

# MTT (thiazolyl blue)

## Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 05/07/2011      Revision date: 06/11/2017  
Supersedes 02/02/2016

**M1415**

Version: 2.0

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

#### 1.1. Product identifier

Product form : Substance  
Trade name : MTT (thiazolyl blue)  
EC-No. : 206-069-5  
CAS-No. : 298-93-1  
Product code : M1415  
Formula : C<sub>18</sub>H<sub>16</sub>N<sub>5</sub>SBr  
Synonyms : Thiazolyl blue tetrazolium bromide / Dimethyl-thiazolyldiphenyl-tetrazolium bromide / 3-(4,5-Dimethylthiazolyl-2)-2,5-diphenyltetrazolium bromide  
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]

Germ cell mutagenicity, Category 2 H341  
Serious eye damage/eye irritation, Category 2 H319  
Skin corrosion/irritation, Category 2 H315  
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation H335

Full text of hazard classes and 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

GHS07

Signal word (CLP)

: Warning

Hazard statements (CLP)

: H315 - Causes skin irritation  
H319 - Causes serious eye irritation.  
H335 - May cause respiratory irritation.  
H341 - Suspected of causing genetic defects.

Precautionary statements (CLP)

: P281 - Use personal protective equipment as required.  
P261 - Avoid breathing dust, fume, gas, mist, spray, vapours.  
P305+P351 - IF IN EYES: Rinse cautiously with water for several minutes.**2.3. Other hazards**

No additional information available

**SECTION 3: Composition/information on ingredients****3.1. Substances**

Name : MTT (thiazolyl blue)

CAS-No. : 298-93-1

EC-No. : 206-069-5

Name	Product identifier	%
MTT (thiazolyl blue)	(CAS-No.) 298-93-1 (EC-No.) 206-069-5	> 98

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 after inhalation : Move to fresh air. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Seek medical attention if ill effect or irritation develops. Wash off with soap and plenty of water.

First-aid measures after eye contact : Rinse immediately with plenty of water. Seek medical attention if ill effect or irritation develops.

First-aid measures after ingestion : Rinse mouth. If you feel unwell, seek medical advice.

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

No additional information available

**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.

Unsuitable extinguishing media : Strong water jet.

**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>. SO<sub>x</sub>.

**5.3. Advice for firefighters**

Firefighting instructions : Avoid (reject) fire-fighting water to enter environment.

Protection during firefighting : Wear proper protective equipment.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****6.1.1. For non-emergency personnel**

Protective equipment : Wear suitable protective clothing.

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**

Prevent entry to sewers and public waters.

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

Methods for cleaning up : Sweep up dry powder and dispose properly.

**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 : Handle in accordance with good industrial hygiene and safety practice.

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

Storage conditions : Store in dry, cool, well-ventilated area.

Storage temperature : 2 - 8 °C

**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

No additional information available

#### 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	: Powder.
Molecular mass	: 414,32 g/mol
Colour	: Yellow.
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 195 °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	: Water: 10 g/l (20 °C)
Log Pow	: No data available
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

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

This product is not hazardous.

### 10.4. Conditions to avoid

Direct sunlight. Heat.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Thermal decomposition generates : COx. NOx. SOx.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Suspected of causing genetic defects.
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Other information	: See actual entry in RTECS for complete information: XF8060000.

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 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

Additional information : Prevent entry to sewers and public waters. Avoid release to the environment

## 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 regulated	Not regulated	Not regulated
<b>14.2. UN proper shipping name</b>		
Not regulated	Not regulated	Not regulated
Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>		
Not regulated	Not regulated	Not regulated
Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>		
Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>		
Not regulated	Not regulated	Not regulated
No supplementary information available		

### 14.6. Special precautions for user

#### . Overland transport

Not regulated

#### - Transport by sea

Not regulated

#### - Air transport

Not regulated

### 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

MTT (thiazolyl blue) is not on the REACH Candidate List

MTT (thiazolyl blue) 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 : The substance is not 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:

1.4	Emergency number	Modified	
8.2	Hand protection	Modified	Specified material, thickness, et cetera of gloves

Abbreviations and acronyms:

ATE	Acute Toxicity Estimate
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

# MTT (thiazolyl blue)

M1415

## Safety Data Sheet

according to Regulation (EU) 2015/830

SDS	Safety Data Sheet
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Data sources : ECHA (European Chemicals Agency). Supplier.

Full text of H- and EUH-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Muta. 2	Germ cell mutagenicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H315	Causes skin irritation
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.

SDS Biochemicals version 2017

*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*