

# Caffeine

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830  
 Date of issue: 09/09/2011 Revision date: 27/02/2017

**249319**

Version: 2.0

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

#### 1.1. Product identifier

Product form : Substance  
 Substance name : Caffeine  
 IUPAC name : 1,3,7-Trimethyl-3,7-dihydro-1H-purine-2,6-dione  
 EC Index No : 613-086-00-5  
 EC No : 200-362-1  
 CAS No : 58-08-2  
 Product code : 249319  
 Formula : C<sub>8</sub>H<sub>10</sub>N<sub>4</sub>O<sub>2</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 : Pharmaceutical  
 Function or use category : Raw material

##### 1.2.2. Uses advised against

No additional information available

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

##### Supplier

Duchefa Farma BV  
 A. Hofmanweg 71  
 2031BH Haarlem - Nederland  
 T +31(0)23-5319093  
[farma@duchefa.nl](mailto:farma@duchefa.nl) - [www.duchefa-farma.com](http://www.duchefa-farma.com)

#### 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)

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Centre Hospitalier Universitaire de Constantine	Avonley Road SE14 5ER London	0870 243 2241	

### SECTION 2: Hazards identification

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

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

Acute toxicity (oral), Category 4

H302

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) :



GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H302 - Harmful if swallowed

Precautionary statements (CLP) :

P301+P312 - IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell

## 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type

: Pharmaceuticals

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Caffeine	(CAS No) 58-08-2 (EC No) 200-362-1 (EC Index No) 613-086-00-5	98.5 - 101.5	Acute Tox. 4 (Oral), H302

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 : Assure fresh air breathing. Allow the victim to rest.

First-aid measures after skin contact : Rinse with plenty of water.

First-aid measures after eye contact : Rinse immediately with plenty of water.

First-aid measures after ingestion : Rinse mouth. Give water to drink. If you feel unwell, seek medical advice (show the label where possible).

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

Symptoms/injuries after ingestion : Excitement/restlessness. Headache. Nausea. Vomiting.

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

On ingestion : Give activated charcoal.

## SECTION 5: Fire-fighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : All extinguishing agents can be used.

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

Fire hazard : On exposure to high temperature, may decompose, releasing toxic gases. Carbon monoxide. Nitrogen oxides.

Explosion hazard : Large amounts: Risk of dust explosion.

### 5.3. Advice for firefighters

Firefighting instructions : Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

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

General measures : Avoid raising dust.

#### 6.1.1. For non-emergency personnel

No additional information available

#### 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 : Large spills: scoop solid spill into closing containers. To clean the floor or objects contaminated by this product, use : Water.

### 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 : Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety procedures.

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

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

Maximum storage period : 5 year

Storage temperature : 15 - 25 °C

### 7.3. Specific end use(s)

Pharmaceutical industry.

**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:**

Protective clothing (with elasticated cuffs and closed neck)

**Respiratory protection:**

Dust production: dust mask with filter type P2

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state	: Solid
Appearance	: Crystalline powder.
Molecular mass	: 194.2 g/mol
Colour	: White.
Odour	: odourless.
Odour threshold	: No data available
pH	: 5.5 - 6.5
pH solution	: 1 % 20°C
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 235 - 239 °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	: 20 hPa 80°C
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.23 g/cm <sup>3</sup> 18°C
Solubility	: Water: 20 g/l 20°C
Log Pow	: -0.09
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

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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

Risk of dust explosion.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

Strong oxidizers.

### 10.6. Hazardous decomposition products

In the event of fire, may decompose : Carbon monoxide. Nitrogen oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Caffeine (58-08-2)	
LD50 oral rat	355 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat	4.1 - 4.9 mg/l/4h

Skin corrosion/irritation : Not classified

pH: 5.5 - 6.5

Serious eye damage/irritation : Not classified

pH: 5.5 - 6.5

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

**SECTION 12: Ecological information****12.1. Toxicity**

Caffeine (58-08-2)	
LC50 fish 1	87 mg/l 96 h, Leuciscus idus
EC50 Daphnia 1	182.12 mg/l 4 h

**12.2. Persistence and degradability**

Caffeine (58-08-2)	
Persistence and degradability	readily degradable in water.

**12.3. Bioaccumulative potential**

Caffeine (58-08-2)	
Log Pow	-0.09
Bioaccumulative potential	Slightly or not bioaccumulative.

**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 disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

**SECTION 14: Transport information**

In accordance with ADR / RID / IMDG / IATA / ADN

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

**14.6. Special precautions for user****- Overland transport**

No data available

**- Air transport**

No data available

**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

Caffeine is not on the REACH Candidate List

Caffeine is not on the REACH Annex XIV List

**15.1.2. National regulations**

No additional information available

**15.2. Chemical safety assessment**

No additional information available

**SECTION 16: Other information**

Indication of changes:

1.4	Emergency telephone	Modified	Added additional information
2	Classification (DSD/DPD)	Removed	Obsolete
8.2	Hand protection	Modified	Specified material, thickness, et cetera of gloves

Abbreviations and acronyms:

SDS	Safety Data Sheet
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
IMDG	International Maritime Dangerous Goods
IATA	International Air Transport Association
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008

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.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
H302	Harmful if swallowed

SDS EU (REACH Annex II) 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*