

Losartan / Hydrochlorothiazide Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 20.03.2023
6.1	26.09.2023	17073-00021	Date of first issue: 30.09.2014

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Losartan / Hydrochlorothiazide Formulation					
Manufacturer or supplier's details							
Company name of supplier Address	:	Organon & Co. Avenida 16 de Septiembre No. 301 Xaltocan - Xochimilco Mexico 16090					
Telephone Emergency telephone E-mail address	:	+52 55 57284444 1-215-631-6999 EHSSTEWARD@organon.com					
Recommended use of the chemical and restrictions on use							
Recommended use Restrictions on use	:	Pharmaceutical Not applicable					

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification Acute toxicity (Oral)	:	Category 5
Serious eye damage/eye irritation	:	Category 1
Skin sensitization	:	Category 1
Reproductive toxicity	:	Category 1B
Effects on or via lactation		
Specific target organ toxicity - repeated exposure	:	Category 1 (Kidney, Parathyroid gland)
Specific target organ toxicity - repeated exposure (Oral)	:	Category 2 (Blood, Cardio-vascular system, Stomach, Kidney)
GHS label elements		
GHS label elements Hazard pictograms	:	
	:	Danger



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		system, Stoma sure if swallow	ich, Kidney) through prolonged or repeated exp ed.
Preca	utionary Statements	P202 Do not h and understoo P260 Do not b P263 Avoid co P264 Wash sk P270 Do not e P272 Contami the workplace.	reathe dust. ntact during pregnancy and while nursing. in thoroughly after handling. at, drink or smoke when using this product. nated work clothing should not be allowed out c ptective gloves/ protective clothing/ eye protection
		Response: P302 + P352 II P305 + P351 + water for sever and easy to do CENTER or do P312 Call a PC unwell. P333 + P313 II attention.	F ON SKIN: Wash with plenty of water. P338 + P310 IF IN EYES: Rinse cautiously with al minutes. Remove contact lenses, if present Continue rinsing. Immediately call a POISON octor/ physician. DISON CENTER or doctor/ physician if you feel f skin irritation or rash occurs: Get medical advide ake off contaminated clothing and wash it befo
		Storage: P405 Store loc	ked up.
		Disposal: P501 Dispose posal plant.	of contents/ container to an approved waste dis
Conta	r hazards act with dust can cause		or drying of the skin. ssing, handling or other means.

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Cellulose	9004-34-6	>= 30 -< 50
Losartan	124750-99-8	>= 20 -< 30
Starch	9005-25-8	>= 10 -< 20
Hydrochlorothiazide	58-93-5	>= 1 -< 5

SECTION 4. FIRST AID MEASURES

media



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Ge	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 medi advice.			
lf i	inhaled	:	If inhaled, remove			
In	In case of skin contact In case of eye contact If swallowed		Get medical attention. In case of contact, immediately flush skin with soap and plen of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.			
In			In case of contact for at least 15 min	, immediately flush eyes with plenty of water nutes. ove contact lens, if worn.		
lf s			If swallowed, DO Get medical atten	NOT induce vomiting. tion.		
an	ost important symptoms ad effects, both acute and elayed	:	May cause an allergic skin reaction. Causes serious eye damage. May damage the unborn child. May cause harm to breast-fed children. Causes damage to organs through prolonged or repeated exposure. Contact with dust can cause mechanical irritation or drying			
Pr	otection of first-aiders	:	 the skin. First Aid responders should pay attention to self-protect and use the recommended personal protective equipment when the potential for exposure exists (see section 8). 			
No	Notes to physician			cally and supportively.		
SECTI	ON 5. FIRE-FIGHTING ME	ASU	IRES			
	uitable extinguishing media	:	: Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical			
Ur	nsuitable extinguishing	:	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 prod- ucts	:	Carbon oxides Chlorine compounds Nitrogen oxides (NOx) Chlorine compounds Sulfur oxides

Specific extinguishing methods Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.



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	Special for fire-	protective equipment fighters	:	Remove undamag so. Evacuate area.	o cool unopened containers. ged containers from fire area if it is safe to do e, wear self-contained breathing apparatus. ective equipment.
SEC	TION 6	. ACCIDENTAL RELE	ASI	E MEASURES	
	tive equ	al precautions, protec- uipment and emer- procedures	:		ective equipment. ing advice (see section 7) and personal ent recommendations (see section 8).
	Enviror	mental precautions	:	Retain and dispos	akage or spillage if safe to do so. e of contaminated wash water. should be advised if significant spillages
		ls and materials for ment and cleaning up	:	container for disper Avoid dispersal of with compressed Dust deposits sho surfaces, as these released into the a Local or national r disposal of this ma employed in the c determine which r Sections 13 and 1	dust in the air (i.e., clearing dust surfaces

SECTION 7. HANDLING AND STORAGE

Technical measures	 Static electricity may accumulate and ignite suspende causing an explosion. Provide adequate precautions, such as electrical grou and bonding, or inert atmospheres. 	
Local/Total ventilation	: If sufficient ventilation is unavailable, use with local exventilation.	chaust
Advice on safe handling	 Avoid contact during pregnancy and while nursing. Do not get on skin or clothing. Do not breathe dust. Do not swallow. Do not get in eyes. Wash skin thoroughly after handling. Handle in accordance with good industrial hygiene ar practice, based on the results of the workplace expos 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. 	



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Hygiene measures		Do not eat, dri Take care to p environment. If exposure to	onary measures against static discharges. nk or smoke when using this product. prevent spills, waste and minimize release to the chemical is likely during typical use, provide eye ms and safety showers close to the working		
		When using de Contaminated workplace. Wash contami The effective of engineering co appropriate de industrial hygio	o not eat, drink or smoke. work clothing should not be allowed out of the nated clothing before re-use. operation of a facility should include review of ontrols, proper personal protective equipment, egowning and decontamination procedures, ene monitoring, medical surveillance and the strative controls.		
Conditions for safe storage		Store locked u Keep tightly cl	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 w Strong oxidizir	vith the following product types: ng agents ubstances and mixtures		

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

:

:

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Cellulose	9004-34-6	VLE-PPT	10 mg/m³	NOM-010- STPS-2014
		TWA	10 mg/m ³	ACGIH
Losartan	124750-99-8	TWA	100 µg/m3 (OEB 2)	Internal
Starch	9005-25-8	VLE-PPT	10 mg/m³	NOM-010- STPS-2014
		TWA	10 mg/m ³	ACGIH
Hydrochlorothiazide	58-93-5	TWA	100 µg/m3 (OEB 2)	Internal

Engineering measures

Use feasible engineering controls to minimize exposure to compound. All engineering controls should be implemented by facility design and operated in accordance with GMP principles to

protect products, workers, and the environment.

Personal protective equipment

Respiratory protection

If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the



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Filter type Hand protection Material		:	recommended gu Particulates type Chemical-resistar	idelines, use respiratory protection. nt gloves			
Eye protection Skin and body 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. Work uniform or laboratory coat.			
SEC		. PHYSICAL AND CHI	EMIC		-		
	Appear	ance	:	powder			
	Color		:	yellow			
	Odor		:	odorless			
	Odor T	hreshold	:	No data available	9		
	рН		:	No data available			
	Melting	point/freezing point	:	No data available	9		
	Initial boiling point and boiling range		:	No data available	9		
	Flash p	oint	:	Not applicable			
	Evapor	ation rate	:	Not applicable			
	Flammability (solid, gas)		:	May form explosi handling or other	ive dust-air mixture during processing, means.		
	Flamma	ability (liquids)	:	No data available	9		
		explosion limit / Upper bility limit	:	No data available	9		
	Lower explosion limit / Lower flammability limit		:	No data available	9		
	Vapor p	pressure	:	Not applicable			
	Relativ	e vapor density	:	Not applicable			
	Relative	e density	:	No data available	9		
	Density	,	:	No data available	9		
	Solubili Wat	ty(ies) er solubility	:	No data available	2		



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o A	Partition coefficient: n- ctanol/water sutoignition temperature Decomposition temperature	Not applicablNo data availNo data avail	able
V	iscosity Viscosity, kinematic	: Not applicabl	e
E	xplosive properties	: Not explosive	
	Dxidizing properties Particle size	: The substand : No data avail	ce or mixture is not classified as oxidizing. able

SECTION 10. STABILITY AND REACTIVITY

Reactivity Chemical stability Possibility of hazardous reac- tions	:	Not classified as a reactivity hazard. Stable under normal conditions. 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 Hazardous decomposition products	:	Oxidizing agents No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes Inhalation Skin contact Ingestion Eye contact	of	exposure
Acute toxicity		
May be harmful if swallowed.		
Product:		
Acute oral toxicity	:	Acute toxicity estimate: 2,201 mg/kg Method: Calculation method
Components:		
Cellulose:		
Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 5.8 mg/l



Exposure time: 4 h Test atmosphere: dust/mist Acute dermal toxicity i Losartan: Acute oral toxicity i Acute oral toxicity i DLo (Rat): 200 mg/kg LDLo (Rat): 200 mg/kg Barch: Acute oral toxicity i Acute oral toxicity i DLo (Rat): 200 mg/kg Acute oral toxicity i D50 (Rat): > 2,000 mg/kg Acute oral toxicity i Acute oral toxicity i D50 (Mouse): > 2,830 mg/kg Acute toxicity (other routes of application Route: Intravenous LD50 (Mouse): 590 mg/kg Application Route: Intravenous Starch: Besult Description Result i Not classified based on available information. Components: Besult Starch: Result i Starch: Components:	rsion	Revision Date: 26.09.2023		S Number: 073-00021	Date of last issue: 20.03.2023 Date of first issue: 30.09.2014
Losartan:K. LD50 (Mouse): 1,257 - 1,590 mg/kg LDLo (Rat): 200 mg/kg LDLo (Rat): 200 mg/kg LDLo (Mouse): 400 mg/kgStarch:K. LD50 (Mouse): 400 mg/kgAcute oral toxicityK. LD50 (Rat): > 5,000 mg/kgAcute dermal toxicityK. LD50 (Rat): > 2,000 mg/kgHydrochlorothiazide:K. LD50 (Rat): > 2,750 mg/kgAcute toxicity (other routes of administration)K. LD50 (Rat): > 2,750 mg/kgAcute toxicity (other routes of administration)LD50 (Rat): > 2,750 mg/kg Application Route: IntravenousSkin corrosion/irritationLD50 (Rat): > 2,750 mg/kg 					
Acute oral toxicity:LD50 (Mouse): 1,257 - 1,590 mg/kg LDLo (Rat): 200 mg/kg LDLo (Mouse): 400 mg/kgStarch: Acute oral toxicity:LD50 (Rat): > 5,000 mg/kgAcute oral toxicity:LD50 (Rat): > 5,000 mg/kgAcute dermal toxicity:LD50 (Rat): > 2,000 mg/kgHydrochlorothiazide: Acute oral toxicity:LD50 (Rat): > 2,750 mg/kgAcute oral toxicity:LD50 (Rat): > 2,750 mg/kgAcute oral toxicity:LD50 (Rat): > 2,830 mg/kgAcute toxicity (other routes of : Application Route: Intravenous LD50 (Mouse): 590 mg/kg Application Route: IntravenousSkin corrosion/irritation Not classified based on available information.Components: Dspecies:Mydrochlorothiazide: Species:Species:Result:Species:	Acute	dermal toxicity	:	LD50 (Rabbit): > 2	2,000 mg/kg
LDLo (Rat): 200 mg/kg LDLo (Mouse): 400 mg/kg Starch: Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg Hydrochlorothiazide: Acute oral toxicity : LD50 (Rat): > 2,750 mg/kg LD50 (Mouse): > 2,830 mg/kg Acute toxicity (other routes of LD50 (Rat): 90 mg/kg Acute toxicity (other routes of LD50 (Rat): 900 mg/kg Acute toxicity (other routes of LD50 (Rat): 900 mg/kg Application Route: Intravenous LD50 (Mouse): 590 mg/kg Application Route: Intravenous Application Route: Intravenous LD50 (Mouse): 590 mg/kg Application Route: Intravenous Application Route: Intravenous LD50 (Mouse): 590 mg/kg Application Rout	Losar	rtan:			
LDLo (Mouse): 400 mg/kg Starch: Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg Hydrochlorothiazide: .	Acute	oral toxicity	:	LD50 (Mouse): 1,2	257 - 1,590 mg/kg
Starch: Acute oral toxicity:LD50 (Rat): > 5,000 mg/kgAcute dermal toxicity:LD50 (Rabbit): > 2,000 mg/kgHydrochlorothiazide: Acute oral toxicity:LD50 (Rat): > 2,750 mg/kgAcute oral toxicity:LD50 (Rat): > 2,750 mg/kgAcute toxicity (other routes of administration):LD50 (Rat): 990 mg/kg Application Route: IntravenousLD50 (Mouse): 590 mg/kg Application Route: Intravenous:LD50 (Mouse): 590 mg/kg Application Route: IntravenousSkin corrosion/irritation:.Not classified based on available informationComponents::.Losartan: Species:Rabbit : No skin irritationSpecies:Rabbit : Routh irritationSerious eye damage/eye irritation.Components:.Losartan: Causes serious eye damageSpecies:Result:Serious eye damage.Components:Losartan: SpeciesSpecies:ResultSerious eye damage.Components:Losartan: SpeciesSpecies:Robit				LDLo (Rat): 200 n	ng/kg
Acute oral toxicity:LD50 (Rat): > 5,000 mg/kgAcute dermal toxicity:LD50 (Rabbit): > 2,000 mg/kgHydrochlorothiazide: Acute oral toxicity:LD50 (Rat): > 2,750 mg/kgAcute oral toxicity:LD50 (Rat): > 2,830 mg/kgAcute toxicity (other routes of administration):LD50 (Rat): > 2,830 mg/kgAcute toxicity (other routes of administration)::LD50 (Mouse): > 2,830 mg/kg Application Route: Intravenous:Skin corrosion/irritation::Not classified based on available information.:Components::Losartan: Result::Species:Rabbit : No skin irritationHydrochlorothiazide: Result:No skin irritationSrious eye damage/eye irritation-::Components:::Losartan: Causes serious eye damage.:Serious eye damage.::Components::Losartan: Causes serious eye damage.:Serious eye damage.:Serious eye damage.:Components::Losartan: Species:Species:Robit:Species:Robit				LDLo (Mouse): 40	0 mg/kg
Acute dermal toxicity:LD50 (Rabbit): > 2,000 mg/kgHydrochlorothiazide: Acute oral toxicity:LD50 (Rat): > 2,750 mg/kgAcute oral toxicity:LD50 (Rat): > 2,830 mg/kgAcute toxicity (other routes of administration):LD50 (Rat): 990 mg/kg Application Route: IntravenousAcute toxicity (other routes of administration)::D50 (Mouse): 590 mg/kg Application Route: IntravenousSkin corrosion/irritation:Not classified based on available information.Components: Result:Species:Result:Mild skin irritationHydrochlorothiazide: Result:Species:Result:Serious eye damage/eye irritation:Components:Components:Components:Serious eye damage.Components:Components:Components:Serious eye damage.Components:	Starc	h:			
Hydrochlorothiazide:Acute oral toxicity:LD50 (Rat): > 2,750 mg/kgLD50 (Mouse): > 2,830 mg/kgAcute toxicity (other routes of administration):LD50 (Rat): 990 mg/kg Application Route: IntravenousLD50 (Mouse): 590 mg/kg Application Route: Intravenous:LD50 (Mouse): 590 mg/kg Application Route: IntravenousSkin corrosion/irritation:.Not classified based on available information.:.Components::.Losartan::.Species:RabbitResult:Mild skin irritationHydrochlorothiazide::.Species:RabbitResult:No skin irritationSerious eye damage/eye irritation.Causes serious eye damageComponents:.Losartan:.Species:Result:Serious eye damageComponents:.Losartan:.Species:Result:Serious eye damageSpecies:Species:Result:Species:Robit	Acute	oral toxicity	:	LD50 (Rat): > 5,00	00 mg/kg
Acute oral toxicity:LD50 (Rat): > 2,750 mg/kgAcute toxicity (other routes of administration):LD50 (Mouse): > 2,830 mg/kgAcute toxicity (other routes of administration):LD50 (Rat): 990 mg/kg Application Route: IntravenousSkin corrosion/irritation.LD50 (Mouse): 590 mg/kg Application Route: IntravenousSkin corrosion/irritationNot classified based on available informationComponents:.Losartan: ResultSpecies:Rabbit ResultResult:.Mild skin irritation.Serious eye damage/eye irritation.Causes serious eye damageComponents:.Losartan: Causes serious eye damageSerious eye damageComponents:.Losartan: Causes serious eye damageSpecies:Rabbit Causes serious eye damage.Components:.Losartan: Causes serious eye damage.Species:RabbitSpecies:RabbitLosartan: SpeciesSpecies:RabbitLosartan: SpeciesLosartan: SpeciesSpecies:Rabbit:::::::::::::: <td:< td=""><td>Acute</td><td>dermal toxicity</td><td>:</td><td>LD50 (Rabbit): > 2</td><td>2,000 mg/kg</td></td:<>	Acute	dermal toxicity	:	LD50 (Rabbit): > 2	2,000 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 Skin corrosion/irritation Not classified based on available information. Components: Losartan: Species ? Result ? Mild skin irritation Hydrochlorothiazide: Species ? Serious eye damage/eye irritation Causes serious eye damage. Components: Losartan: Species ? Result ? No skin irritation Hydrochlorothiazide: Species ? Result ? No skin irritation Serious eye damage/eye irritation Causes serious eye damage. Components: Losartan: Species ? Rabbit Species ? Robit Species ? Robit <t< td=""><td>Hydro</td><td>ochlorothiazide:</td><td></td><td></td><td></td></t<>	Hydro	ochlorothiazide:			
Acute toxicity (other routes of administration) LD50 (Rat): 990 mg/kg Application Route: Intravenous LD50 (Mouse): 590 mg/kg Application Route: Intravenous Skin corrosion/irritation Not classified based on available information. Components: Losartan: Species : Rabbit Result : Mild skin irritation Hydrochlorothiazide: Species : Rabbit Result : No skin irritation Serious eye damage/eye irritation Causes serious eye damage. Components: Losartan: Species : Rabbit Result : No skin irritation Strious eye damage/eye irritation Causes serious eye damage. Losartan: Species : Rabbit	Acute	oral toxicity	:	LD50 (Rat): > 2,7	50 mg/kg
administration) Application Route: Intravenous LD50 (Mouse): 590 mg/kg Application Route: Intravenous Skin corrosion/irritation Not classified based on available information. Components: Losartan: Species : Rabbit Result : Mild skin irritation Hydrochlorothiazide: Species : Rabbit Result : No skin irritation Serious eye damage/eye irritation Causes serious eye damage. Losartan: Species : Rabbit Result : Result				LD50 (Mouse): > 2	2,830 mg/kg
Application Route: Intravenous Skin corrosion/irritation Not classified based on available information. Components: Losartan: Species : Result : Mild skin irritation Hydrochlorothiazide: Species : Result : No skin irritation Species : Result : No skin irritation Species : Result : No skin irritation Species serious eye damage/eye irritation Causes serious eye damage. Components: Losartan: Species : Rabbit			:		
Not classified based on available information. Components: Losartan: Species : Result : Hydrochlorothiazide: Species : Result : Species : Result : Not skin irritation Species : Result : Species : Result : Not skin irritation Serious eye damage/eye irritation Causes serious eye damage. Components: Losartan: Species : Rabbit					
Components: Losartan: Species : Result : Hydrochlorothiazide: Species : Species : Result : No skin irritation Serious eye damage/eye irritation Causes serious eye damage. Components: Losartan: Species : Rabbit			ble	information	
Species : Rabbit Result : Mild skin irritation Hydrochlorothiazide: Species : Rabbit Result : Rabbit Result : No skin irritation Serious eye damage/eye irritation Causes serious eye damage					
Result : Mild skin irritation Hydrochlorothiazide: . Species : Rabbit Result : No skin irritation Serious eye damage/eye irritation . Causes serious eye damage Components: . Losartan: . Species : Rabbit	Losar	rtan:			
Species : Rabbit Result : No skin irritation Serious eye damage/eye irritation Causes serious eye damage. Components: Losartan: Species : Rabbit			:		
Result : No skin irritation Serious eye damage/eye irritation Causes serious eye damage. Components: Losartan: Species : Rabbit	Hydro	ochlorothiazide:			
Causes serious eye damage. Components: Losartan: Species : Rabbit			:		
Losartan: Species : Rabbit			tati	on	
Species : Rabbit					
	Losar	rtan:			
			:		



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	Starch				
	Specie Result		:	Rabbit No eye irritation	
	Hydro	chlorothiazide:			
	Specie Result		:	Rabbit Mild eye irritation	
	Respir	atory or skin sensitiz	atio	'n	
		ensitization luse an allergic skin rea	actio	on.	
	-	atory sensitization ssified based on availa	ble	information.	
	Compo	onents:			
	Losart Test Ty Routes Specie Assess Result	vpe s of exposure s	:	Maximization Tes Skin contact Guinea pig Probability or evic positive	t lence of skin sensitization in humans
	Starch Test Ty Routes Specie Result	/pe of exposure	:	Maximization Tes Skin contact Guinea pig negative	t
		cell mutagenicity ssified based on availa	blo	information	
		onents:	DIE	iniomation.	
	Cellulo				
		oxicity in vitro	:	Test Type: Bacter Result: negative	ial reverse mutation assay (AMES)
				Test Type: In vitro Result: negative	o mammalian cell gene mutation test
	Genoto	oxicity in vivo	:	Test Type: Mamm cytogenetic assay Species: Mouse Application Route Result: negative	
	Losart	an:			
		oxicity in vitro	:	Test Type: in vitro Result: negative	o test



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		Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster ovary cells Result: negative Test Type: Alkaline elution assay Result: negative Test Type: Chromosomal aberration Result: negative
Gen	otoxicity in vivo	: Test Type: Chromosomal aberration Result: negative
Star Gene	ch: otoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Result: negative
-	rochlorothiazide: otoxicity 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
Gen	otoxicity 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
	n cell mutagenicity - essment	: Weight of evidence does not support classification as a germ cell mutagen.

Carcinogenicity

Not classified based on available information.



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<u>Comp</u>	onents:			
Cellul	ose:			
Specie			Rat	
•	ation Route	:	Ingestion	
	ure time	÷	72 weeks	
Result		:	negative	
Losar	tan:			
Specie	es	:	Mouse	
	ation Route	:	Oral	
	ure time	:	92 weeks	
Dose		:	200 mg/kg body v	veight
Result			negative	
Specie		:	Rat	
	ation Route	:	Oral	
	ure time	:	105 weeks	
Dose		÷	270 mg/kg body v	veignt
Result		·	negative	
-	chlorothiazide:			
Specie		:	Mouse, female	
	ation Route	:	Oral	
	ure time	:	2 Years	
Result		:	negative	
Specie	es	:	Mouse, male	
	ation Route	:	Oral	
	ure time	:	2 Years	
Result		:	equivocal	
Specie		:	Rat, male and fer	nale
	ation Route	:	Oral	
	ure time	:	2 Years	
Result		•	negative	
Repro	ductive toxicity			
	amage the unborn child ause harm to breast-fed		ldren.	
	onents:			
Cellul	ose:			
Effects	s on fertility	:	Test Type: One-g	eneration reproduction toxicity study
	-		Species: Rat	
			Application Route	: Ingestion
			Result: negative	
Effects	s on fetal development	:		y/early embryonic development
			Species: Rat	
			Application Route	: Ingestion
			Result: negative	



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	Losarta Effects	an: on fertility	:	Result: female rep	ale : Oral 200 mg/kg body weight
	Effects	on fetal development	:	Developmental To Result: Embryoto	: Oral Maternal: NOAEL: 10 mg/kg body weight oxicity: NOAEL F1: 20 mg/kg body weight kic effects and adverse effects on the sected only at high maternally toxic doses,
	Reprod sessme	luctive toxicity - As- ent	:	Clear evidence of animal experimen	adverse effects on development, based on ts.
				Studies indicating period	a hazard to babies during the lactation
	Hydrod	chlorothiazide:			
	Effects	on fertility	:	Test Type: Fertility Species: Rat, mai Application Route Fertility: NOAEL: 4 Result: Effects on	e and female : oral (feed) 4 mg/kg body weight
				Test Type: Fertility Species: Mouse, i Application Route Fertility: NOAEL: Result: Effects on	male and female : oral (feed) 100 mg/kg body weight
	Effects	on fetal development	:	Test Type: Develor Species: Mouse Application Route Developmental To Result: No teratoo	: Oral pxicity: NOAEL: 3,000 mg/kg body weight
				Test Type: Develo Species: Rat Application Route Developmental To	



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		Result: No t	eratogenic effects.
	T-single exposure lassified based on av	ailable information.	
STO	T-repeated exposure	•	
May o		ans (Blood, Cardio-	d gland) through prolonged or repeated exposure vascular system, Stomach, Kidney) through pro-
Com	ponents:		
Targe	r tan: es of exposure et Organs ssment		io-vascular system, Stomach, Kidney damage to organs through prolonged or repeated
Hydr	ochlorothiazide:		
	et Organs ssment		athyroid gland nage to organs through prolonged or repeated
-	eated dose toxicity ponents:		
Spec NOAI Applie		: Rat : >= 9,000 m : Ingestion : 90 Days	g/kg
Losa	rtan:		
Spec LOAE Applie Expo Numb	ies	: Rat : 15 mg/kg : Oral : 309 d : daily : Blood, Kidn	ey, Cardio-vascular system, Stomach
Expo		: Dog : 5 mg/kg : Oral : 1 Months : Salivation, V	/omiting

Species	: Dog
LOAEL	: 25 mg/kg
Application Route	: Oral
Exposure time	: 53 Weeks
Number of exposures	: daily
Symptoms	: Salivation, Vomiting



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S N A E	tarch: pecies IOAEL pplication Route xposure time lethod		Rat >= 2,000 mg/kg Skin contact 28 Days OECD Test Gu		
S L A E	ydrochlorothiazi pecies OAEL pplication Route xposure time arget Organs	de:	Rat, male and 10 mg/kg Oral 2 y Kidney, Parath		
N A E	pecies IOAEL pplication Route xposure time temarks		Mouse, male a 300 - 550 mg/k Oral 2 y No significant a		
A E	pecies pplication Route xposure time arget Organs		Dog 50 - 200 mg/kg Oral 9 Months Parathyroid gla		
	spiration toxicity		information.		
L	components: osartan: lo aspiration toxici	ty classificatior	ì		
	l ydrochlorothiazi lo aspiration toxici		ı		
	xperience with h	uman exposu	re		
	osartan: ye contact	:	Symptoms: Ey	e irritation	

Lye contact	•	Symptoms. Lye initation
Ingestion	:	Symptoms: hypotension, tachycardia
Hydrochlorothiazide:		
Eye contact	:	Symptoms: Eye irritation
Ingestion	:	Symptoms: Dizziness, Headache, Fatigue, Nausea, Ab- dominal pain, hypotension, dry mouth, electrolyte imbalance, eye pain



rsion	Revision Date: 26.09.2023	SDS Number: 17073-00021		Date of last issue: 20.03.2023 Date of first issue: 30.09.2014
CTION	12. ECOLOGICAL INFO	JKN	IATION	
Ecoto	oxicity			
<u>Comp</u>	oonents:			
Cellul	ose:			
Toxici	ty to fish	:	Exposure time: 48	pes (Japanese medaka)): > 100 mg/l s h on data from similar materials
Losar	tan:			
Toxici	ty to fish	:	LC50 (Oncorhync Exposure time: 96 Method: FDA 4.11	
	ty to daphnia and other ic invertebrates	:	EC50 (Daphnia m Exposure time: 48 Method: OECD Te	
Toxici plants	ty to algae/aquatic	:	NOEC (Microcysti Exposure time: 10 Method: FDA 4.01	
			NOEC (Selenastru Exposure time: 10 Method: FDA 4.01	
Toxici icity)	ty to fish (Chronic tox-	:	NOEC (Pimephale Exposure time: 32 Method: OECD Te	
	ty to daphnia and other ic invertebrates (Chron- city)	:	NOEC (Daphnia n Exposure time: 21 Method: OECD Te	
Hydro	ochlorothiazide:			
-	ty to fish	:	LC50 (Pimephales Exposure time: 96	s promelas (fathead minnow)): > 500 mg/l s h
	ty to daphnia and other ic invertebrates	:	EC50 (Daphnia m Exposure time: 48	agna (Water flea)): > 500 mg/l s h
Persis	stence and degradabili	ity		
<u>Comp</u>	oonents:			
Cellul	ose:			
	gradability	:	Result: Readily bio	odegradable.
Losar Stabili	tan: ity in water		Hydrolysis: < 10 %	6(5 d)
		•		



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-	chlorothiazide: y in water	: Hydrolysis: 46.2 9	%(96 h)	
Bioaco	cumulative potential			
Comp	onents:			
Losart	an:			
Partitic octano	on coefficient: n- I/water	: log Pow: 1.2		
Mobili	ty in soil			
No dat	a available			
Other	adverse effects			
No dat	a available			
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.

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.

Domestic regulation

NOM-002-SCT Not regulated as a dangerous good

Special precautions for user

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture



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Federal Law for the control of chemical precursors, : Not applicable essential chemical products and machinery for producing capsules, tablets and pills.				
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 Date format	:	26.09.2023 dd.mm.yyyy	
Full text of other abbreviations			
ACGIH NOM-010-STPS-2014	:	USA. ACGIH Threshold Limit Values (TLV) Mexico. Norm NOM-010-STPS-2014 on Chemicals Polluting the Work Environment - Identification, Assessment and Con- trol - Appendix 1 Occupational Exposure Limits	
		8-hour, time-weighted average Time weighted average 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; KECI - 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; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recom-



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mendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Sources of key data used to	:	Internal technical data, data from raw material SDSs, OECD
compile the Material Safety		eChem Portal search results and European Chemicals Agen-
Data Sheet		cy, http://echa.europa.eu/

The information is considered as correct, but not exhaustive, and will be used only as a guide, which is based in the current knowledge of the substance or mixture, and is applicable to proper safety precautions for the product.

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