

SAFETY DATA SHEET**Klórosan 20**

The safety data sheet is in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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

Date issued	25.03.2014
Revision date	25.03.2021

1.1. Product identifier

Product name	Klórosan 20
Article no.	1440036, 1440038, 1440039

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance / mixture	Disinfectant. Bleaching agent.
The chemical can be used by the general public	No
The chemical is used by general public only	No

1.3. Details of the supplier of the safety data sheet

Company name	Tandur h.f.
Office address	Hestháis 12
Postcode	110
City	Reykjavík
Country	ICELAND
Telephone number	00354 510 1200
Email	tandur@tandur.is
Website	www.tandur.is

1.4. Emergency telephone number

Emergency telephone	Telephone number: (+354)-543-2222 Description: EMERGENCY# POISON CENTER Telephone number: 112 Description: POISON CENTER EMERGENCY#
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to
Regulation (EC) No 1272/2008
[CLP / GHS]

Skin Irrit. 2; H315
Eye Dam. 1; H314
Aquatic Acute 1; H400
Aquatic Chronic 2; H411

2.2. Label elements

Hazard pictograms (CLP)



Composition on the label

Sodium hypochlorite 1 - 3 % wt/wt

Signal word

Danger

Hazard statements

H315 Causes skin irritation.
H318 Causes serious eye damage.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.
EUH 031 Contact with acids liberates toxic gas.

Precautionary statements

P234 Keep only in original packaging.
P260 Do not breathe dust / fume / gas / mist / vapours / spray.
P264 Þvoðið húð vandlega eftir meðhöndlun.
P273 Avoid release to the environment.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P309+P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor / physician.
P391 Collect spillage.
P501 Dispose of contents/container to an approved disposal station for chemical waste.

2.3. Other hazards

PBT / vPvB

This product does not contain any PBT or vPvB substances.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Substance	Identification	Classification	Contents	Notes
Sodium hypochlorite, solution ...% Cl active	CAS No.: 7681-52-9 EC No.: 231-668-3 Index No.: 017-011-00-1	Skin Corr. 1B;H314 Aquatic Acute 1;H400 EUH031	1 - 3 % wt/wt	

Amines, C12-14-Alkyldimethyl, N-Oxides	CAS No.: 308062-28-4	Note : B	
	EC No.: 931-292-6	Eye Dam. 1; H318 Aquatic Acute 1; H400 Skin Irrit. 2; H315	1 - 3 % wt/wt

SECTION 4: First aid measures

4.1. Description of first aid measures

General	Call a POISON CENTER or doctor/physician if you feel unwell. Show this SDS.
Inhalation	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
Skin contact	Flush skin thoroughly with water. Take off contaminated clothing and wash before reuse. Get immediate medical advice/attention.
Eye contact	Promptly wash eyes with plenty of water while lifting the eye lids. Remove contact lenses, if present and easy to do. Continue rinsing. Continue flushing during transport to hospital.
Ingestion	Rinse mouth thoroughly. Do not induce vomiting. Drink a few glasses of water or milk. Do not give victim anything to drink if he is unconscious. Get immediate medical advice/attention.
Recommended personal protective equipment for first aid responders	Wear protective gloves / protective clothing / eye protection / face protection. Sjä lið 8.2

4.2. Most important symptoms and effects, both acute and delayed

Information for health personnel	Contains SODIUM HYPOCHLORITE! IF IN EYES: Remember to remove lenses if they are present. Ask patient. Continue eye rinsing/treatment. Call an eye specialist in all cases.
Acute symptoms and effects	May cause severe eye damage. See further section 11.1 under "Potential Acute Effects"

4.3. Indication of any immediate medical attention and special treatment needed

Medical treatment	Treat symptomatically. In the event of emergency, the patient may have been exposed to chlorine gas liberated from the product.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Water spray, carbon dioxide, dry powder or polar resistant foam.
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5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	OXIDISING!
Hazardous combustion products	Not known.

5.3. Advice for firefighters

Personal protective equipment	Wear respiratory protection. Wear protective gloves / protective clothing / eye
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Fire fighting procedures	protection / face protection. Fight fire with normal precautions from a reasonable distance.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	Stop leak if safe to do so.
Personal protection measures	Wear protective gloves / protective clothing / eye protection / face protection.
Hazardous combustion products	Not known.
For emergency responders	Wear protective clothing as described in Section 8 of this safety data sheet. Call a POISON CENTER or doctor/physician if you feel unwell.

6.2. Environmental precautions

Environmental precautionary measures	Avoid release to the environment. Collect and dispose of spillage as indicated in section 13.
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6.3. Methods and material for containment and cleaning up

Cleaning method	Absorb with inert, damp, non-combustible material, then flush area with water.
Containment	Store in a closed container.

6.4. Reference to other sections

Other instructions	See section 8 and 13 for further details.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling	Provide easy access to water supply and eye wash facilities. Avoid inhalation of vapours and contact with skin and eyes.
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Protective safety measures

Preventitive measures to protect the environment	Prevent the product to reach sewage water or drainage system undiluted or unneutralized. Collect spillage if possible.
Advice on general occupational hygiene	Private clothes and working clothes should be kept separately.

7.2. Conditions for safe storage, including any incompatibilities

Storage	Alkalis. Avoid contact with skin and eyes. Keep away from food, drink and animal feeding stuffs. Keep container tightly closed. Keep in original container. Store protected from acids.
Conditions to avoid	Store away from acids. Store isolated from reducing agents. Take any precaution to avoid mixing with combustibles /

Conditions for safe storage

Technical measures and storage conditions	Alkalis.
Requirements for storage rooms and vessels	Keep only in original container.
Advice on storage compatability	Alkalis.
Additional information on storage conditions	Store away from acids.

7.3. Specific end use(s)

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Substance	Identification	Exposure limits	TWA Year
Sodium hypochlorite, solution ...% Cl active	CAS No.: 7681-52-9		
Amines, C12-14-Alkyldimethyl, N-Oxides	CAS No.: 308062-28-4		

DNEL / PNEC

Substance	Sodium hypochlorite, solution ...% Cl active
DNEL	<p>Group: Consumer Route of exposure: Long term (repeated) - Dermal - Local effect Value: 0,5%</p> <p>Group: Worker Route of exposure: Long term (repeated) - Inhalation - Local effect Value: 1,55 mg/m3</p> <p>Group: Worker Route of exposure: Long term (repeated) - Inhalation - Systemic effect Value: 1,55 mg/m3</p> <p>Group: Worker Route of exposure: Short term (acute) - Inhalation - Systemic effect Value: 3,1 mg/m3</p> <p>Group: Worker Route of exposure: Short term (acute) - Inhalation - Local effect Value: 3,1 mg/m3</p> <p>Group: Consumer Route of exposure: Long term (repeated) - Oral - Systemic effect Value: 0,26 mg/kg</p> <p>Group: Worker Route of exposure: Long term (repeated) - Dermal - Local effect Value: 0,5%</p>
PNEC	<p>Route of exposure: Air Value: 0,00026 mg/m3</p>

Substance	Route of exposure: Sewage treatment plant STP Value: 0,03 mg/l
	Route of exposure: Water Value: 0,00021 mg/l
DNEL	Amines, C12-14-Alkyldimethyl, N-Oxides Group: Consumer Route of exposure: Long term (repeated) - Inhalation - Systemic effect Value: 3,8 mg/m3 Group: Worker Route of exposure: Long term (repeated) - Dermal - Systemic effect Value: 11 mg/kg/day Group: Worker Route of exposure: Long term (repeated) - Inhalation - Systemic effect Value: 15,5 mg/m3 8h Group: Consumer Route of exposure: Long term (repeated) - Oral - Systemic effect Value: 0,44 mg/kg/day Group: Consumer Route of exposure: Long term (repeated) - Dermal - Systemic effect Value: 5,5 mg/kg/day
PNEC	Route of exposure: Water Value: 0,0335 mg/l Reference: Freshwater Route of exposure: Sewage treatment plant STP Value: 24 mg/kg Route of exposure: Water Value: 0,00335 mg/l Reference: Marine water Route of exposure: Sediment Value: 5,24 mg/kg Reference: Fresh water Route of exposure: Sediment Value: 0,524 mg/kg Reference: Marine water Route of exposure: Soil Value: 1,02 mg/kg

8.2. Exposure controls

Limitation of exposure on workplace	Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Protective gloves and goggles are recommended. An eye wash bottle must be available at the work site.
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Safety signs



Precautionary measures to prevent exposure

Instruction on measures to prevent exposure	Secure access of workers to safety information.
Organisational measures to prevent exposure	Avoid direct contact and/or splashes where possible. Train personnel.
Technical measures to prevent exposure	Where possible: use through foam systems and cover open containers. Use safety glasses/goggles and protective clothing.

Eye / face protection

Eye protection	Use approved safety glasses, goggles or face shield. Safety glasses should have side shields.
Suitable eye protection	Safety glasses should have side shields.
Additional eye protection measures	Provide easy access to water supply and eye wash facilities.
Reference to relevant standard	EN 166

Hand protection

Hand protection	Chemical resistant gloves required for prolonged or repeated contact.
Skin- / hand protection, short term contact	Nitril rubber: Penetration time: ≥ 30 min Material thickness: $\geq 0,4$ mm
Skin- / hand protection, long term contact	Butylrubber: Penetration time: ≥ 480 min Material thickness: $\geq 0,7$ mm
Thickness of glove material	Value: $\geq 0,4$ mm
Reference to relevant standard	Chemical-resistant protective gloves (EN 374).

Skin protection

Skin protection (except hands)	Wear suitable protective clothing as protection against splashing or contamination.
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Respiratory protection

Respiratory protection	Under normal conditions of use respiration protection should not be required. In case of inadequate ventilation or risk of inhalation of vapours, use suitable respiratory equipment with combination filter (type A2/P2).
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Appropriate environmental exposure control

Environmental exposure controls	Should not reach sewage or drainage system undiluted or unneutralized.
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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Clear liquid.
Colour	Straw.
Odour	Chlorine.
pH	Status: In delivery state Value: ~ 12 Temperature: ~ 20 °C
Flammability	The product is not flammable.
Relative density	Value: = 1,03 Kg/m ³ Temperature: ~ 20 °C
Solubility in water	Fully miscible.

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Sodium hypochlorite will react with acids to release toxic chlorine gas. These effects become less and less significant as the mixture is diluted with water. If the mixture is stored and used as recommended there should be no danger due to its reactivity.
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10.2. Chemical stability

Stability	The mixture is stable under normal storage and use conditions.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	No hazardous reactions known under normal storage and use conditions.
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10.4. Conditions to avoid

Conditions to avoid	May attack light-alloy metals and liberate hydrogen gas.
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10.5. Incompatible materials

Materials to avoid	Reacts with acids releasing toxic chlorine gas.
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10.6. Hazardous decomposition products

Hazardous decomposition products	No hazardous decomposition products.
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SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Substance	Sodium hypochlorite, solution ...% Cl active
Acute toxicity	Type of toxicity: Acute Effect tested: LD50 Route of exposure: Oral Value: > 1100 mg/kg Animal test species: Rat Test reference: OECD 401 Type of toxicity: Acute Effect tested: LD50 Route of exposure: Dermal Value: > 20000 mg/kg Animal test species: Rabbits Test reference: OECD 402 Type of toxicity: Acute Effect tested: LC50 Route of exposure: Inhalation. Value: > 10,5 mg/l Animal test species: Rat Test reference: OECD 403
Substance	Amines, C12-14-Alkyldimethyl, N-Oxides
Acute toxicity	Type of toxicity: Acute Effect tested: LD50 Route of exposure: Oral Value: = 1064 mg/kg Animal test species: Rat

Other information regarding health hazards

Inhalation	May cause irritation to the respiratory system.
Skin contact	Irritating.
Eye contact	Risk of serious damage to eyes. Immediate first aid is necessary.
Ingestion	May cause burns in mucous membranes, throat, oesophagus and stomach.

11.2 Other information

SECTION 12: Ecological information

12.1. Toxicity

Substance	Sodium hypochlorite, solution ...% Cl active
Aquatic toxicity, fish	Value: = 0,06 mg/l Test duration: 96 h Species: Rainbow trout Method: Not given
Substance	Amines, C12-14-Alkyldimethyl, N-Oxides
Aquatic toxicity, fish	Value: = 2,67 mg/l Test duration: 96 h

Substance	Sodium hypochlorite, solution ...% Cl active
Aquatic toxicity, algae	Value: = 0,0021 mg/l Test duration: 168 h Species: Not specified Method: Not given
Substance	Amines, C12-14-Alkyldimethyl, N-Oxides
Aquatic toxicity, algae	Value: = 0,143 mg/l Test duration: 72 H
Substance	Sodium hypochlorite, solution ...% Cl active
Aquatic toxicity, crustacean	Value: = 0,141 mg/l Test duration: 48 h Species: Daphnia magna Method: OECD 202
Substance	Amines, C12-14-Alkyldimethyl, N-Oxides
Aquatic toxicity, crustacean	Value: = 3,1 mg/l Test duration: 48 H

12.2. Persistence and degradability

Substance	Sodium hypochlorite, solution ...% Cl active
Biodegradability	Comments: Not relevant.
Persistence and degradability, comments	All organic components are considered biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential	Bioaccumulation: Is not expected to be bioaccumulable.
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12.4. Mobility in soil

12.5. Results of PBT and vPvB assessment

PBT assessment results	This substance is not classified as PBT or vPvB.
Substance	Sodium hypochlorite, solution ...% Cl active
PBT assessment results	This substance is not classified as PBT or vPvB.
Substance	Amines, C12-14-Alkyldimethyl, N-Oxides
PBT assessment results	Not Classified as PBT/vPvB by current EU criteria.

12.6. Endocrine disrupting properties

12.7. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Specify the appropriate methods of disposal	Avoid release to the environment. Dispose of waste and residues in accordance with local authority requirements.
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Relevant waste regulation	Regulation no. 737/2003
Hazardous waste product	Avoid release to the environment.
Hazardous waste packing	Avoid release to the environment.
Product classified as hazardous waste	Yes
Packaging classified as hazardous waste	Yes
EWC waste code	EWC: 200115 alkalines
National regulations	Regulation 184/2002 Regulation 786/1999
Other information	Disposal to licensed waste disposal site in accordance with local Waste Disposal Authority.

SECTION 14: Transport information

14.1. UN number

ADR/RID/ADN	1791
IMDG	1791
ICAO/IATA	1791

14.2. UN proper shipping name

ADR/RID/ADN	HYPOCHLORITE SOLUTION
IMDG	HYPOCHLORITE SOLUTION
ICAO/IATA	HYPOCHLORITE SOLUTION

14.3. Transport hazard class(es)

ADR/RID/ADN	8
IMDG	8
ICAO/IATA	8

14.4. Packing group

ADR/RID/ADN	II
IMDG	II
ICAO/IATA	II

14.5. Environmental hazards

14.6. Special precautions for user

14.7. Maritime transport in bulk according to IMO instruments

ADR/RID Other information

Hazard No.	80
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IMDG Other information

EmS	F-A, S-B
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SECTION 15: Regulatory information

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

Legislation and regulations	<p>Reglugerð nr. 1907/2006 og síðan 750/2008 um skráningu, mat, leyfisveitingu og takmarkanir er varða efni (efnareglur REACH).</p> <p>Breytingar sem gerðar voru á II viðauka REACH reglugerðar með EB reglugerð nr. 453/2010 til að samræma kröfurnar við nýjar reglur um flokkun og merkingu (CLP reglugerðin 1272/2008).</p> <p>Reglugerð EB nr. 1272/2008 um flokkun, merkingu og pökkun efna og blandna, sem breytir og kemur í stað tilskipana 67/548/EBE og 1999/45/EB, og breytir reglugerð (EB) nr. 1907/2006 (REACH).</p> <p>Reglugerðir EB nr. 790/2009 og 286/2011 um breytingar á reglugerðum Evrópuþingsins og ráðsins (EB) nr. 1272/2008 í því skyni að laga hana að tækniframförum.</p> <p>Lög nr. 61/2013 - Efnalög meginmarkmið þeirra er að tryggja öryggi neytenda við meðferð á efnum og efnablöndum þannig að þau valdi ekki tjóni á heilsu manna, dýra eða umhverfi.</p>
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15.2. Chemical safety assessment

Chemical safety assessment performed	No
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SECTION 16: Other information

List of relevant H-phrases (Section 2 and 3)	<p>H314 Causes severe skin burns and eye damage.</p> <p>H315 Causes skin irritation.</p> <p>H318 Causes serious eye damage.</p> <p>H400 Very toxic to aquatic life.</p> <p>H411 Toxic to aquatic life with long lasting effects.</p>
Abbreviations and acronyms used	<p>CLP: Classification, labelling and packaging</p> <p>GHS: Globally Harmonized System.</p> <p>DNEL: Derived No Effect Limit (afleidd áhrifaleysismörk).</p> <p>PBT: Persistent, Bioaccumulative and Toxic</p> <p>PNEC: Predicted No Effect Concentration</p> <p>vPvB: Very Persistent and very Bioaccumulative</p> <p>REACH: Registration, Evaluation, Authorization and Restriction of Chemicals.</p>
Information added, deleted or revised	Section 2: Outdated histograms, hazard and precautionary statements removed.
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