

# Furosemide

## Safety Data Sheet

**497142**

Version: 3.1

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU)  
2015/830  
Date of issue: 03/09/2012      Revision date 06/02/2020  
Supersedes 10/07/2019

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

#### 1.1. Product identifier

Product form : Substance  
Substance name : Furosemide  
IUPAC name : 4-Chloro-2-[(furan-2-ylmethyl)amino]-5-sulfamoylbenzoic acid  
EC-No. : 200-203-6  
CAS-No. : 54-31-9  
Product code : 497142  
Formula : C<sub>12</sub>H<sub>11</sub>ClN<sub>2</sub>O<sub>5</sub>S  
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  
Use of the substance/mixture : Active ingredient for the preparation of pharmaceuticals  
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)

Organisation/Company	Address	Comment
Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	

### 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

Reproductive toxicity, Category 1B

H360

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]** Extra labelling to display Extra classification(s) to display

Hazard pictograms (CLP)

:



GHS07



GHS08

Signal word (CLP)

: Danger

Hazard statements (CLP)

: H302 - Harmful if swallowed.

H360 - May damage fertility or the unborn child.

Precautionary statements (CLP)

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

P301+P312 - IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330 - Rinse mouth.

P308+P313 - IF exposed or concerned: Get medical advice/attention.

## 2.3. Other hazards

Other hazards not contributing to the classification : No additional information available.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Furosemide	(CAS-No.) 54-31-9 (EC-No.) 200-203-6	98.5 - 101	Acute Tox. 4 (Oral), H302 Repr. 1B, H360

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	: Remove victim to fresh air If not breathing, give artificial respiration Seek medical advice.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse Seek medical attention if ill effect or irritation develops.
First-aid measures after eye contact	: Rinse immediately with plenty of water If eye irritation persists, take medical advice.
First-aid measures after ingestion	: Rinse mouth. Never give anything by mouth to an unconscious person Seek medical advice.

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

Symptoms/effects	: Dizziness Reduced blood pressure Dehydration.
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#### 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	: Alcohol resistant foam dry chemical powder Carbon dioxide.
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#### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: Contact with oxidizing agents can lead to ignition.
Hazardous decomposition products in case of fire	: Sulphur oxides Nitrogen oxides Carbon oxides (CO, CO <sub>2</sub> ) Hydrogen chloride.

#### 5.3. Advice for firefighters

Precautionary measures fire	: Exercise caution when fighting any chemical fire.
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

##### 6.1.1. For non-emergency personnel

Protective equipment	: See Headings 7 and 8.
Emergency procedures	: Ensure adequate air ventilation. Avoid raising dust. Evacuate unnecessary personnel.

### 6.1.2. For emergency responders

Protective equipment : Wear proper protective equipment.

### 6.2. Environmental precautions

Prevent product from entering drains.

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

For containment : Sweeping or shovelling without dust for disposal.

Methods for cleaning up : Clean with alkaline solution.

### 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 contact with skin, eyes and clothing. Ensure good ventilation of the work station.

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

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

Storage conditions : Store in dry, well-ventilated area  
Keep container tightly closed.  
Protect from light.

Storage temperature : 15 - 25 °C

Packaging materials : glass. HDPE.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

#### Appropriate engineering controls:

Technical measures and appropriate working operations should have priority over the use of personal protective equipment.

#### Personal protective equipment:

Safety glasses. Dustproof clothing. Dust/aerosol mask with filter type P3. Gloves.

#### Hand protection:

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

Dustmask with filtertype P3



## SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Appearance	: Crystalline powder.
Molecular mass	: 330.7 g/mol
Colour	: White almost white.
Odour	: odourless.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 220 °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	: Insoluble in water Soluble in : Acetone Ethanol Aqueous solution of alkaline agents.
Log Pow	: 2.03
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

No additional information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

None under normal conditions.

### 10.4. Conditions to avoid

heat  
High temperature  
Light (daylight).

### 10.5. Incompatible materials

Strong oxidizers.

### 10.6. Hazardous decomposition products

Carbon dioxide  
Carbon monoxide  
Nitrogen oxides  
Sulphur oxides  
Chlorine.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

Furosemide (54-31-9)	
LD50 oral rat	2600 mg/kg
LD50 oral	800 mg/kg rabbit

Skin corrosion/irritation : Not classified  
Serious eye damage/irritation : Not classified  
Respiratory or skin sensitisation : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified

Reproductive toxicity : May damage fertility or the unborn child.  
STOT-single exposure : Not classified  
STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

IARC group : 3

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : There are no available data for a classification.

<b>Furosemide (54-31-9)</b>	
LC50 fish 1	> 500 mg/l

### 12.2. Persistence and degradability

<b>Furosemide (54-31-9)</b>	
Persistence and degradability	Not established.
Biodegradation	< %

### 12.3. Bioaccumulative potential

<b>Furosemide (54-31-9)</b>	
Log Pow	2.03

### 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

Other adverse effects : None known.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

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

Furosemide is not on the REACH Candidate List

Furosemide is not on the REACH Annex XIV List

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Indication of changes:

	Version	Modified	change of logo
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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 : Supplier. EP.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Repr. 1B	Reproductive toxicity, Category 1B
H302	Harmful if swallowed.
H360	May damage fertility or the unborn child.



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SDS EU (REACH Annex II) ducheфа nieuwe logo

*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.*