)	
LC50 fish 1	> 100 mg/l

Metronidazole (443-48-1)	
EC50 Daphnia 1	> 1000 mg/l (Daphnia magna, 48h)
EC50 72h algae (1)	12,5 mg/l

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

Metronidazole (443-48-1)	
Log Pow	-0,02

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose in a safe manner in accordance with local/national regulations.  
Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / IATA / IMDG

ADR	IMDG	IATA
<b>14.1. UN number</b>		
Not applicable	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>		
Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>		
Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>		
Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>		
Not applicable	Not applicable	Not applicable
No supplementary information available		

### 14.6. Special precautions for user

#### . Overland transport

Not applicable

#### - Transport by sea

Not applicable

### - Air transport

Not applicable

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Metronidazole is not on the REACH Candidate List

Metronidazole is not on the REACH Annex XIV List

#### 15.1.2. National regulations

Ensure all national/local regulations are observed.

#### Germany

12th Ordinance Implementing the Federal Immission Control Act -  
12.BImSchV

: Is not subject of the 12. BImSchV  
(Hazardous Incident Ordinance)

#### Netherlands

SZW-lijst van kankerverwekkende stoffen

: Metronidazole is listed

SZW-lijst van mutagene stoffen

: The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding

: The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen –  
Vruchtbaarheid

: The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling

: The substance is not listed

#### Denmark

Recommendations Danish Regulation

: Young people below the age of 18  
years are not allowed to use the  
product  
Pregnant/breastfeeding women  
working with the product must not be  
in direct contact with the product  
The requirements from the Danish  
Working Environment Authorities  
regarding work with carcinogens must  
be followed during use and disposal

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Indication of changes:

2.2	Hazard statements (CLP)	Modified	Fixed wrong hazard- and precautionary statements, they differed from actual product labelling.
-----	-------------------------	----------	--

Abbreviations and acronyms:

ATE	Acute Toxicity Estimate
-----	-------------------------

# Metronidazole

M0131

## Safety Data Sheet

according to Regulation (EU) 2015/830

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DPD	Dangerous Preparations Directive 1999/45/EC
DSD	Dangerous Substances Directive 67/548/EEC
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
PBT	Persistent Bioaccumulative Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
SDS	Safety Data Sheet

Data sources : ECHA (European Chemicals Agency). Supplier.

Full text of H- and EUH-statements:

Carc. 2	Carcinogenicity, Category 2
STOT SE 2	Specific target organ toxicity — Single exposure, Category 2
H351	Suspected of causing cancer.
H371	May cause damage to organs.

SDS Biochemicals version 2018

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*