

# Safety Data Sheet for Drug product



Date of issue: 06-FEB-2015

Replaces version of: 09-JUN-2010

TEKAMLO FCT 150/5MG 7 (SA-BOTTLE) 719804 (US02)

## 1. Identification of the substance/preparation and of the company

**Product name** TEKAMLO FCT 150/5MG 7 (SA-BOTTLE)  
**Generic Name** ALISKIREN HEMIFUMARATE, Amlodipine besylate  
**Pharmacological Action** Renin inhibitor, antihypertensive agent  
**Usage** Drug product (pharmaceutical bulk, primary packed, finished product, pharmaceutical intermediate)  
**Company name** Novartis Pharma AG  
4002 Basel  
Switzerland  
Tel: +41 61 324 11 11, email: sds.support@novartis.com  
**Emergency phone number** CHEMTEL (International) +1 813 676 1670

## 2. Hazards identification

For side effects, which could also have impact for people working with this substance, please refer to the Patient Information Leaflet.

## 3. Composition / information on ingredients

For classification of declared components, see section 15, "Regulatory Information"

Chemical Name	Contains:	CAS Number
ALISKIREN HEMIFUMARATE	approx. 33 %	173334-58-2
Amlodipine besylate	0.5 - 3 %	111470-99-6

Remaining components are inert ingredients.

For TLV values of declared components, see Section 8, Exposure controls / Personal

## 4. First aid measures

**Eye Contact** Immediately rinse eyes thoroughly with running water as long as possible (approx. 15 min). Take injured quickly to factory medical center or call an ambulance (code word: eye accident).  
**Skin Contact** Remove contaminated clothing. Rinse contaminated skin immediately with plenty of water and soap and seek medical advice.  
**Inhalation** Remove the victim from danger zone, avoid further exposure.  
**Ingestion** If swallowed, seek medical advice immediately and show this container or label.  
**Notes to Physician** General measures to eliminate the substance and to reduce absorption.

## 5. Fire fighting measures

**Suitable Extinguishing Media** Water spray or fog, foam, dry chemical powder, CO2, dry sand  
**Unsuitable Extinguishing Media** No restrictions  
**Protective equipment for firefighters** Wear self-contained breathing apparatus and fire protective suite.

## 6. Accidental release measures

**Personal precautions** Avoid contact with skin, eyes and clothing.  
**Environmental precautions** Must not be released into sewers, drains or wells.  
**Methods for cleaning** Transfer large quantities into a container. Clean up the rest with absorbent material and

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discharge properly.

## 7. Handling and storage

No special handling requirements for normal use of this material.

Store in a dry and cool place and observe special instructions from supplier.

## 8. Exposure controls / Personal protection

### Occupational Exposure Limit (OEL)

no data available

### TLV values of declared components

Contains:

**ALISKIREN HEMIFUMARATE**

List type	$\mu\text{g}/\text{m}^3$	
Internal exposure limit	150	/

Contains:

**Amlodipine besylate**

List type	$\mu\text{g}/\text{m}^3$	
Internal exposure limit	17	/

### Personal protection for open handling

Health care personnel



Safety glasses (EN166) Lab coat Disposable gloves (EN374)

## 9. Physical and chemical properties

Formulation

Tablet

Flash Point

not available

## 10. Stability and reactivity

Under the normal conditions of use, the product is stable.

## 11. Toxicological information

### Acute Toxicity

Data of ALISKIREN HEMIFUMARATE

LD50: approx. 1000 mg/kg

Route: oral

Species: rat

Data of Amlodipine besylate

LD50: 393 mg/kg

Route: oral

Species: rat

Data of Amlodipine besylate

LD50: 686 mg/kg

Route: oral

Species: rat, Sex: female

Data of Amlodipine besylate

LD50: 37 mg/kg

Route: oral

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	Species: mouse Data of Amlodipine besylate TDL0: 40 mg/kg Route: oral Species: rat Data of Amlodipine besylate LDLo: 10 mg/kg Route: oral Species: dog
<b>Irritation, Corrosion</b>	Values of ALISKIREN HEMIFUMARATE The substance has an irritating potential. Data of ALISKIREN HEMIFUMARATE Respiratory system (Species: rat) corrosive See comment. Data of ALISKIREN HEMIFUMARATE Skin (Species: mouse) irritant Method: Assessment of contact allergenic potential with the murine local lymph node assay (LLNA TIER II) Data of Amlodipine besylate Eyes (Species: rabbit) strongly corrosive Free base Data of Amlodipine besylate Skin (Species: rabbit) non irritant Free base
<b>Sensitisation</b>	Data of ALISKIREN HEMIFUMARATE Skin (Species: mouse) not sensitizing Method: Assessment of contact allergenic potential with the murine local lymph node assay (LLNA TIER II) Data of Amlodipine besylate Skin (Species: guinea pig) not sensitizing Method: OECD 406 * 1981 * Guinea pig maximisation test
<b>Additional advice</b>	Data of ALISKIREN HEMIFUMARATE The compound is a local irritant of the upper respiratory tract and can cause inflammation and necrosis of the respiratory epithelium. Data of ALISKIREN HEMIFUMARATE Not mutagenic in AMES Test. Data of Amlodipine besylate Handling this substance, precautionary measures should be taken according to workplace health risk assessment.
<b>Mutagenicity</b>	Data of ALISKIREN HEMIFUMARATE Negative (AMES-Test (reverse mutation assay)) in vitroCell: Strains of salmonella typhimurium. Data of ALISKIREN HEMIFUMARATE Negative (Chromosome Aberration Study) in vitroCell: Chinese hamster ovary (CHO) cells Data of ALISKIREN HEMIFUMARATE Negative (Micronucleus Test) in vivo, Species: rat, Cell: Bone marrow Data of Amlodipine besylate Negative (in vitro) Cell: Mammalian HeLa 83 cells Data of Amlodipine besylate Negative with and without metabolic activation (AMES-Test (reverse mutation assay)) in vitroCell: Strains of salmonella typhimurium. Data of Amlodipine besylate Negative

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in vitroCell: Lymphoma cells L5178Y of the mouse

Data of Amlodipine besylate

Negative (Chromosome Aberration Study)

in vitro

Data of Amlodipine besylate

Negative (DNA Damage and Repair, Unscheduled DNA Synthesis in vivo)

in vivo

## Chronic Effects

Data of ALISKIREN HEMIFUMARATE

Upper respiratory tract inflammation and necrosis. (Repeated Dose Toxicity (subchronic study))

NOAEL: = 50 mg/kg/d

LOEL: 150 mg/kg/d

Route: oral

Species: rat

Dosage: <= 600 mg/kg/d, Duration: 26 weeks

Data of ALISKIREN HEMIFUMARATE

Pathological findings (Repeated Dose Toxicity (subacute study))

NOAEL: 2 mg/kg/d

Route: oral

Species: Marmoset, Organ: Kidneys

Dosage: <= 20 mg/kg/d, Duration: 39 weeks

Data of ALISKIREN HEMIFUMARATE

No findings (Carcinogenesis)

NOEL: 250 mg/kg/d

Route: oral

Species: Transgenic mouse

Dosage: <= 1500 mg/kg/d, Duration: 6 months

Data of Amlodipine besylate

(Repeated Dose Toxicity)

Route: oral

Species: rat, Organ: Blood

Duration: 26 weeks

Data of Amlodipine besylate

(Repeated Dose Toxicity)

LOAEL: 3.75 mg/kg/d

Route: oral

Species: dog

Duration: 13 weeks

Data of Amlodipine besylate

(Repeated Dose Toxicity)

NOAEL: 3 mg/kg/d

Route: oral

Species: rat

Dosage: 2.5 mg/kg/d, Duration: 13 weeks

Data of Amlodipine besylate

No evidence for carcinogenicity (Repeated Dose Toxicity)

NOAEL: 0.5 mg/kg/d

Route: oral

Species: rat

Duration: 2 years

Data of Amlodipine besylate

(Repeated Dose Toxicity)

NOAEL: 2 mg/kg/d

Route: oral

Species: rat

Duration: 52 weeks

Data of Amlodipine besylate

No evidence for carcinogenicity (Repeated Dose Toxicity)

NOAEL: 0.5 mg/kg/d

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Route: oral  
Species: mouse  
Duration: 2 years

## Reproduction Toxicity

Values of ALISKIREN HEMIFUMARATE

This substance has been shown to have unwanted effects during the second and third trimesters of pregnancy and/or unborn/offspring. It is recommended that pregnant women working with or around this substance are informed and their exposure evaluated according to local policies. Handling this substance, precautionary measures should be taken according to workplace health risk assessment.

Values of Amlodipine besylate

The substance may have unwanted effects on the reproductive system of both sexes. This substance may have unwanted effects on pregnancy and/or unborn/offspring. It is recommended that pregnant women working with or around this substance are informed and their exposure evaluated according to local policies. Handling this substance, precautionary measures should be taken according to workplace health risk assessment.

Data of Amlodipine besylate

Maternal toxicity (Segment II (Embryotoxicity/fetotoxicity and teratogenicity))

NOAEL: 10 mg/kg/d

Route: oral

Species: rat

Data of Amlodipine besylate

Fetal toxicity (Segment II (Embryotoxicity/fetotoxicity and teratogenicity))

NOAEL: 25 mg/kg/d

Route: oral

Species: rat

Data of Amlodipine besylate

Maternal toxicity (Segment II (Embryotoxicity/fetotoxicity and teratogenicity))

NOAEL: 4 mg/kg/d

Route: oral

Species: rabbit

Data of Amlodipine besylate

Not teratogenic / not embryotoxic (Segment I (Fertility toxicity))

NOAEL: 2 mg/kg/d

Route: oral

Species: rat

Data of Amlodipine besylate

Negative (Segment I (Fertility toxicity))

Route: oral

Species: rat, Sex: male

Data of Amlodipine besylate

Negative (Segment I (Fertility toxicity))

Route: oral

Species: rat, Sex: male

Data of Amlodipine besylate

Increased pre-implantation loss (Segment II (Embryotoxicity/fetotoxicity and teratogenicity))

NOAEL: 2 mg/kg/d

Route: oral

Species: mouse, Sex: male

Data of Amlodipine besylate

Not teratogenic / not embryotoxic (Segment II (Embryotoxicity/fetotoxicity and teratogenicity))

NOAEL: 25 mg/kg/d

Route: oral

Species: rat

Data of Amlodipine besylate

Fetal toxicity (Segment II (Embryotoxicity/fetotoxicity and teratogenicity))

NOAEL: 25 mg/kg/d

Route: oral

Species: rabbit

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Data of Amlodipine besylate  
Not teratogenic / not embryotoxic (Segment II (Embryotoxicity/fetotoxicity and teratogenicity))  
NOAEL: 25 mg/kg/d  
Route: oral  
Species: rabbit  
Data of Amlodipine besylate  
Maternal toxicity (Segment III (Peri- and postnatal toxicity))  
NOAEL: 4 mg/kg/d  
Route: oral  
Species: rat

## 12. Ecological information

**Biological Elimination** Data of ALISKIREN HEMIFUMARATE  
Degradation: 5 % (aerobic: Temperature: 22 °C DOC)  
Not readily degradable  
Initial conc.: 40 mg/l, Duration: 28 days  
Method: 92/69/EC (L383) C.4-A \* Dissolved organic carbon (DOC) die-away  
Inhibitory effects can be excluded.

**Fish acute toxicity** Data of ALISKIREN HEMIFUMARATE  
LC50: > 100 mg/l  
NOEC: >= 100 mg/l  
Species: zebra fish (danio rerio)  
Exp. time: 96 hours  
Method: 92/69/EEC (L383) C.1 \* Acute toxicity for fish

**Fish chronic toxicity** Data of ALISKIREN HEMIFUMARATE  
NOEC: 10.6 mg/l  
Species: fathead minnow (pimephales promelas)  
Exp. time: 31 days  
Method: OECD 210 \* 1992  
Data of Amlodipine besylate  
LOEC: 4.6 mg/l  
NOEC: NOEC: 2.2 mg/l  
Species: fathead minnow (pimephales promelas)  
Exp. time: 31 days  
Method: OECD 210 \* 1992

**Aquatic invertebrate acute toxicity** Data of ALISKIREN HEMIFUMARATE  
EC50: 56 mg/l  
NOEC: 30 mg/l  
EC100: > 100 mg/l  
Species: daphnia magna (water flea)  
Exp. time: 48 hours  
Method: 92/69/EEC (L383) C.2 \* Acute toxicity for daphnia  
Data of Amlodipine besylate  
EC50: 3.2 mg/l  
Species: daphnia magna (water flea)  
Exp. time: 48 hours

**Aquatic invertebrate chronic toxicity** Data of ALISKIREN HEMIFUMARATE  
NOEC: 10 mg/l  
Species: daphnia magna (water flea)  
Exp. time: 21 days  
Method: OECD 211 \* 2008  
Data of Amlodipine besylate  
EC50: 0.58 mg/l  
NOEC: 0.22 mg/l  
Species: daphnia magna (water flea)  
Exp. time: 21 days  
Method: OECD 211 \* 2008

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<b>Algae Toxicity</b>	Data of ALISKIREN HEMIFUMARATE EbC50: > 100 mg/l ErC50: > 100 mg/l NOEC: 100 mg/l Species: Desmodesmus subspicatus/Scenedesmus subspicatus (Green algae) Exp. time: 72 hours Method: 92/69/EC (L383) C.3 Data of Amlodipine besylate ErC50: 0.23 mg/l EbC50: 0.11 mg/l NOEC: 0.029 mg/l Species: Green algae - fresh water (Pseudokirchneriella subcapitata) Exp. time: 72 hours Method: OECD 201 * 2006 * Growth inhibition; ISO 8692 * 2004
<b>Bacterial Respiration Inhibition</b>	Data of ALISKIREN HEMIFUMARATE EC50: 4470 mg/l Species: activated sludge Exp. time: 3 hours Method: Inhibition of Oxygen Consumption by activated sludge (87/302/EEC), Part C Data of Amlodipine besylate NOEC: 10 mg/l LOEC: 32 mg/l Species: activated sludge Exp. time: 3 hours Method: OECD 209 * 1984
<b>Ecotoxicity Summary</b>	Data of ALISKIREN HEMIFUMARATE Avoid release to the environment. Data of Amlodipine besylate No quantifiable data available. Data of Amlodipine besylate Toxic to aquatic organisms. Data of Amlodipine besylate Avoid release to the environment.

## 13. Disposal considerations

**Disposal Requirements** Fill into suitable waste receptacles, seal and label them properly. Incineration in an approved, controlled furnace with combustion gas scrubbing and emission gas control. Local regulations should be adhered to.

## 14. Transport information

Regulation	Class	UN No.	PG	Label	LQ
RID/ADR:	not restricted	0			N.A.
IMDG-Code:	not restricted	0			
ICAO/IATA-DGR:	not restricted	0			

ICAO/IATA-DGR: no dangerous good

Proper shipping name: -

## 15. Regulatory information

### Classifications of components:

Chemical Name	Contains:	CAS Number	Picto	Signal Word	Classification
ALISKIREN HEMIFUMARATE	approx. 33 %	173334-58-		W	H302, H361d, H335,

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		2				H373, H402
Amlodipine besylate	0.5 - 3 %	111470-99-6		D		H302, H318, H373, H400, H410

Remaining components are inert ingredients.

## 16. Other information

### Abbreviations used

H302: Harmful if swallowed.

H335: May cause respiratory irritation.

H361d: Suspected of damaging the unborn child.

H373: May cause damage to organs through prolonged or repeated exposure.

H402: Harmful to aquatic life.(in EU not leading to classification as hazardous)

H318: Causes serious eye damage.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

### Recipient

Henry Delima  
Delima Associates  
1227 Providence Terr  
McLean, VA  
USA

Product should be stored, handled and used in accordance with good industrial hygiene practices and in conformity with legal regulations. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should therefore not be construed as guaranteeing specific properties.