

# Adrenaline tartrate

## Safety Data Sheet

**246212**

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830  
Date of issue: 01/06/2013      Revision date 08/01/2020  
Supersedes 18/10/2018

Version: 3.1

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

#### 1.1. Product identifier

Product form : Substance  
Substance name : Adrenaline tartrate  
IUPAC name : (1R)-1-(3,4-Dihydroxyphenyl)-2-(methylamino)ethanolhydrogen (2R,3R)-2,3-dihydroxybutanedioate  
EC-No. : 200-097-1  
CAS-No. : 51-42-3  
Product code : 246212  
Formula : C13H19NO9  
Synonyms : Epinephrine Bitartrate  
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 industry  
Industrial/Professional use spec : For professional use only  
Use of the substance/mixture : Active ingredient for the preparation of pharmaceuticals

##### 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 1	H300
Acute toxicity (dermal), Category 1	H310
Acute toxicity (inhalation:dust,mist) Category 1	H330
Hazardous to the aquatic environment — Chronic Hazard, Category 3	H412

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) :



GHS06

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H300+H310+H330 - Fatal if swallowed, in contact with skin or if inhaled  
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP) :

P260 - Do not breathe dust.  
P284 - Wear respiratory protection.  
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor  
P302+P352 - IF ON SKIN: Wash with plenty of water/...  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P310 - Immediately call a POISON CENTER/doctor

### 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]
Adrenaline tartrate	(CAS-No.) 51-42-3 (EC-No.) 200-097-1	100	Acute Tox. 1 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 1 (Inhalation:dust,mist), H330 Aquatic Chronic 3, H412

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 (show the label where possible).
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.  
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)  
If not breathing, give artificial respiration.
- First-aid measures after skin contact : Immediately call a POISON CENTER/doctor.
- First-aid measures after eye contact : Immediately call a POISON CENTER/doctor  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- First-aid measures after ingestion : Rinse mouth  
Do NOT induce vomiting.  
Fatal if swallowed.  
Immediately call a POISON CENTER/doctor.

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

Symptoms/effects : Disturbances of heart rate.

### 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 : Foam  
Carbon dioxide  
Water spray  
dry chemical powder  
Alcohol resistant foam.
- Unsuitable extinguishing media : Do not use a heavy water stream.

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

- Hazardous decomposition products in case of fire : Nitrogen oxides  
Carbon oxides (CO, CO<sub>2</sub>).

### 5.3. Advice for firefighters

- Firefighting instructions : Exercise caution when fighting any chemical fire. 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. Avoid contact with substance.

#### 6.1.1. For non-emergency personnel

- Protective equipment : Dustmask with filtertype P3.
- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.

### 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 : On land, sweep or shovel into suitable containers. Minimise generation of dust. Store away from other materials.

### 6.4. Reference to other sections

- Reference to other sections (8, 13).

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Handle in accordance with good industrial hygiene and safety procedures.

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

- Storage conditions : Keep container tightly closed.  
Keep under inert gas. Air and light sensitive.  
Protect from light.

Storage temperature : 15 - 25 °C

### 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.

#### Hand protection:

Chemical resistant PVC gloves (to European standard EN 374 or equivalent)

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:

Chemical resistant apron. Protective clothing (with elasticated cuffs and closed neck)

#### Respiratory protection:

Dustmask with filtertype P3

#### Other information:

Do not eat, drink or smoke during use. Wash hands before break and at end of works.

## SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Appearance	: Crystalline powder.
Molecular mass	: 333.3 g/mol
Colour	: White Grey.
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 155 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available

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Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Freely soluble in water.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Product is not explosive.
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

Additional information : Dust explosion possible if in powder or granular form, mixed with air

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

May decompose under the influence of light.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight

Extremely high or low temperatures.

### 10.5. Incompatible materials

Oxidizing agent

Bases

iron compounds

copper and its alloys.

### 10.6. Hazardous decomposition products

On heating/burning: release of harmful gases/vapours.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Fatal if swallowed. Fatal in contact with skin. Fatal if inhaled.

Adrenaline tartrate (51-42-3)	
LD50 oral	4 mg/kg mouse
LD50 dermal	< 50 mg/kg
Additional information	LC50 inhalation <0.05 mg/l/4u

Skin corrosion/irritation	: Not classified
Additional information	: Poisoning possible by absorption through skin
Serious eye damage/irritation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified
	Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-single exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Potential adverse human health effects and symptoms	: Fatal if swallowed. Fatal in contact with skin. Fatal if inhaled.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Harmful to aquatic life.

### 12.2. Persistence and degradability

<b>Adrenaline tartrate (51-42-3)</b>	
Persistence and degradability	Not established.

### 12.3. Bioaccumulative potential

<b>Adrenaline tartrate (51-42-3)</b>	
Bioaccumulative potential	Not established.

### 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 : Avoid release to the environment.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

Regional legislation (waste) : 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>	
2811	2811
<b>14.2. UN proper shipping name</b>	
TOXIC SOLID, ORGANIC, N.O.S.	Toxic solid, organic, n.o.s.
<b>14.3. Transport hazard class(es)</b>	
6.1	6.1
	
<b>14.4. Packing group</b>	
I	I
<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**

Classification code (ADR) : T2  
 Special provisions (ADR) : 274, 614  
 Limited quantities (ADR) : 0  
 Excepted quantities (ADR) : E5  
 Packing instructions (ADR) : P002, IBC07  
 Mixed packing provisions (ADR) : MP18  
 Portable tank and bulk container instructions (ADR) : T6  
 Portable tank and bulk container special provisions (ADR) : TP33  
 Tank code (ADR) : S10AH, L10CH  
 Tank special provisions (ADR) : TU15, TE19  
 Vehicle for tank carriage : AT  
 Transport category (ADR) : 1  
 Special provisions for carriage - Packages (ADR) : V10  
 Special provisions for carriage - Loading, unloading and handling (ADR) : CV1, CV13, CV28  
 Special provisions for carriage - Operation (ADR) : S9, S14

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Hazard identification number (Kemler No.) : 66

Orange plates :



Tunnel restriction code (ADR) : C/E

EAC code : 2X

### - Air transport

PCA Excepted quantities (IATA) : E5

PCA Limited quantities (IATA) : Forbidden

PCA limited quantity max net quantity (IATA) : Forbidden

PCA packing instructions (IATA) : 666

PCA max net quantity (IATA) : 5kg

CAO packing instructions (IATA) : 673

CAO max net quantity (IATA) : 50kg

Special provisions (IATA) : A3, A5

ERG code (IATA) : 6L

### 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

Adrenaline tartrate is not on the REACH Candidate List

Adrenaline tartrate 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:

1.4	Emergency telephone	Modified	Added additional information
11.1	LD50 oral	Modified	

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

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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 : EP. EDQM. Supplier.

Other information : REACH Disclaimer:

This information is based on current knowledge. Consistency of data in the SDS with CSR is considered, as far as the information is available at the time of compilation (cfr Revision date and Version number). **DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness.

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

Acute Tox. 1 (Dermal)	Acute toxicity (dermal), Category 1
Acute Tox. 1 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 1
Acute Tox. 1 (Oral)	Acute toxicity (oral), Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
H300	Fatal if swallowed.
H310	Fatal in contact with skin.
H330	Fatal if inhaled.
H412	Harmful to aquatic life with long lasting effects.

### SDS EU (REACH Annex II) duchefa 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.*