

# Thiamine hydrochloride

## Safety Data Sheet

**T0614**

according to Regulation (EU) 2015/830

Version: 2.1

Date of issue: 15/04/2011      Revision date 24/01/2019  
Supersedes 25/09/2017

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

#### 1.1. Product identifier

Product form : Substance  
Trade name : Thiamine hydrochloride  
EC-No. : 200-641-8  
CAS-No. : 67-03-8  
REACH registration No : 01-2120773699-31-xxxx  
Product code : T0614  
Formula : C<sub>12</sub>H<sub>17</sub>CIN<sub>4</sub>OS · HCl

#### 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]

Serious eye damage/eye irritation, Category 2 H319

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) :



GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H319 - Causes serious eye irritation.

Precautionary statements (CLP) :

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351 - IF IN EYES: Rinse cautiously with water for several minutes.

P337+P313 - If eye irritation persists: Get medical advice/attention.

### 2.3. Other hazards

Other hazards not contributing to the classification

: Potential dust explosion hazard.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name

: Thiamine hydrochloride

CAS-No.

: 67-03-8

EC-No.

: 200-641-8

Name	Product identifier	%
Thiamine hydrochloride	(CAS-No.) 67-03-8 (EC-No.) 200-641-8	>= 98,5

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

: If you feel unwell, seek medical advice.

First-aid measures after inhalation

: Assure fresh air breathing.

First-aid measures after skin contact

: Wash skin with mild soap and water.

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.

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

Symptoms/effects

: Gastrointestinal complaints.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water  
Foam.

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

Hazardous decomposition products in case of fire : - SO<sub>x</sub>  
Corrosive vapours  
Carbon oxides (CO, CO<sub>2</sub>)  
- NO<sub>x</sub>.

### 5.3. Advice for firefighters

Protection during firefighting : Wear proper protective equipment. Self-contained breathing apparatus.  
Other information : Prevent fire fighting water from entering the environment.

## 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 : Avoid dust formation.

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Prevent product from entering drains.

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

Methods for cleaning up : Sweep up, shovel or vacuum. This material and its container must be disposed of in a safe way, and as per local legislation.

### 6.4. Reference to other sections

Reference to other sections (8, 13).

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

No additional information available

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

Storage conditions : Keep container tightly closed and dry  
Store at room temperature.

### 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

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### 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

### Respiratory protection:

Dust production: dust mask with filter type P1

## SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Appearance	: Powder.
Molecular mass	: 337,3 g/mol
Colour	: White to off-white.
Odour	: Characteristic.
Odour threshold	: No data available
pH	: 2,7 - 3,3 (2,5%)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 248 - 250 °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	: 0,4 g/cm <sup>3</sup>
Solubility	: Readily soluble in water. Water: ≈ 1000 g/l
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.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Potential dust explosion hazard.

### 10.4. Conditions to avoid

- Heat

Water, humidity.

### 10.5. Incompatible materials

Bases

- Metals

Oxidising agents.

### 10.6. Hazardous decomposition products

Hydrogen chloride

Nitrogen oxides

- SO<sub>x</sub>.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Thiamine hydrochloride (67-03-8)	
LD50 oral rat	3710 mg/kg
LD50 oral	8224 mg/kg (mouse)

Skin corrosion/irritation : Slightly irritating to the skin  
pH: 2,7 - 3,3 (2,5%)

Serious eye damage/irritation : May cause eye irritation.  
pH: 2,7 - 3,3 (2,5%)

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Other information : See actual entry in RTECS for complete information: XI7350000.

## SECTION 12: Ecological information

### 12.1. Toxicity

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Thiamine hydrochloride (67-03-8)	
LC50 fish 1	> 100 mg/l Oncorhynchus mykiss (Rainbow trout)
EC50 Daphnia 1	> 100 mg/l (Daphnia Magna)

### 12.2. Persistence and degradability

Thiamine hydrochloride (67-03-8)	
Persistence and degradability	Product is biodegradable.
Biodegradation	74 % (7d)

### 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

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods	: This product is not hazardous.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: When not empty dispose of this container at hazardous or special waste collection point.
Ecology - waste materials	: 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

Thiamine hydrochloride is not on the REACH Candidate List

Thiamine hydrochloride is not on the REACH Annex XIV List

#### 15.1.2. National regulations

##### Germany

Reference to AwSV

: Water hazard class (WGK) 1, Slightly hazardous to water (Classification according to VwVwS, Annex 3; ID No. 3924)

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

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Indication of changes:

1.1	REACH registration No	Added	
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Added	Change from no classification to H319 (Eye cat.2) based on new data from manufacturer.
2.2	Hazard pictograms (CLP)	Added	GHS07
2.2	Signal word (CLP)	Added	Warning
2.2	Precautionary statements (CLP)	Added	P280;P305+P351;P337+P313

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### 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
SDS	Safety Data Sheet

### Data sources

: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. Supplier.

### Full text of H- and EUH-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H319	Causes serious eye irritation.

### SDS Biochemicals version 2019

*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*