

Safety Data Sheet

CHLORHEXIDINE DIGLUCONATE DISINFECTANT GEL

Version: V1.0.0.1

Report No.: NAR20LC1I

Creation Date: 2020/03/10

Revision Date: 2020/03/10

*Prepared according to EU regulation No. 2015/830

1 Identification of the substance/mixture and of the company/undertaking

Product Name	
CAS No.	
EC No.	
Molecular Formula	
REACH Registration Number	-

Relevant identified uses	
Uses advised against	Please consult manufacturer.

Details of the supplier of the Safety Data Sheet

Name of the company	
Address of the company	
Post code	
Telephone number	
Fax number	
E-mail address	

Emergency phone number

Emergency phone number	0754-89862302
------------------------	---------------

2 Hazards identification

CLP classification according to Regulation (EC) No. 1272/2008

Flammable Liquids	Category 2
Eye Damage/Irritation	Category 2
Hazardous To The Aquatic Environment – Long-Term (Chronic) Hazard	Category 3

Label elements

Hazard pictograms	
-------------------	---

Signal word | **Danger****Hazard statements**

H225	Highly flammable liquid and vapour
H319	Causes serious eye irritation
H412	Harmful to aquatic life with long lasting effects

Precautionary statements

◆ Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P264	Wash face and hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

◆ Response

P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

◆ Storage

P403+P235	Store in a well-ventilated place. Keep cool.
-----------	--

◆ Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
------	---

Other hazards

	Not applicable
--	----------------

3 Component

Component	Cas No.	EC No.	Index No.	Hazard classification according to CLP	Concentration (weight percent, %)
ALCOHOL	64-17-5	200-578-6	603-002-00-5	Flammable Liquids, Category 2, H225	75
AQUA	7732-18-5	231-791-2	-	Not Classified	23.2
CHLORHEXIDINE DIGLUCONATE	18472-51-0	242-354-0	-	Serious Eye Damage/Irritation, Category 1, H318; Hazardous To The Aquatic Environment – Short-Term (Acute) Hazard, Category 1, H400; Hazardous To The	1

				Aquatic Environment – Long-Term (Chronic) Hazard, Category 1, H410	
CARBOMER	9007-16-3	-	-	Serious Eye Damage/Irritation, Category 2B, H320	0.4
TRIETHANOLAMINE	102-71-6	203-049-8	-	Not Classified	0.4

4 First aid measures

Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye contact	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Skin contact	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Ingestion	Rinse mouth. Refer for medical attention.
Inhalation	Fresh air, rest.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

Most important symptoms and effects, both acute and delayed

1	Please see section 11.
---	------------------------

Indication of any immediate medical attention and special treatment needed

1	Treat symptomatically.
2	Symptoms may be delayed.

5 Firefighting measures

Extinguishing media

Suitable extinguishing media	Use extinguishing agent suitable for type of surrounding fire.
Unsuitable extinguishing media	No special notes.

Specific hazards arising from the substance or mixture

1	May expansion or decompose explosively when heated or involved in fire.
2	Development of hazardous combustion gases or vapor possible in the event of fire.

Advice for firefighters

1	As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
2	Fight fire from a safe distance, with adequate cover.
3	Prevent fire extinguishing water from contaminating surface water or the ground water system.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

1	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
2	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

3	Use personal protective equipment. Avoid breathing vapours, mist or gas.
---	--

Environmental precautions

1	Prevent further leakage or spillage if safe to do so.
2	Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

1	Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.
2	Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
3	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7 Handling and storage

Precautions for handling

◆ Protective measures

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with skin and eyes.

◆ Measures to prevent fire

1	Keep away from heat/sparks/open flames/ hot surfaces.
---	---

◆ Measures to prevent aerosol and dust generation

1	Not applicable.
---	-----------------

◆ Advice on general occupational hygiene

1	Wash hands and face after using of the substances.
2	Replace the contaminated clothing immediately.

Conditions for safe storage, including any incompatibilities

1	Keep containers tightly closed.
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.
4	Store away from incompatible materials and foodstuff containers.

Specific end uses

1	In addition to use mentioned in the first parts, unforeseen other specific end uses.
---	--

8 Exposure controls/personal protection

Control parameters

◆ Occupational Exposure limit values

Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m ³	ppm	mg/m ³
ALCOHOL 64-17-5	USA - OSHA	1000	1900	-	-
	South Korea	1000	1900	-	-

	Ireland	-	-	1000	-
	Germany (AGS)	500	960	1000	1920
	Denmark	1000	1900	2000	3800
	Australia	1000	1880	-	-
TRIETHANOLAMINE 102-71-6	Switzerland	-	5	-	20
	Sweden	0.8	5	1.6	10
	Ireland	-	5	-	-
	Germany (DFG)	-	5	-	20
	Denmark	0.5	3.1	1	6.2
	Australia	-	5	-	-

◆ Biological limit values

Biological limit values	No relevant regulations
--------------------------------	-------------------------

◆ Monitoring methods

1	EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
2	GBZ/T 160.1~GBZ/T 160.81-2004 Determination of toxic substances in workplace air (Series standard) .

◆ Derived No effect level(DNEL)

Component	Route of exposure	DNEL for Workers			
		Acute effects (local)	Acute effects (systemic)	Chronic effects(local)	Chronic effects (systemic)
ALCOHOL 64-17-5	Inhalation	No data available	No data available	No data available	950 mg/m ³
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
AQUA 7732-18-5	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
CHLORHEXIDINE DIGLUCONATE 18472-51-0	Inhalation	No data available	No data available	No data available	0.42 mg/m ³
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
CARBOMER 9007-16-3	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
TRIETHANOLAMINE 102-71-6	Inhalation	No data available	No data available	5 mg/m ³	5 mg/m ³
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available

◆ Predicted No Effect Concentration (PNEC)


Predicted No Effect Concentration (PNEC)	No information available
---	--------------------------

◆ Engineering controls

1	Ensure adequate ventilation, especially in confined areas.
---	--

2	Ensure that eyewash stations and safety showers are close to the workstation location.
3	Use explosion-proof electrical/ventilating/lighting/equipment.
4	Set up emergency exit and necessary risk-elimination area.

Personal protection equipment

General requirement	
Eye protection	Tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US)).
Hand protection	Wear protective gloves (such as butyl rubber), passing the tests according to EN 374(EU), US F739 or AS/NZS 2161.1 standard.
Respiratory protection	If exposure limits are exceeded or if irritation or other symptoms are experienced, use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges.
Skin and body protection	Wear fire/flame resistant/retardant clothing and antistatic boots.

9 Physical and chemical properties

Physical and chemical properties

Appearance	Gelatinous
Odor	No information available
Odor threshold	No information available
pH	7.0 (20°C, 10g/L, ALCOHOL)
Melting point/freezing point(°C)	-117 (ALCOHOL)
Initial boiling point and boiling range(°C)	79 (ALCOHOL)
Flash point(Closed cup,°C)	13 (ALCOHOL)
Evaporation rate	No information available
Flammability	Highly flammable
Upper/lower explosive limits[%(v/v)]	Upper limit: 19 (ALCOHOL); Lower limit: 3.3 (ALCOHOL)
Vapor pressure	5.8kPa (ALCOHOL)
Vapor density(Air = 1)	1.6 (ALCOHOL)
Relative density(Water=1)	0.79 (ALCOHOL)
Solubility(mg/L)	Miscible with water (ALCOHOL)
n-octanol/water partition coefficient	-0.32 (ALCOHOL)
Auto-ignition temperature(°C)	363 (ALCOHOL)
Decomposition temperature(°C)	≥700 (ALCOHOL)
Viscosity(mm ² /s)	No information available
Explosive properties	Not explosive
Oxidizing properties	Not oxidizing

10 Stability and reactivity

Stability and reactivity

Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical stability	Stable under proper operation and storage conditions.
Possibility of hazardous reactions	In contact with oxidants causes severe reactions, and may cause a fire or explosion. In contact with active metals (alkali metals, Na, Ca etc.) causes a reaction and release hydrogen.
Conditions to avoid	Incompatible materials, heat, flame and spark.
Incompatible materials	Oxidants, alkali metals, alkaline earth metals and aluminum. Alkali, sodium, calcium, and other active metal, halogen, metal oxide, nonmetal oxide, acyl halide and metal phosphide.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information**Acute toxicity**

Component	Cas No.	LD ₅₀ (oral)	LD ₅₀ (dermal)	LC ₅₀ (inhalation,4h)
ALCOHOL	64-17-5	7060mg/kg(Rat)	No information available	39mg/L(Mouse)
CHLORHEXIDINE DIGLUCONATE	18472-51-0	2000mg/kg(Rat)	No information available	No information available
TRIETHANOLAMINE	102-71-6	5846mg/kg(Mouse)	No information available	No information available
CARBOMER	9007-16-3	4100mg/kg(Rat)	No information available	No information available

Carcinogenicity

ID	Cas No.	Component	IARC	NTP
1	64-17-5	ALCOHOL	Category 1	Not Listed
2	7732-18-5	AQUA	Not Listed	Not Listed
3	18472-51-0	CHLORHEXIDINE DIGLUCONATE	Not Listed	Not Listed
4	9007-16-3	CARBOMER	Not Listed	Not Listed
5	102-71-6	TRIETHANOLAMINE	Category 3	Not Listed

Others

CHLORHEXIDINE DIGLUCONATE DISINFECTANT GEL	
Skin corrosion/irritation	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Causes serious eye irritation(Category 2)
Skin sensitization	Based on available data, the classification criteria are not met
Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met
STOT-single exposure	Based on available data, the classification criteria are not met
STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met

Germ cell mutagenicity	Based on available data, the classification criteria are not met
Reproductive toxicity(additional)	Based on available data, the classification criteria are not met

12 Ecological information

Acute aquatic toxicity

Component	Cas No.	Fish	Crustaceans	Algae
ALCOHOL	64-17-5	LC ₅₀ : 11000mg/L (96h)(Fish)	EC ₅₀ : 9950mg/L (48h)(Crustaceans)	No information available
TRIETHANOLAMINE	102-71-6	LC ₅₀ : 11800mg/L (96h)(Fish)	EC ₅₀ : 610mg/L (48h)(Crustaceans)	No information available

Chronic aquatic toxicity

Chronic aquatic toxicity	No information available
---------------------------------	--------------------------

Persistence and degradability

Component	Cas No.	Persistence (water/soil)	Persistence (air)
ALCOHOL	64-17-5	Low(Half-life = 2.17 days)	Low(Half-life = 5.08 days)
AQUA	7732-18-5	Low	Low
CHLORHEXIDINE DIGLUCONATE	18472-51-0	High	High
CARBOMER	9007-16-3	Low	Low
TRIETHANOLAMINE	102-71-6	Low	Low

Bioaccumulative potential

Component	Cas No.	Bioaccumulative potential	comments
ALCOHOL	64-17-5	Low	Log K _{ow} =-0.31
AQUA	7732-18-5	Low	Log K _{ow} =-1.38
CHLORHEXIDINE DIGLUCONATE	18472-51-0	Low	Log K _{ow} =1.83
CARBOMER	9007-16-3	Low	Log K _{ow} =0.4415
TRIETHANOLAMINE	102-71-6	Low	BCF=4

Mobility in soil

Component	Cas No.	Mobility in soil	Soil Organic Carbon-Water Partitioning Coefficient (Koc)
ALCOHOL	64-17-5	High	1
AQUA	7732-18-5	Low	14.3
CHLORHEXIDINE DIGLUCONATE	18472-51-0	Low	72.53
CARBOMER	9007-16-3	High	1.201
TRIETHANOLAMINE	102-71-6	Low	10

Results of PBT and vPvB assessment

Component	Cas No.	Results of PBT and vPvB assessment
-----------	---------	------------------------------------

(according to (EC) No 2015/830)		
ALCOHOL	64-17-5	not PBT/vPvB
AQUA	7732-18-5	not PBT/vPvB
CHLORHEXIDINE DIGLUCONATE	18472-51-0	not PBT/vPvB
CARBOMER	9007-16-3	not PBT/vPvB
TRIETHANOLAMINE	102-71-6	not PBT/vPvB


13 Disposal considerations

Disposal considerations

Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
Disposal recommendations	Refer to section 13.1 and 13.2.

14 Transport information

Label and Mark

Transporting Label	
Marine pollutant	None

IMDG-CODE

UN number	1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S.(ALCOHOL)
Transport hazard class	3
Transport subsidiary hazard class	None
Packing group	II
Special provisions	274
Limited quantities	1L
Excepted quantities	E2
Marine pollutant (Yes or no)	No
EmS No.	F-E,S-E

ICAO/IATA-DGR

UN number	1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (ALCOHOL)
Transport hazard class	3
Transport subsidiary hazard class	None

Packing group	II
Excepted quantities	E2
Passenger and Cargo Aircraft Limited Quantity Packing Instructions	Y341
Passenger and Cargo Aircraft Limited Quantity Maxium net Quantity per Package	1 L
Passenger and Cargo Aircraft Packing Instructions	353
Passenger and Cargo Aircraft Maxium net Quantity per Package	5 L
Cargo Aircraft Packing Instructions	364
Cargo Aircraft Maxium net Quantity per Package	60 L
Special provisions	A3
ERG code	3H

UN-ADR

UN number	1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (ALCOHOL)
Transport hazard class	3
Transport subsidiary hazard class	None
Packing group	II
Special provisions	274 601 640C or 274 601 640D
Limited quantities	1 L
Excepted quantities	E2
Packing instructions	P001 or P001 IBC02 R001
Special packing provisions	-
Mixed packing provisions	MP19
Portable tanks and bulk containers instructions	T7
Portable tanks and bulk containers special provisions	TP1 TP8 TP28
ADR tank code	L1.5BN or LGBF
ADR tank special provisions	-
Vehicle for tank carriage	FL
Transport category(Tunnel restriction code)	2 (D/E)
Special provisions for carriage(Packages)	-
Special provisions for carriage(Bulk)	-
Special provisions for	-

carriage(Loading, unloading and handling)	
Special provisions for carriage(Operation)	S2 S20
Hazard identification No.	33
Notes	When vapour pressure at 50°C more than 110kPa, special provisions: 274 601 640C; packing instructions:P001; ADR tank code: L1.5BN; When vapour pressure at 50°C not more than 110 kPa, special provisions: 274 601 640D; packing instructions:P001 IBC02 R001;ADR tank code: LGBF

15 Regulatory information

International chemical inventory

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AICS	ENCS
ALCOHOL	✓	✓	✓	✓	✓	✓	✓	✓	✓
AQUA	✓	✓	✓	✓	✓	✓	✓	✓	✓
CHLORHEXIDINE DIGLUCONATE	✓	✓	✓	✓	✓	✗	✓	✓	✗
CARBOMER	✗	✗	✗	✓	✓	✓	✗	✗	✗
TRIETHANOLAMINE	✓	✓	✓	✓	✓	✓	✓	✓	✓

【EINECS】 European Inventory of Existing Commercial Chemical Substances

【TSCA】 United States Toxic Substances Control Act Inventory

【DSL】 Canadian Domestic Substances List

【IECSC】 China Inventory of Existing Chemical Substances

【NZIoC】 New Zealand Inventory of Chemicals

【PICCS】 Philippines Inventory of Chemicals and Chemical Substances

【KECI】 Existing and Evaluated Chemical Substances

【AICS】 Australia Inventory of Chemical Substances

【ENCS】 Existing And New Chemical Substances

European chemical inventory

Component	A	B	C	D	E	F	G
ALCOHOL	✗	✗	✓	✓	✓	✗	✗
AQUA	✗	✗	✗	✓	✗	✗	✗
CHLORHEXIDINE DIGLUCONATE	✗	✗	✗	✓	✓	✗	✗
CARBOMER	✗	✗	✗	✗	✗	✗	✗
TRIETHANOLAMINE	✗	✗	✗	✓	✓	✓	✗

【A】 Candidate list of Substances of Very High Concern for authorization under EU REACH regulation

【B】 Substances requiring authorisation under EU REACH regulation

【C】 Substances restricted under EU REACH

【D】 Pre-registered substances under EU REACH

【E】 Registered substances under EU REACH

【F】 Substance Evaluation – CoRAP under EU REACH

【G】 List of priority substances under EU water policy (Directive 2455/2001/EC)

Note

"√" Indicates that the substance included in the regulations

"x" That no data or included in the regulations

16 Others

Information on revision

Creation Date	2020/03/10
Revision Date	2020/03/10
Reason for revision	-

Reference

[1]IPCS: The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>.

[2]IARC, website: <http://www.iarc.fr/>.

[3]OECD: The Global Portal to Information on Chemical Substances, website:
http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en.

[4]CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>.

[5]NLM: ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>.

[6]EPA: Integrated Risk Information System, website: <http://cfpub.epa.gov/iris/>.

[7]U.S. Department of Transportation: ERG, website: <http://www.phmsa.dot.gov/hazmat/library/erg>.

[8]Germany GESTIS-database on hazard substance, website: <http://gestis-en.itrust.de/>.

Abbreviations and acronyms

CAS –Chemical Abstracts Service

PC-STEL- Short term exposure limit

DNEL - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC₅₀ - Lethal Concentration 50%

NOEC -No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

BCF - Bioconcentration factor (BCF)

IMDG-International Maritime Dangerous Goods

UN-The United Nations

NFPA-National Fire Protection Association

CMR - Carcinogens, mutagens or substances toxic to reproduction

PC-TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

PNEC –Predicted No Effect Concentration

LD₅₀ - Lethal Dose 50%

EC₅₀ - Effective Concentration 50%

POW - Partition coefficient Octanol: Water

vPvB - very Persistent, very Bioaccumulative

ICAO/IATA-International Civil Aviation Organization/International Air Transportation Association

ACGIH-American Conference of Governmental Industrial Hygienists

OECD-Organization for Economic Co-operation and Development

Disclaimer

This Safety Data Sheet (SDS) was prepared according to REACH Regulation The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user' s reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.