

## Enalapril / Hydrochlorothiazide Formulation

Version 7.1      Revision Date: 30.09.2023      SDS Number: 443856-00019      Date of last issue: 04.04.2023  
Date of first issue: 07.01.2016

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### SECTION 1. IDENTIFICATION

Product name : Enalapril / Hydrochlorothiazide Formulation

#### Manufacturer or supplier's details

Company : Organon & Co.

Address : 30 Hudson Street, 33nd floor  
Jersey City, New Jersey, U.S.A 07302

Telephone : 1-551-430-6000

Emergency telephone : 1-215-631-6999

E-mail address : EHSSTEWARD@organon.com

#### Recommended use of the chemical and restrictions on use

Recommended use : Pharmaceutical

Restrictions on use : Not applicable

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### SECTION 2. HAZARDS IDENTIFICATION

#### GHS Classification

Acute toxicity (Oral) : Category 5

Reproductive toxicity : Category 1A

Specific target organ toxicity - repeated exposure : Category 1 (Kidney, Parathyroid gland)

Specific target organ toxicity - repeated exposure : Category 2 (Cardio-vascular system)

#### GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H303 May be harmful if swallowed.  
H360D May damage the unborn child.  
H372 Causes damage to organs (Kidney, Parathyroid gland) through prolonged or repeated exposure.  
H373 May cause damage to organs (Cardio-vascular system) through prolonged or repeated exposure.

## Enalapril / Hydrochlorothiazide Formulation

Version 7.1      Revision Date: 30.09.2023      SDS Number: 443856-00019      Date of last issue: 04.04.2023  
Date of first issue: 07.01.2016

Precautionary Statements : **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P260 Do not breathe dust.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**  
P312 Call a POISON CENTER/ doctor if you feel unwell.

**Storage:**  
P405 Store locked up.

**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards which do not result in classification**

Dust contact with the eyes can lead to mechanical irritation.  
Contact with dust can cause mechanical irritation or drying of the skin.  
May form explosive dust-air mixture during processing, handling or other means.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Components**

Chemical name	CAS-No.	Concentration (% w/w)
Hydrochlorothiazide	58-93-5	>= 10 -< 20
Starch	9005-25-8	>= 10 -< 20
(S)-1-[N-[1-(Ethoxycarbonyl)-3-phenylpropyl]-L-alanyl]-L-proline maleate	76095-16-4	>= 5 -< 10

**SECTION 4. FIRST AID MEASURES**

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.  
Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.  
Remove contaminated clothing and shoes.  
Get medical attention.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.

In case of eye contact : If in eyes, rinse well with water.  
Get medical attention if irritation develops and persists.

## Enalapril / Hydrochlorothiazide Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
7.1	30.09.2023	443856-00019	Date of first issue: 07.01.2016

---

If swallowed	:	If swallowed, DO NOT induce vomiting. Get medical attention. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and delayed	:	May be harmful if swallowed. May damage the unborn child. Causes damage to organs through prolonged or repeated exposure. Contact with dust can cause mechanical irritation or drying of the skin. Dust contact with the eyes can lead to mechanical irritation.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
Notes to physician	:	Treat symptomatically and supportively.

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**SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Carbon dioxide (CO <sub>2</sub> ) Dry chemical
Unsuitable extinguishing media	:	None known.
Specific hazards during fire fighting	:	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Exposure to combustion products may be a hazard to health.
Hazardous combustion products	:	Carbon oxides Nitrogen oxides (NO <sub>x</sub> ) Chlorine compounds Sulfur oxides Metal oxides
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
Environmental precautions	:	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

## Enalapril / Hydrochlorothiazide Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
7.1	30.09.2023	443856-00019	Date of first issue: 07.01.2016

Methods and materials for containment and cleaning up : Sweep up or vacuum up spillage and collect in suitable container for disposal.  
Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).  
Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

**SECTION 7. HANDLING AND STORAGE**

Technical measures : Static electricity may accumulate and ignite suspended dust causing an explosion.  
Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing.  
Do not breathe dust.  
Do not swallow.  
Avoid contact with eyes.  
Wash skin thoroughly after handling.  
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
Keep container tightly closed.  
Minimize dust generation and accumulation.  
Keep container closed when not in use.  
Keep away from heat and sources of ignition.  
Take precautionary measures against static discharges.  
Do not eat, drink or smoke when using this product.  
Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage : Keep in properly labeled containers.  
Store locked up.  
Keep tightly closed.  
Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:  
Strong oxidizing agents  
Self-reactive substances and mixtures  
Organic peroxides  
Explosives  
Gases

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Ingredients with workplace control parameters**

Components	CAS-No.	Value type	Control parame-	Basis
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# SAFETY DATA SHEET



## Enalapril / Hydrochlorothiazide Formulation



Version 7.1      Revision Date: 30.09.2023      SDS Number: 443856-00019      Date of last issue: 04.04.2023  
Date of first issue: 07.01.2016

		(Form of exposure)	ters / Permissible concentration	
Hydrochlorothiazide	58-93-5	TWA	100 µg/m <sup>3</sup> (OEB 2)	Internal
Starch	9005-25-8	CMP	10 mg/m <sup>3</sup>	AR OEL
Further information: A4 - Not classifiable as a human carcinogen				
		TWA	10 mg/m <sup>3</sup>	ACGIH
(S)-1-[N-[1-(Ethoxycarbonyl)-3-phenylpropyl]-L-alanyl]-L-proline maleate	76095-16-4	TWA	50 µg/m <sup>3</sup> (OEB 3)	Internal
		Wipe limit	500 µg/100 cm <sup>2</sup>	Internal

**Engineering measures** : All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment. Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices).  
Minimize open handling.

### Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Particulates type

Hand protection

Material : Chemical-resistant gloves

Remarks : Consider double gloving.

Eye protection : Wear safety glasses with side shields or goggles. If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles. Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

Skin and body protection : Work uniform or laboratory coat. Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces. Use appropriate degowning techniques to remove potentially contaminated clothing.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use. The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

# SAFETY DATA SHEET



## Enalapril / Hydrochlorothiazide Formulation



Version 7.1      Revision Date: 30.09.2023      SDS Number: 443856-00019      Date of last issue: 04.04.2023  
Date of first issue: 07.01.2016

---

Appearance : powder

Color : No data available

Odor : No data available

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling range : No data available

Flash point : Not applicable

Evaporation rate : Not applicable

Flammability (solid, gas) : May form explosive dust-air mixture during processing, handling or other means.

Flammability (liquids) : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

Relative vapor density : Not applicable

Relative density : No data available

Density : No data available

Solubility(ies)  
Water solubility : No data available

Partition coefficient: n-octanol/water : Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity  
Viscosity, kinematic : Not applicable

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

## Enalapril / Hydrochlorothiazide Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
7.1	30.09.2023	443856-00019	Date of first issue: 07.01.2016

---

Particle size : No data available

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.  
 Chemical stability : Stable under normal conditions.  
 Possibility of hazardous reactions : May form explosive dust-air mixture during processing, handling or other means.  
 Can react with strong oxidizing agents.

Conditions to avoid : Heat, flames and sparks.  
 Avoid dust formation.

Incompatible materials : Oxidizing agents  
 Hazardous decomposition products : No hazardous decomposition products are known.

**SECTION 11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure : Inhalation  
 Skin contact  
 Ingestion  
 Eye contact

**Acute toxicity**

May be harmful if swallowed.

**Product:**

Acute oral toxicity : Acute toxicity estimate: 4.231 mg/kg  
 Method: Calculation method

**Components:****Hydrochlorothiazide:**

Acute oral toxicity : LD50 (Rat): > 2.750 mg/kg  
 LD50 (Mouse): > 2.830 mg/kg

Acute toxicity (other routes of administration) : LD50 (Rat): 990 mg/kg  
 Application Route: Intravenous  
 LD50 (Mouse): 590 mg/kg  
 Application Route: Intravenous

**Starch:**

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg  
 Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg

**(S)-1-[N-[1-(Ethoxycarbonyl)-3-phenylpropyl]-L-alanyl]-L-proline maleate:**

Acute oral toxicity : LD50 (Rat): 2.000 - 3.500 mg/kg  
 LDLo (Rat): 1.775 mg/kg

## Enalapril / Hydrochlorothiazide Formulation

Version 7.1      Revision Date: 30.09.2023      SDS Number: 443856-00019      Date of last issue: 04.04.2023  
Date of first issue: 07.01.2016

---

LD50 (Mouse): 2.000 - 3.500 mg/kg

LDLo (Mouse): 1.000 mg/kg

Acute toxicity (other routes of administration) : LD50 (Rat): 850 mg/kg  
Application Route: Intravenous

LD50 (Mouse): 750 mg/kg  
Application Route: Intravenous

LD50 (Dog): > 100 mg/kg

LDLo (Dog): 200 mg/kg

**Skin corrosion/irritation**

Not classified based on available information.

**Components:****Hydrochlorothiazide:**

Species : Rabbit  
Result : No skin irritation

**(S)-1-[N-[1-(Ethoxycarbonyl)-3-phenylpropyl]-L-alanyl]-L-proline maleate:**

Species : Rabbit  
Result : No skin irritation

**Serious eye damage/eye irritation**

Not classified based on available information.

**Components:****Hydrochlorothiazide:**

Species : Rabbit  
Result : Mild eye irritation

**Starch:**

Species : Rabbit  
Result : No eye irritation

**(S)-1-[N-[1-(Ethoxycarbonyl)-3-phenylpropyl]-L-alanyl]-L-proline maleate:**

Species : Rabbit  
Result : Severe irritation

**Respiratory or skin sensitization****Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.



## Enalapril / Hydrochlorothiazide Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
7.1	30.09.2023	443856-00019	Date of first issue: 07.01.2016

---

**Components:****Starch:**

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Result	:	negative

**(S)-1-[N-[1-(Ethoxycarbonyl)-3-phenylpropyl]-L-alanyl]-L-proline maleate:**

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Result	:	Not a skin sensitizer.

**Germ cell mutagenicity**

Not classified based on available information.

**Components:****Hydrochlorothiazide:**

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES)
		Result: negative

Test Type: Chromosomal aberration
Test system: Chinese hamster ovary cells
Result: negative

Test Type: sister chromatid exchange assay
Test system: Chinese hamster ovary cells
Result: positive

Test Type: in vitro test
Test system: mouse lymphoma cells
Result: positive

Genotoxicity in vivo	:	Test Type: Chromosomal aberration
		Species: Chinese hamster
		Cell type: Bone marrow
		Result: negative

Test Type: in vivo assay
Species: Mouse
Cell type: Bone marrow
Result: negative

Germ cell mutagenicity - Assessment	:	Weight of evidence does not support classification as a germ cell mutagen.
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**Starch:**

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES)
		Result: negative

**(S)-1-[N-[1-(Ethoxycarbonyl)-3-phenylpropyl]-L-alanyl]-L-proline maleate:**

## Enalapril / Hydrochlorothiazide Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
7.1	30.09.2023	443856-00019	Date of first issue: 07.01.2016

---

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Test Type: In vitro sister chromatid exchange assay in mammalian cells  
Result: negative

Test Type: Alkaline elution assay  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Mouse  
Application Route: Ingestion  
Result: negative

Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)  
Species: Mouse  
Application Route: Ingestion  
Result: negative

**Carcinogenicity**

Not classified based on available information.

**Components:****Hydrochlorothiazide:**

Species : Mouse, female  
Application Route : Oral  
Exposure time : 2 Years  
Result : negative

Species : Mouse, male  
Application Route : Oral  
Exposure time : 2 Years  
Result : equivocal

Species : Rat, male and female  
Application Route : Oral  
Exposure time : 2 Years  
Result : negative

**(S)-1-[N-[1-(Ethoxycarbonyl)-3-phenylpropyl]-L-alanyl]-L-proline maleate:**

Species : Rat  
Application Route : Ingestion  
Exposure time : 106 weeks  
NOAEL : 90 mg/kg body weight  
Result : negative

Species : Mouse  
Application Route : Ingestion  
Exposure time : 94 weeks  
NOAEL : 90 - 180 mg/kg body weight

## Enalapril / Hydrochlorothiazide Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
7.1	30.09.2023	443856-00019	Date of first issue: 07.01.2016

---

Result : negative

**Reproductive toxicity**

May damage the unborn child.

**Components:****Hydrochlorothiazide:**

Effects on fertility : Test Type: Fertility  
Species: Rat, male and female  
Application Route: oral (feed)  
Fertility: NOAEL: 4 mg/kg body weight  
Result: Effects on fertility.

Test Type: Fertility  
Species: Mouse, male and female  
Application Route: oral (feed)  
Fertility: NOAEL: 100 mg/kg body weight  
Result: Effects on fertility.

Effects on fetal development : Test Type: Development  
Species: Mouse  
Application Route: Oral  
Developmental Toxicity: NOAEL: 3.000 mg/kg body weight  
Result: No teratogenic effects.

Test Type: Development  
Species: Rat  
Application Route: Oral  
Developmental Toxicity: NOAEL: 1.000 mg/kg body weight  
Result: No teratogenic effects.

**(S)-1-[N-[1-(Ethoxycarbonyl)-3-phenylpropyl]-L-alanyl]-L-proline maleate:**

Effects on fertility : Test Type: Fertility  
Species: Rat, male and female  
Application Route: Ingestion  
Fertility: NOAEL: 90 mg/kg body weight  
Result: No effects on fertility.

Effects on fetal development : Species: Rat  
Application Route: Ingestion  
Developmental Toxicity: NOAEL: 200 mg/kg body weight  
Result: No effects on fetal development.

Species: Rat  
Application Route: Ingestion  
Developmental Toxicity: LOAEL: 1.200 mg/kg body weight  
Result: Fetotoxicity.

Species: Rat  
Application Route: Ingestion  
Developmental Toxicity: LOAEL: 30 mg/kg body weight  
Result: Effects on postnatal development., Effects on newborn., No teratogenic effects.

## Enalapril / Hydrochlorothiazide Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
7.1	30.09.2023	443856-00019	Date of first issue: 07.01.2016

---

Species: Rabbit  
 Application Route: Ingestion  
 General Toxicity Maternal: LOAEL: 1 mg/kg body weight  
 Developmental Toxicity: LOAEL: 1 mg/kg body weight  
 Result: Fetotoxicity., Maternal toxicity observed., No teratogenic effects.

Reproductive toxicity - Assessment : Positive evidence of adverse effects on development from human epidemiological studies.

**STOT-single exposure**

Not classified based on available information.

**STOT-repeated exposure**

Causes damage to organs (Kidney, Parathyroid gland) through prolonged or repeated exposure.  
 May cause damage to organs (Cardio-vascular system) through prolonged or repeated exposure.

**Components:****Hydrochlorothiazide:**

Target Organs : Kidney, Parathyroid gland  
 Assessment : Causes damage to organs through prolonged or repeated exposure.

**(S)-1-[N-[1-(Ethoxycarbonyl)-3-phenylpropyl]-L-alanyl]-L-proline maleate:**

Target Organs : Kidney, Cardio-vascular system  
 Assessment : Causes damage to organs through prolonged or repeated exposure.

**Repeated dose toxicity****Components:****Hydrochlorothiazide:**

Species : Rat, male and female  
 LOAEL : 10 mg/kg  
 Application Route : Oral  
 Exposure time : 2 y  
 Target Organs : Kidney, Parathyroid gland

Species : Mouse, male and female  
 NOAEL : 300 - 550 mg/kg  
 Application Route : Oral  
 Exposure time : 2 y  
 Remarks : No significant adverse effects were reported

Species : Dog  
 : 50 - 200 mg/kg  
 Application Route : Oral  
 Exposure time : 9 Months  
 Target Organs : Parathyroid gland

## Enalapril / Hydrochlorothiazide Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
7.1	30.09.2023	443856-00019	Date of first issue: 07.01.2016

---

**Starch:**

Species	:	Rat
NOAEL	:	>= 2.000 mg/kg
Application Route	:	Skin contact
Exposure time	:	28 Days
Method	:	OECD Test Guideline 410

**(S)-1-[N-[1-(Ethoxycarbonyl)-3-phenylpropyl]-L-alanyl]-L-proline maleate:**

Species	:	Dog
NOAEL	:	15 mg/kg
LOAEL	:	30 mg/kg
Application Route	:	Ingestion
Exposure time	:	1 y
Target Organs	:	Kidney

Species	:	Rat
NOAEL	:	90 mg/kg
Application Route	:	Oral
Exposure time	:	1 y
Remarks	:	No significant adverse effects were reported

Species	:	Monkey
NOAEL	:	30 mg/kg
Application Route	:	Oral
Exposure time	:	1 Months
Remarks	:	No significant adverse effects were reported

**Aspiration toxicity**

Not classified based on available information.

**Components:****Hydrochlorothiazide:**

No aspiration toxicity classification

**Experience with human exposure****Components:****Hydrochlorothiazide:**

Eye contact	:	Symptoms: Eye irritation
Ingestion	:	Symptoms: Dizziness, Headache, Fatigue, Nausea, Abdominal pain, hypotension, dry mouth, electrolyte imbalance, eye pain

**(S)-1-[N-[1-(Ethoxycarbonyl)-3-phenylpropyl]-L-alanyl]-L-proline maleate:**

Ingestion	:	Target Organs: Cardio-vascular system Symptoms: hypotension, Cough, Dizziness, Headache, Blurred vision, Fatigue, Edema, Nausea, hyperkalemia, fainting, Weakness, skin rash Remarks: May cause harm to the unborn child.
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## Enalapril / Hydrochlorothiazide Formulation

Version 7.1      Revision Date: 30.09.2023      SDS Number: 443856-00019      Date of last issue: 04.04.2023  
Date of first issue: 07.01.2016

---

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:****Hydrochlorothiazide:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 500 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 500 mg/l  
aquatic invertebrates Exposure time: 48 h

**(S)-1-[N-[1-(Ethoxycarbonyl)-3-phenylpropyl]-L-alanyl]-L-proline maleate:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 1.000 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 346 mg/l  
aquatic invertebrates Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to microorganisms : EC50 (Natural microorganism): > 1.000 mg/l  
Exposure time: 3 h  
Test Type: Respiration inhibition  
Method: OECD Test Guideline 209

**Persistence and degradability****Components:****Hydrochlorothiazide:**

Stability in water : Hydrolysis: 46,2 %(96 h)

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects**

No data available

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**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Do not dispose of waste into sewer.  
Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste  
handling site for recycling or disposal.  
If not otherwise specified: Dispose of as unused product.

## Enalapril / Hydrochlorothiazide Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
7.1	30.09.2023	443856-00019	Date of first issue: 07.01.2016

---

**SECTION 14. TRANSPORT INFORMATION****International Regulations****UNRTDG**

Not regulated as a dangerous good

**IATA-DGR**

Not regulated as a dangerous good

**IMDG-Code**

Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**Special precautions for user**

Not applicable

**SECTION 15. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture**

Argentina. Carcinogenic Substances and Agents Registry. : Not applicable

Control of precursors and essential chemicals for the preparation of drugs. : Sodium hydrogencarbonate  
Calcium oxide**The ingredients of this product are reported in the following inventories:**

AICS : not determined

DSL : not determined

IECSC : not determined

**SECTION 16. OTHER INFORMATION**Revision Date : 30.09.2023  
Date format : dd.mm.yyyy**Further information**Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>**Full text of other abbreviations**

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

AR OEL : Argentina. Occupational Exposure Limits

ACGIH / TWA : 8-hour, time-weighted average

## Enalapril / Hydrochlorothiazide Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
7.1	30.09.2023	443856-00019	Date of first issue: 07.01.2016

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AR OEL / CMP : TLV (Threshold Limit Value)

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECl - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECl - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

AR / Z8