

according to the Globally Harmonized System

Chlorhexidine Formulation

1.10 30.09.2023 5322110-00011 Date of first issue: 25.11.2019	Version 1.10	Revision Date: 30.09.2023	SDS Number: 5322110-00011	Date of last issue: 04.04.2023 Date of first issue: 25.11.2019
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Chlorhexidine Formulation
Manufacturer or supplier's d e Company	eta :	ils MSD
Address	:	Briahnager - Off Pune Nagar Road Wagholi - Pune - India 412 207
Telephone	:	+1-908-740-4000
Emergency telephone number	:	+1-908-423-6000
E-mail address	:	EHSDATASTEWARD@msd.com
Recommended use of the ch	em	ical and restrictions on use
Recommended use Restrictions on use	:	Veterinary product Not applicable

2. HAZARDS IDENTIFICATION

Manufacture, Storage and Import of Hazardous Chemicals Rules 1989

Classification

Not classified as hazardous according to criteria laid down in Part I of Schedule-1.

GHS Classification Short-term (acute) aquatic hazard	: Category 2
Long-term (chronic) aquatic hazard	: Category 2
GHS label elements	
Hazard pictograms	
Signal word	: None
Hazard statements	: H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	 Prevention: P273 Avoid release to the environment. Response:

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P391 Collect spillage.

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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

••••••		
Chemical name	CAS-No.	Concentration (%
		w/w)
Ethanol#	64-17-5	>= 5 - < 10
Chlorhexidine	55-56-1	>= 5 - < 10
Linalyl acetate	115-95-7	>= 0.1 - < 0.25
#: Voluntarily_disclosed substance		

#: Voluntarily-disclosed substance

4. FIRST AID MEASURES

General advice	:	In the case of accident or if you feel unwell, seek medical ad- vice immediately. When symptoms persist or in all cases of doubt seek medical
		advice.
If inhaled	:	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
In case of skin contact	:	In case of contact, immediately flush skin with soap and plenty of water.
		Get medical attention if symptoms occur.
In case of eye contact	:	If in eyes, rinse well with water.
		Get medical attention if irritation develops and persists.
If swallowed	:	If swallowed, DO NOT induce vomiting.
		Get medical attention if symptoms occur.
		Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and	:	Contact with dust can cause mechanical irritation or drying of the skin.
delayed		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.

5. FIREFIGHTING MEASURES

Suitable extinguishing media :

Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical



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Unsuitable extinguishing media		:	None known.			
Specific hazards during fire- fighting		:	Exposure to com	Exposure to combustion products may be a hazard to health.		
Hazardous combustion prod- ucts		:	Carbon oxides			
Specific extinguishing meth- ods		:	Use extinguishing measures that are appropriate to local cir- cumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to c so. Evacuate area.			
	Special protective equipment for firefighters		In the event of fire	e, wear self-contained breathing apparatus. tective equipment.		
6. ACCIDE	NTAL RELEASE MEA	SUI	RES			
tive eo	nal precautions, protec- quipment and emer- procedures	· :	Follow safe hand	tective equipment. ing advice (see section 7) and personal pro- t recommendations (see section 8).		

Environmental precautior	าร :	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning	·· ·	 Soak up with inert absorbent material. 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. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. 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.

7. HANDLING AND STORAGE

caus Prov	c electricity may accumulate and ignite suspended dust ing an explosion. ide adequate precautions, such as electrical grounding bonding, or inert atmospheres.
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	Local/Total ventilation Advice on safe handling		:	Handle in accorda practice, based of sessment Minimize dust ger Keep container cl Keep away from h Take precautiona Take care to prev environment.	ist or vapours. In eyes. For repeated contact with skin. Ance with good industrial hygiene and safety in the results of the workplace exposure as- meration and accumulation. The set and sources of ignition. Try measures against static discharges. Ent spills, waste and minimize release to the
		ions for safe storage als to avoid	 Keep in properly labelled containers. Store in accordance with the particular national regula Do not store with the following product types: Strong oxidizing agents 		

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

components with workplace control parameters							
Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis			
Ethanol	64-17-5	TWA	1,000 ppm 1,900 mg/m3	IN OEL			
		STEL	1,000 ppm	ACGIH			
Chlorhexidine	55-56-1	TWA	40 µg/m3 (OEB 3)	Internal			
	Further informa	ation: RSEN					
		Wipe limit	400 µg/100 cm2	Internal			

Components with workplace control parameters

Engineering measures :	 Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less quick connections). 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 equipmer	nt

Respiratory protection Filter type Hand protection		If adequate local exhaust ventilation is not available or expo- sure assessment demonstrates exposures outside the rec- ommended guidelines, use respiratory protection. Combined particulates and organic vapour type
Material	:	Chemical-resistant gloves

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Remarks Eye protection		 Consider double gloving. 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 Additional body of being performed suits) to avoid ex	garments should be used based upon the task (e.g., sleevelets, apron, gauntlets, disposable posed skin surfaces. degowning techniques to remove potentially				
Hygiene measures		: If exposure to ch flushing systems place. When using do r Wash contamina The effective ope engineering cont appropriate dego	emical is likely during typical use, provide eye and safety showers close to the working ot eat, drink or smoke. ted clothing before re-use. eration of a facility should include review of rols, proper personal protective equipment, wining and decontamination procedures, e monitoring, medical surveillance and the				

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	light pink
Odour	:	No data available
Odour Threshold	:	No data available
рН	:	5.0 - 6.5
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	May form explosive dust-air mixture during processing, han- dling or other means.
Flammability (liquids)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower	:	No data available



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flamma	ability limit			
Vapou	r pressure	:	No data available)
Relativ	ve vapour density	:	No data available	9
Relativ	ve density	:	No data available)
Densit	У	:	No data available)
	lity(ies) ter solubility	:	No data available	9
	on coefficient: n- ol/water	:	Not applicable	
	gnition temperature	:	No data available	
Decom	nposition temperature	:	No data available	
Viscos Vis	ity cosity, kinematic	:	No data available	9
Explos	sive properties	:	Not explosive	
	ing properties	:		r mixture is not classified as oxidizing.
	ular weight	:	No data available	
Particle	e size	:	Not applicable	

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, han- dling 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.

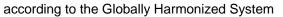
11. TOXICOLOGICAL INFORMATION

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



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Acute	e toxicity			
	assified based on availa	ble	information.	
<u>Produ</u>	uct:			
Acute	oral toxicity	:	Acute toxicity est Method: Calculat	imate: > 5,000 mg/kg ion method
<u>Comp</u>	oonents:			
Ethan	nol:			
Acute	oral toxicity	:	LD50 (Rat): > 5,0 Method: OECD T	000 mg/kg ēst Guideline 401
Acute	inhalation toxicity	:	LC50 (Rat): 124. Exposure time: 4 Test atmosphere	h
Chlor	hexidine:			
Acute	oral toxicity	:	LD50 Oral (Mous	e): 1,260 mg/kg
			LD50 Oral (Rabb	it): 1,100 mg/kg
			LD50 Oral (Rat):	2,000 mg/kg
	toxicity (other routes of histration)	:	LD50 (Rat): 21 m Application Route	
Linal	yl acetate:			
-	oral toxicity	:	LD50 (Rat): > 9,0	000 mg/kg
Acute	dermal toxicity	:	LD50 (Rabbit): >	5,000 mg/kg
Skin d	corrosion/irritation			
Not cl	assified based on availa	ble	information.	
<u>Comp</u>	oonents:			
Ethan	nol:			
Speci Metho		:	Rabbit OECD Test Guid	alina 101
Resul		:	No skin irritation	enne 404
Linaly	yl acetate:			
Speci		:	Rabbit	
Metho Resul		:	OECD Test Guid Skin irritation	eline 404
Serio	us eye damage/eye irri	tati	on	





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_			
<u>Comp</u>	oonents:		
Ethan	ol:		
Speci		: Rabbit	
Metho			Guideline 405
Resul	t	: Irritation to e	yes, reversing within 21 days
Chlor	hexidine:		
Speci	es	: Rabbit	
Resul		: Mild eye irrita	ation
Linal	/l acetate:		
Speci		: Rabbit	
Metho			Guideline 405
Resul			yes, reversing within 21 days
Rema	irks		ta from similar materials
Respi	iratory or skin sen	sitisation	
Skin s	sensitisation		
	assified based on a	available information.	
NOT CI			
Respi	iratory sensitisatio	on	
Resp i Not cl	iratory sensitisation assified based on a		
Respi Not cl <u>Comp</u>	iratory sensitisation assified based on a ponents:	on	
Respi Not cl <u>Comp</u> Ethan	iratory sensitisatic assified based on a ponents: nol:	on available information.	
Respi Not cl Comp Ethan Test T	iratory sensitisation assified based on a ponents: nol: Type	on available information. : Local lymph	node assay (LLNA)
Respi Not cl Comp Ethan Test T Expos	iratory sensitisation assified based on a ponents: nol: Type sure routes	on available information. : Local lymph : Skin contact	node assay (LLNA)
Respi Not cl Comp Ethan Test T Expos Specie	iratory sensitisatic assified based on a ponents: nol: Type sure routes es	on available information. : Local lymph : Skin contact : Mouse	node assay (LLNA)
Respi Not cl Comp Ethan Test T Expos	iratory sensitisatic assified based on a ponents: nol: Type sure routes es	on available information. : Local lymph : Skin contact	node assay (LLNA)
Respi Not cl Comp Ethan Test T Expos Speci Resul Linaly	iratory sensitisation assified based on a ponents: nol: Fype sure routes es t yl acetate:	available information. : Local lymph : Skin contact : Mouse : negative	
Respi Not cl Comp Ethan Test T Expos Speci- Resul Linaly Test T	iratory sensitisation assified based on a ponents: nol: Type sure routes es t yl acetate: Type	available information. : Local lymph : Skin contact : Mouse : negative : Local lymph	node assay (LLNA)
Respi Not cl Comp Ethan Test T Expos Specia Resul Linaly Test T Expos	iratory sensitisation assified based on a ponents: nol: Type sure routes es t /I acetate: Type sure routes	available information. : Local lymph : Skin contact : Mouse : negative : Local lymph : Skin contact	node assay (LLNA)
Respi Not cl Comp Ethan Test T Expos Specia Resul Linaly Test T Expos Specia	iratory sensitisation assified based on a ponents: nol: Type sure routes es t // acetate: Type sure routes es	available information. : Local lymph : Skin contact : Mouse : negative : Local lymph : Skin contact : Mouse	node assay (LLNA)
Respi Not cl Comp Ethan Test 1 Expos Specia Resul Linaly Test 1 Expos Specia Metho	iratory sensitisation assified based on a ponents: nol: Type sure routes es t /I acetate: Type sure routes es oure routes es oure routes	available information. : Local lymph : Skin contact : Mouse : negative : Local lymph : Skin contact : Mouse : OECD Test (node assay (LLNA)
Respi Not cl Comp Ethan Test T Expos Specia Resul Linaly Test T Expos Specia Methor Resul	iratory sensitisation assified based on a ponents: nol: Type sure routes es t /I acetate: Type sure routes es bod t	available information. : Local lymph : Skin contact : Mouse : negative : Local lymph : Skin contact : Mouse : OECD Test of : positive	node assay (LLNA) Guideline 429
Respi Not cl Comp Ethan Test T Expos Specia Resul Linaly Test T Expos Specia Methor Resul	iratory sensitisation assified based on a ponents: nol: Type sure routes es t /I acetate: Type sure routes es oure routes es oure routes	available information. : Local lymph : Skin contact : Mouse : negative : Local lymph : Skin contact : Mouse : OECD Test of : positive	node assay (LLNA) Guideline 429 r evidence of low to moderate skin sensitisati
Respi Not cl Comp Ethan Test T Expos Specia Resul Linaly Test T Expos Specia Metho Resul Asses	iratory sensitisation assified based on a ponents: nol: Type sure routes es t /I acetate: Type sure routes es bod t ssment	available information. : Local lymph : Skin contact : Mouse : negative : Local lymph : Skin contact : Mouse : OECD Test (: positive : Probability of rate in huma	node assay (LLNA) Guideline 429 r evidence of low to moderate skin sensitisati
Respi Not cl Comp Ethan Test T Expos Specia Resul Linaly Test T Expos Specia Metho Resul Asses Germ	iratory sensitisation assified based on a ponents: nol: Type sure routes es t yl acetate: Type sure routes es od t ssment cell mutagenicity	available information. : Local lymph : Skin contact : Mouse : negative : Local lymph : Skin contact : Mouse : OECD Test (: positive : Probability of rate in huma	node assay (LLNA) Guideline 429 r evidence of low to moderate skin sensitisati
Respi Not cl Comp Ethan Test T Expos Specia Resul Linaly Test T Expos Specia Metho Resul Asses Germ Not cl	iratory sensitisation assified based on a ponents: nol: Type sure routes es t yl acetate: Type sure routes es od t ssment cell mutagenicity	available information. : Local lymph : Skin contact : Mouse : negative : Local lymph : Skin contact : Mouse : OECD Test of : positive : Probability of rate in huma	node assay (LLNA) Guideline 429 r evidence of low to moderate skin sensitisati
Respi Not cl Comp Ethan Test T Expos Specia Resul Linaly Test T Expos Specia Metho Resul Asses Germ Not cl	iratory sensitisation assified based on a ponents: nol: Type sure routes es t // acetate: Type sure routes es bod t ssment cell mutagenicity assified based on a ponents:	available information. : Local lymph : Skin contact : Mouse : negative : Local lymph : Skin contact : Mouse : OECD Test of : positive : Probability of rate in huma	node assay (LLNA) Guideline 429 r evidence of low to moderate skin sensitisati



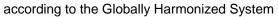
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rsion 10	Revision Date: 30.09.2023		S Number: 22110-00011	Date of last issue: 04.04.2023 Date of first issue: 25.11.2019		
			Test Type: Ba Result: negativ	cterial reverse mutation assay (AMES) ve		
Genotoxicity in vivo		:	: Test Type: Rodent dominant lethal test (germ ce Species: Mouse Application Route: Ingestion Result: equivocal			
Chlor	hexidine:					
Genotoxicity in vitro		:	Test Type: Ba Result: negativ	cterial reverse mutation assay (AMES) ve		
				romosomal aberration Chinese hamster ovary cells ve		
Genotoxicity in vivo		:	Test Type: do Species: Mous Result: negativ			
			Test Type: Cy Species: Ham Result: negativ			
Linal	yl acetate:					
Geno	toxicity in vitro	:		cterial reverse mutation assay (AMES) D Test Guideline 471 ve		
			Result: negativ	vitro mammalian cell gene mutation test ve ed on data from similar materials		
				romosome aberration test in vitro D Test Guideline 473 ve		
Geno	toxicity in vivo	:	cytogenetic as Species: Mous Application Ro Method: OECI Result: negativ	se oute: Ingestion D Test Guideline 474		
Carci	nogenicity					
	assified based on av	ailable i	nformation.			
Comp	oonents:					
Chlor	hexidine:					

Chlorhexidine:

Species : Rat





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Expo		:	oral (drinking wate 2 Years daily 38 mg/kg body we negative	
Expo	ication Route osure time uency of Treatment EL		Rat oral (drinking wate 2 Years daily 158 mg/kg body v negative	
-	roductive toxicity classified based on avail	lable	information.	
Com	iponents:			
Etha Effec	i nol: cts on fertility	:	Test Type: Two-g Species: Mouse Application Route Result: negative	eneration reproduction toxicity study : Ingestion
	orhexidine: cts on fertility	:	Species: Rat Fertility: NOAEL:	100 mg/kg body weight
Effeo men	cts on foetal develop- t	:	Species: Rat Developmental To	oxicity: NOAEL: 300 mg/kg body weight
			Species: Rabbit Developmental To	oxicity: NOAEL: 40 mg/kg body weight
Lina	lyl acetate:			
Effec	cts on fertility	:	test Species: Rat Application Route Result: negative	duction/Developmental toxicity screening : Ingestion on data from similar materials
Effeo men	cts on foetal develop- t	:	Test Type: Embry Species: Rat Application Route Method: OECD To Result: negative	

STOT - single exposure

Not classified based on available information.



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rsion 0	Revision Date: 30.09.2023	SDS Number: 5322110-00011	Date of last issue: 04.04.2023 Date of first issue: 25.11.2019
STOT	- repeated exposu	e	
	assified based on av		
Comp	onents:		
Chlor	hexidine:		
	t Organs	: Liver	
	sment	: May cause da exposure.	mage to organs through prolonged or repeate
Linaly	/l acetate:		
Asses	sment		health effects observed in animals at concen g/kg bw or less.
Rema	rks		a from similar materials
Repea	ated dose toxicity		
Comp	oonents:		
Ethan	ol:		
Specie		: Rat	
NOAE LOAE		: 1,280 mg/kg	
	L ation Route	: 3,156 mg/kg : Ingestion	
	sure time	: 90 Days	
Chlor	hexidine:		
Specie	es	: Rat	
NOAE		: 158 mg/kg	
	ation Route	: Oral	
Expos	sure time	: 2 yr	
Specie		: Rabbit	
	L ation Route	: 250 mg/kg : Dermal	
	sure time	: 13 Weeks	
	t Organs	: Skin, Liver	
Linaly	/l acetate:		
Specie		: Rat	
NOAE		: > 30 - 300 mg	/kg
	ation Route	: Ingestion	
Expos Rema	sure time rks	: 28 Days : Based on data	a from similar materials
Specie		: Rat	
NOAE	—	: > 100 mg/kg	
	ation Route	: Skin contact	
	sure time rks	: 91 Days	a from similar materials



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Aspir	ation toxicity								
Not c	Not classified based on available information.								
Experience with human exposure									

Components:

• • • • • • • • • • • • • • • • • • • •	
General Information	: Symptoms: Headache
Inhalation	: Target Organs: Lungs
	Symptoms: Asthmatic appearance, bronchospasm, discomfort
	in the chest, upper respiratory tract infection
Ingestion	: Target Organs: Gastrointestinal tract
-	Symptoms: Gastrointestinal disturbance, Gastrointestinal tract
	damage

12. ECOLOGICAL INFORMATION

Ecotoxicity	
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Components:

Ethanol:		
Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): > 1,000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Ceriodaphnia (water flea)): > 1,000 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Chlorella vulgaris (Fresh water algae)): 275 mg/l Exposure time: 72 h
		EC10 (Chlorella vulgaris (Fresh water algae)): 11.5 mg/l Exposure time: 72 h
Toxicity to microorganisms	:	EC50 (Pseudomonas putida): 6,500 mg/l Exposure time: 16 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 9.6 mg/l Exposure time: 9 d Species: Daphnia magna (Water flea)
Chlorhexidine: Toxicity to fish	:	(Fish): 2.088 mg/l Exposure time: 96 h Method: ECOSAR (Ecological Structure Activity Relation- ships)
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.222 mg/l Exposure time: 48 h Method: ECOSAR (Ecological Structure Activity Relation- ships)
Toxicity to algae/aquatic	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 1.124



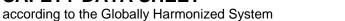
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Versi 1.10		Revision Date: 30.09.2023		S Number: 22110-00011	Date of last issue: 04.04.2023 Date of first issue: 25.11.2019
k	plants			mg/l End point: Growth Exposure time: 96 Method: ECOSAR ships)	
	M-Factor icity)	r (Acute aquatic tox-	:	1	
	M-Factor toxicity)	r (Chronic aquatic	:	1	
I	Linalyl a	cetate:			
	Toxicity 1		:	LC50 (Cyprinus ca Exposure time: 96 Method: OECD Te	
		to daphnia and other nvertebrates	:	Exposure time: 48 Method: OECD Te	
	Toxicity f plants	to algae/aquatic	:	mg/l Exposure time: 72	esmus subspicatus (green algae)): > 100 ? h on data from similar materials
				Exposure time: 72	smus subspicatus (green algae)): > 1 mg/l ? h on data from similar materials
-	Toxicity 1	to microorganisms	:	EC50: > 1,000 mg Exposure time: 30 Method: ISO 8192) min
I	Persiste	ence and degradabili	ty		
<u>(</u>	Compor	nents:			
	Ethanol	:			
	Biodegra		:	Result: Readily bio Biodegradation: 8 Exposure time: 20	34 %
(Chlorhe	xidine:			
E	Biodegra	adability	:	Remarks: Not inhe	erently biodegradable.
I	Linalyl a	acetate:			
	Biodegra		:	Result: Readily bio Biodegradation: 7 Exposure time: 28 Method: OECD Te	0 - 80 %



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ersion .10	Revision Date: 30.09.2023	-	DS Number: 22110-00011	Date of last issue: 04.04.2023 Date of first issue: 25.11.2019
Bioad	cumulative potential			
Com	oonents:			
Ethar	nol:			
	on coefficient: n- ol/water	:	log Pow: -0.35	
Chlor	hexidine:			
	on coefficient: n- ol/water	:	log Pow: 4.85	
Linal	yl acetate:			
	on coefficient: n- ol/water	:	log Pow: 3.9 Method: OECD	Test Guideline 107
	l ity in soil ata available			
Other	r adverse effects			
No da	ita available	NS		
No da 3. DISPO Dispo	ata available SAL CONSIDERATIO osal methods		Do not dianooo	of wooto into cover
No da 3. DISPO Dispo Waste	ata available	NS :	Dispose of in ac Empty containe dling site for rec	of waste into sewer. ccordance with local regulations. rs should be taken to an approved waste ha cycling or disposal. specified: Dispose of as unused product.
No da 3. DISPO Dispo Waste Conta	ata available SAL CONSIDERATIO osal methods e from residues	:	Dispose of in ac Empty containe dling site for rec	ccordance with local regulations. rs should be taken to an approved waste ha cycling or disposal.
No da 3. DISPO Dispo Waste Conta 4. TRANS	ata available PSAL CONSIDERATIO osal methods e from residues aminated packaging	:	Dispose of in ac Empty containe dling site for rec	ccordance with local regulations. rs should be taken to an approved waste ha cycling or disposal.
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No da 3. DISPO Dispo Waste Conta 4. TRANS Interr UNRT UN nu Prope Class Packi Label Enviro IATA UN/IE Prope Class	Ata available SAL CONSIDERATIO Sal methods e from residues aminated packaging SPORT INFORMATION Mational Regulations TDG umber er shipping name Ing group s onmentally hazardous DGR O No. er shipping name	:	Dispose of in ad Empty contained dling site for read If not otherwise UN 3082 ENVIRONMEN N.O.S. (Chlorhexidine) 9 III 9 yes UN 3082 Environmentally	cordance with local regulations. rs should be taken to an approved waste ha cycling or disposal. specified: Dispose of as unused product. TALLY HAZARDOUS SUBSTANCE, LIQUIE





Chlorhexidine Formulation

Version 1.10	Revision Date: 30.09.2023		DS Number: 22110-00011	Date of last issue: 04.04.2023 Date of first issue: 25.11.2019
Labels Packin aircrafi	g instruction (cargo	:	Miscellaneous 964	
ger air	g instruction (passen- craft) nmentally hazardous	:	964 yes	
		•	yes	
IMDG- UN nu Proper		:	UN 3082 ENVIRONMENTA N.O.S. (Chlorhexidine)	ALLY HAZARDOUS SUBSTANCE, LIQUID,
Labels EmS C			9 III 9 F-A, S-F yes	

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15. REGULATORY INFORMATION

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

The components of this product are reported in the following inventories:

AICS	: not determined	-
DSL	: not determined	
IECSC	: not determined	

16. OTHER INFORMATION

Revision Date	:	30.09.2023
Further information Sources of key data used to	:	Internal technical data, data from raw material SDSs, OECD
compile the Safety Data Sheet		eChem Portal search results and European Chemicals Agen- cy, http://echa.europa.eu/
Date format	:	dd.mm.yyyy
Full text of other abbreviation	ons	
ACGIH IN OEL	:	USA. ACGIH Threshold Limit Values (TLV) India. Permissible levels of certain chemical substances in

according to the Globally Harmonized System



Chlorhexidine Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
1.10	30.09.2023	5322110-00011	Date of first issue: 25.11.2019

work environment.

ACGIH / STEL	:	Short-term exposure limit	
IN OEL / TWA	:	Time-Weighted Average Concentration (TWA)	(8 hrs.)

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 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.

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