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

1.1. Product identifier

Natrii hypochlorosi 5% solut

Item No. 21360005

Substance / product identification

UFI 64F8-00YK-800Q-ENHC

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

Hänseler AG
Industriestrasse 35
9100 Herisau

Telephone no.	0041 (0)71 353 58 58
E-mail address of person responsible for this SDS	sdb@haenseler.ch

1.4. Emergency telephone number

Switzerland :145 / Abroad +41 (0)44 251 51 51

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No. 1272/2008)

Classification (Regulation (EC) No. 1272/2008)

Skin Corr. 1B	H314
Eye Dam. 1	H318
Aquatic Acute 1	H400
Aquatic Chronic 2	H411

The product is classified and labelled in accordance with Regulation (EC) No 1272/2008
For explanation of abbreviations see section 16.

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard pictograms

Signal word

Danger

Hazard statements

H314	Causes severe skin burns and eye damage.
H410	Very toxic to aquatic life with long lasting effects.
EUH031	Contact with acids liberates toxic gas.
H290	May be corrosive to metals.

Precautionary statements

P273	Avoid release to the environment.

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor.
P501.3	Disposal in compliance with local and national regulations.

Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)

contains sodium hypochlorite, solution… % Cl active

2.3. Other hazards

The product contains no PBT substances. The product contains no vPvB substances. This product does not contain a substance that has endocrine disrupting properties with respect to human. The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

SECTION 3: Composition/information on ingredients

Hazardous ingredients

sodium hypochlorite, solution… % Cl active

CAS No.	7681-52-9			
EINECS no.	231-668-3			
Registration no.	01-2119488154-34-XXXX			
Concentration	>=	5	< 10	%

Classification (Regulation (EC) No. 1272/2008)

Skin Corr. 1B	H314
Eye Dam. 1	H318
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Concentration limits (Regulation (EC) No. 1272/2008)

	EUH031	>= 5 %
Aquatic Acute 1		M = 10
Aquatic Chronic 1		M = 1

ATE	oral	5	mg/kg

Additional remarks:

CLP Regulation (EC) No 1272/2008, Annex VI, Note B

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated, soaked clothing immediately and dispose of safely.

After inhalation

If the patient is likely to become unconscious, place and transport in stable sideways position.

After skin contact

Wash off immediately with soap and water and rinse well. Remove contaminated, soaked clothing immediately and dispose of safely. Take medical treatment.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). Take medical treatment.

After ingestion

Rinse out mouth and give plenty of water to drink. Do not induce vomiting. Summon a doctor immediately.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Extinguishing measures to suit surroundings

5.2. Special hazards arising from the substance or mixture

Developpment of toxic gases; Chlorine (Cl2)

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Use self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Respiratory protection. Wear protective equipment. Keep away unprotected persons.

6.2. Environmental precautions

Dilute with lot of water. Do not discharge into the drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

Pick up with absorbent material (eg sand, kieselgur, acid binder, universal binder, sawdust). Rinse away rest with plenty of water. Neutralize

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Provide good ventilation of working area (local exhaust ventilation if necessary). Handle and open container with care.

Advice on protection against fire and explosion

The product is not combustible.

7.2. Conditions for safe storage, including any incompatibilities

Recommended storage temperature

Value	<	15	°C

Requirements for storage rooms and vessels

Only use containers that are approved specifically for the substance/product.

Hints on storage assembly

Do not store with acids.

Storage classes

Storage class according to TRGS 510	8A	Combustible corrosive hazardous substances
Storage category (Switzerland)	8	Caustic and corrosive substances

Further information on storage conditions

Protect from heat and direct sunlight. Protect from light.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Derived No/Minimal Effect Levels (DNEL/DMEL)

sodium hypochlorite, solution… % Cl active

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	3.1	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	1.55	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Local effects	
Concentration	0.5	%

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	1.55	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short term	
Route of exposure	inhalative	
Concentration	3.1	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	0.26	mg/kg/d

Predicted No Effect Concentration (PNEC)

sodium hypochlorite, solution… % Cl active

Type of value	PNEC	
Type	Freshwater	
Concentration	0.21	µg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	0.042	µg/l

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	0.03	mg/l

Type of value	PNEC	
Conditions	Intermittend	
Concentration	0.26	µg/l

8.2. Exposure controls

General protective and hygiene measures

Remove contaminated, soaked clothing immediately and dispose of safely. Avoid contact with skin and eyes. Do not inhale gases/vapours/aerosols. Keep away from food-stuffs, beverages and feed-stocks.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection

Gloves (alkali-resistant)

Appropriate Material	Natural Latex
Appropriate Material	nitrile rubber - NBR
Appropriate Material	PVC
Appropriate Material	Butyl rubber - Butyl

Eye protection

Tightly fitting safety glasses

Body protection

Protective clothing

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	yellowish, clear
Odour	Chlorine.

Boiling point or initial boiling point and boiling range

Value	100	°C
Method	DIN 51761	

Flash point

Value	>	100	°C

Decomposition temperature

Remarks	Slow decomposition possible.

pH value

Value	11.5
Remarks	strongly alkaline

Vapour pressure

Remarks	No data available

Density and/or relative density

Value	1.08		g/cm³
Temperature	20	°C	

9.2. Other information

Solubility in water

Remarks Completely miscible

Other information

The product is not dangerous for explosions.

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive to metals. Contact with acids liberates toxic gases.

10.2. Chemical stability

Protect from warmth.

10.3. Possibility of hazardous reactions

Heat

10.4. Conditions to avoid

Heat. Protect from frost. Protect from light.

10.5. Incompatible materials

Corrosive to metals. Evolution of chlorine under influence of acids. amines, Reactions with alcohols. Organic materials

10.6. Hazardous decomposition products

Chlorine

SECTION 11: Toxicological information

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

Acute oral toxicity

ATE		90.9091	mg/kg
Method	calculated value (Regulation (EC) No. 1272/2008)		

Acute oral toxicity (Components)

sodium hypochlorite, solution… % Cl active

Species	mouse		
LD50		5800	mg/kg

sodium hypochlorite, solution… % Cl active

Species	rat		
LD50	>	1100	mg/kg
Method	OECD 401		
Source	Test substance: Cl		

sodium hypochlorite, solution… % Cl active

Species	rat		
NOAEL		5	mg/kg

Acute dermal toxicity (Components)

sodium hypochlorite, solution… % Cl active

Species	rabbit		
LD50	>	20000	mg/kg
Method	OECD 402		
Source	Test substance: Cl		

Acute inhalative toxicity (Components)

sodium hypochlorite, solution… % Cl active

Species	rat		
LC50	>	10.5	mg/l
Duration of exposure		1 h	

Method	OECD 403
Source	Chlor

Skin corrosion/irritation

Remarks	Corrosive action on the skin and mucous membrane.

Skin corrosion/irritation (Components)

sodium hypochlorite, solution… % Cl active

Species	Human
evaluation	corrosive

sodium hypochlorite, solution… % Cl active

Species	rabbit
evaluation	strongly irritant
Method	OECD 404

Serious eye damage/irritation

evaluation	strongly corrosive

Serious eye damage/irritation (Components)

sodium hypochlorite, solution… % Cl active

Species	rabbit
evaluation	irritant - risk of serious damage to eyes
Method	OECD 405

Sensitization

Remarks	No sensitation effect known.

Sensitization (Components)

sodium hypochlorite, solution… % Cl active

Species	guinea pig
evaluation	non-sensitizing
Method	OECD 406

Mutagenicity (Components)

sodium hypochlorite, solution… % Cl active

evaluation	No experimental information on genotoxicity in vitro available.

sodium hypochlorite, solution… % Cl active

evaluation	No experimental indications on genotoxicity in vivo found.

sodium hypochlorite, solution… % Cl active

Species	Salmonella typhimurium
evaluation	No mutagenicity in the Ames-test.
Method	OECD 471

sodium hypochlorite, solution… % Cl active

Species	hamster
evaluation	Information on genotoxicity in vitro available.
Method	OECD 473

sodium hypochlorite, solution… % Cl active

Species	mouse
evaluation	No experimental indications on genotoxicity in vivo found.
Method	OECD 474

sodium hypochlorite, solution… % Cl active

Species	mouse
evaluation	Information on genotoxicity in vivo available.

Reproduction toxicity (Components)

sodium hypochlorite, solution… % Cl active

evaluation	No negative effects

Carcinogenicity (Components)

sodium hypochlorite, solution… % Cl active

evaluation	No negative effects

Specific Target Organ Toxicity (STOT) (Components)

sodium hypochlorite, solution… % Cl active

Single exposure

evaluation	May cause respiratory irritation. Route of exposure inhalative Organs: Respiratory tract
Species	Human

11.2 Information on other hazards

Endocrine disrupting properties with respect to humans

The product does not contain a substance that has endocrine disrupting properties with respect to humans.

Experience in practice

Ingestion of aqueous solution causes burns in: Mouth. Throat. Perforation of gullet and stomach.

SECTION 12: Ecological information

12.1. Toxicity

Fish toxicity (Components)

sodium hypochlorite, solution… % Cl active

Species	Salmo gairdneri		
LC50	0.06		mg/l
Duration of exposure	96	h	

sodium hypochlorite, solution… % Cl active

Species	Menidia peninsulae		
NOEC	0.04		mg/l
Duration of exposure	96	h	

sodium hypochlorite, solution… % Cl active

Species	Menidia peninsulae		
NOEC	0.04		mg/l
Duration of exposure	28	d	

Daphnia toxicity (Components)

sodium hypochlorite, solution… % Cl active

Species	Daphnia magna		
EC50	0.141		mg/l
Duration of exposure	48	h	

Algae toxicity (Components)

sodium hypochlorite, solution… % Cl active

NOEC	0.0021		
Duration of exposure	7	d	

Bacteria toxicity (Components)

sodium hypochlorite, solution… % Cl active

Species	activated sludge		
EC50	> 3		mg/l
Duration of exposure	3	h	

12.2. Persistence and degradability

Biodegradability (Components)

sodium hypochlorite, solution… % Cl active

Remarks	Inorganic product, cannot be eliminated from the water by biological purification processes.

12.3. Bioaccumulative potential

Octanol/water partition coefficient (log Pow) (Components)

sodium hypochlorite, solution… % Cl active

log Pow	-3.42	
Temperature	20	°C

12.4. Mobility in soil

Mobility in soil (Components)

sodium hypochlorite, solution… % Cl active

Highly mobile in soils

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

The product contains no PBT substances

The product contains no vPvB substances.

12.6 Endocrine disrupting properties

Endocrine disrupting properties with respect to the envrionment

The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

General information / ecology

Do not allow it to reach ground water, water bodies or sewage system. Hazard for drinking water supplies. Neutralization is normally necessary before waste water is discharged into water treatment plants.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations for the product

Disposal in compliance with local and national regulations.

Disposal recommendations for packaging

Dispose of as unused product.

SECTION 14: Transport information

	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
Tunnel restriction code	E		
14.1. UN number	1791	1791	1791
14.2. UN proper shipping name	HYPOCHLORITE SOLUTION	HYPOCHLORITE SOLUTION	HYPOCHLORITE SOLUTION
14.3. Transport hazard class(es)	8	8	8
Label			
14.4. Packing group	III	III	III
Limited Quantity	5 l		
Transport category	3		

SECTION 15: Regulatory information

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

Water Hazard Class (Germany)

Water Hazard Class (Germany)	WGK 2
Remarks	Derivation of WGK according to Annex 1 No. 5.2 AwSV

SECTION 16: Other information

Hazard statements listed in Chapter 3

H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

CLP categories listed in Chapter 3

Aquatic Acute 1	Hazardous to the aquatic environment, acute, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic, Category 2
Eye Dam. 1	Serious eye damage, Category 1
Skin Corr. 1B	Skin corrosion, Category 1B

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***
This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.