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

1.1. Product identifier

Acid hydrochloricum 32%

Item No. 20200000

Registration no.

Registration no. 01-2119484862-27-XXXX

Substance / product identification

UFI MG3J-R0KE-D00T-DTC0

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)

Met. Corr. 1	H290
Skin Corr. 1A	H314
Eye Dam. 1	H318
STOT SE 3	H335

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

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.

Precautionary statements

P234	Keep only in original packaging.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
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.

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

contains hydrochloric acid … %

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

hydrochloric acid … %

CAS No. 7647-01-0
EINECS no. 231-595-7
Registration no. 01-2119484862-27-XXXX
Concentration >= 25 < 44 %
Classification (Regulation (EC) No. 1272/2008)

STOT SE 3	H335
Met. Corr. 1	H290
Skin Corr. 1A	H314
Eye Dam. 1	H318

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

Eye Irrit. 2	H319	>= 10 < 25 %
Skin Corr. 1B	H314	>= 25 %
Skin Irrit. 2	H315	>= 10 < 25 %
STOT SE 3	H335	>= 10 %

ATE oral 900 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

Adhere to personal protective measures when giving first aid. 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. Remove the casualty into fresh air and keep him calm.

After skin contact

Wash immediately with plenty of water for several minutes. Summon a doctor immediately.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). Summon a doctor immediately.

After ingestion

Do not induce vomiting. No trials on neutralisation. Let plenty of water be drunk in small gulps. Ensure supply of fresh air. Summon a doctor immediately.

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

Chemical burn, Irritation of mucosa, bleeding vomiting

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

Hints for the physician / treatment

Treat symptomatically

Hints for the physician / hazards

Frequent and persistent contact with the skin can cause dermatitis. Risk of pulmonary oedema; Risk of stomach perforation

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Product itself is non-combustible; adapt fire extinguishing measures to surrounding areas.

5.2. Special hazards arising from the substance or mixture

Hydrogen chloride (HCl); Chlorine (Cl_2)

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Wear full protective suit. Use self-contained breathing apparatus.

Other information

Cool endangered containers with water spray jet. Suppress vapours with water spray jet. Fire residues and contaminated fire-fighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep people away and stay on the upwind side. Ensure adequate ventilation. Avoid contact with eyes and skin. Do not inhale vapours.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil. Advise water authority if spillage has entered water course or drainage system.

6.3. Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). Take up mechanically and collect in suitable container for disposal. When picked up, treat material as prescribed under Section 13 "Disposal". Flush away residues with water.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

When diluting, always stir product into water. Handle and open container with care. Wear protective equipment. Provide good ventilation of working area (local exhaust ventilation if necessary). Use breathing apparatus when transferring large quantities without exhaust ventilation facilities. Avoid contact with skin, eyes and clothing. Avoid inhaling dusts/ billows/ steams.

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	-	25	°C

Requirements for storage rooms and vessels

Provide acid-resistant floor. Do not use metal containers and metal pinings. Use polyethylene or polypropylene containers.

Hints on storage assembly

Do not store together with foodstuffs. Do not store together with: Metals, Alkalies

Storage classes

Storage class according to TRGS 510	8B	Non-combustible corrosive hazardous substances
Storage category (Switzerland)	8	Caustic and corrosive substances

Further information on storage conditions

Keep containers tightly closed in a dry, cool and well-ventilated place.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Derived No/Minimal Effect Levels (DNEL/DMEL)

hydrochloric acid … %

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	15	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	Local effects	
Concentration	8	mg/m³

Predicted No Effect Concentration (PNEC)

hydrochloric acid … %

Type of value	PNEC	
Type	Freshwater	
Concentration	36	µg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	36	µg/l

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	36	µg/l

Type of value	PNEC	
Type	Soil	
Concentration	0.036	mg/kg

Type of value	PNEC	
Conditions	Intermittend	
Concentration	45	µg/l

8.2. Exposure controls

General protective and hygiene measures

Hold eye wash fountain available. Keep away from food-stuffs, beverages and feed-stocks. Remove contaminated, soaked clothing immediately and dispose of safely. Wash hands before breaks and after work. Avoid contact with skin and eyes.

Respiratory protection

Breathing apparatus in the event of aerosol or mist formation. Short term: filter apparatus, combination filter B-P2; At intensive and longer exposition use self-contained breathing apparatus. In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection

Gloves (acid-resistant)
Protective gloves

Appropriate Material	The glove material must be sufficient impermeable and resistant to the substance. Check the tightness before wear. Gloves should be well cleaned before being removed, then stored in a well ventilated location.

Hand protection must comply with EN 374.

Gloves			
Appropriate Material	Polychloroprene		
Material thickness		0.5	mm
Breakthrough time	>=	8	h

Gloves			
Appropriate Material	nitrile rubber - NBR		
Material thickness		0.35	mm
Breakthrough time	>=	8	h

Gloves			
Appropriate Material	Butyl rubber - Butyl		
Material thickness		0.5	mm
Breakthrough time	>=	8	h

Gloves			
Appropriate Material	Fluoro carbon rubber - FKM		
Material thickness		0.4	mm
Breakthrough time	>=	8	h

Gloves			
Appropriate Material	Vinyl-PVC		
Material thickness		0.5	mm
Breakthrough time	>=	8	h

Not suitable: gloves of natural latex
Not suitable: leather gloves
Not suitable: leather gloves

Eye protection

Tightly fitting safety glasses; Face shield; Eye protection must comply with EN 166.

Body protection

Acid-resistant protective clothing

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state liquid

Colour clear, colorless, light yellow
Odour pungent

Freezing point

Value	-42	°C

Boiling point or initial boiling point and boiling range

Value	80	°C

Flammability

non flammable

Flash point

Value	°C	
Remarks	Not applicable	

pH value

Value	<	1	
Temperature		20	°C

Viscosity

Remarks	No data available

Partition coefficient n-octanol/water (log value)

Remarks	No data available

Vapour pressure

Value	30		hPa
Temperature	20	°C	

Density and/or relative density

Value	1.14	to	1.18	g/cm³
Temperature	20	°C		

9.2. Other information

Odour threshold

Remarks	No data available

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. No decomposition if stored and applied as directed.

10.2. Chemical stability

Stable under recommended storage and handling conditions (see section 7).

10.3. Possibility of hazardous reactions

Keep away from free radical initiators, peroxides, strong alkalis or reactive metals.

10.4. Conditions to avoid

Heat. Protect from frost. Protect from direct sunlight.

10.5. Incompatible materials

Reactions with alkalies. Reactions with metals, with evolution of hydrogen. Reactions with oxidising agents. Explosive, amines, Fluorine, Strong oxidising agents, cyanide, Alkalis

10.6. Hazardous decomposition products

Hydrogen chloride (HCl), Chlorine, Hydrogen

Other information

When diluting, add acids to water, never the other way around.

SECTION 11: Toxicological information

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

Acute oral toxicity

ATE	2'608.69 57	mg/kg
Method	calculated value (Regulation (EC) No. 1272/2008)	

Acute oral toxicity (Components)

hydrochloric acid … %

Species	rabbit	
LD50	900	mg/kg
Remarks	Ingestion causes burns of the upper digestive and respiratory tracts.	

hydrochloric acid … %

Species	rat	
LD50	2222	mg/kg

Acute inhalative toxicity (Components)

hydrochloric acid … %

Reference substance	hydrogen chloride	
Species	rat	
LC50	31000	ppm(V)
Duration of exposure	5 min	
Administration/Form	Vapors	
Source	NCBI Bookshelf 1998	

hydrochloric acid … %

Reference substance	hydrogen chloride	
Species	mouse	
LC50	11200	ppm(V)
Duration of exposure	5 min	
Administration/Form	Vapors	
Source	NCBI Bookshelf 1998	

hydrochloric acid … %

Reference substance	hydrogen chloride	
Species	rat	
LC50	5600	ppm(V)
Duration of exposure	30 min	
Administration/Form	Vapors	
Source	NCBI Bookshelf 1998	

hydrochloric acid … %

Reference substance	hydrogen chloride	
Species	mouse	
LC50	2100	ppm(V)
Duration of exposure	30 min	
Administration/Form	Vapors	
Source	NCBI Bookshelf 1998	

hydrochloric acid … %

Reference substance	hydrogen chloride	
Species	guinea pig	
LC50	2519	ppm(V)

Duration of exposure	30	min	
Administration/Form	Vapors		
Source	Kirsch and Drabk 1982		

hydrochloric acid … %

Species	rat (male)		
LC50	45.6		mg/l
Duration of exposure	5	min	

hydrochloric acid … %

Species	rat		
NOAEC	15		mg/m³

Skin corrosion/irritation

Species	rabbit
Remarks	Corrosive action on the skin and mucous membrane.

Skin corrosion/irritation (Components)

hydrochloric acid … %

Species	rabbit	
Duration of exposure	1	h
Method	OECD 404	
Remarks	Corrosive	

Serious eye damage/irritation

Species	rabbit
Remarks	strongly corrosive
Remarks	Risk of serious damage to eyes.

Serious eye damage/irritation (Components)

hydrochloric acid … %

Species	rabbit eye
evaluation	strongly corrosive
Method	OECD 405

Sensitization

Species	guinea pig
Remarks	No sensitation effect known.

Sensitization (Components)

hydrochloric acid … %

Species	guinea pig
Remarks	No sensitation effect known.

Subacute, subchronic, chronic toxicity

Remarks	edema pulmonary
Remarks	Risk of blindness.
Remarks	necroses

Subacute, subchronic, chronic toxicity (Components)

hydrochloric acid … %

Remarks	No data available

Mutagenicity

evaluation	No mutagenicity according to various in vitro tests.

Mutagenicity (Components)

hydrochloric acid … %

evaluation	No experimental information on genotoxicity in vitro available.

Reproductive toxicity

Remarks	No indications of toxic effects were observed in reproduction studies in

animals.

Reproduction toxicity (Components)

hydrochloric acid … %

Remarks: No indications of toxic effects were observed in reproduction studies in animals.

Carcinogenicity

Remarks: No evidence available on carcinogenicity.

Carcinogenicity (Components)

hydrochloric acid … %

Remarks: negative on animals

Specific Target Organ Toxicity (STOT)

Single exposure

evaluation: May cause damage to organs.
Organs: Respiratory tract

Repeated exposure

evaluation: No indications of STOT effects are available.

Specific Target Organ Toxicity (STOT) (Components)

hydrochloric acid … %

Single exposure

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

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)

hydrochloric acid … %

Species	Gambusia affinis		
LC50	282		mg/l
Duration of exposure	96	h	

hydrochloric acid … %

Species	Bluegill (Lepomis macrochirus)		
LC50	20.5		mg/l
Duration of exposure	24	h	

Daphnia toxicity (Components)

hydrochloric acid … %

Species	Daphnia magna		
EC50	0.45		mg/l
Duration of exposure	48	h	
Method	OECD 201		

Algae toxicity (Components)

hydrochloric acid … %

Species	Chlorella vulgaris		
ErC50	0.73		mg/l
Duration of exposure	72	h	
Method	OECD 201		

Bacteria toxicity (Components)

hydrochloric acid … %

Species	activated sludge		
EC50	0.23		mg/l
Duration of exposure	3	h	
Method	OECD 209		

12.2. Persistence and degradability

Biodegradability

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

Biodegradability (Components)

hydrochloric acid … %

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

12.3. Bioaccumulative potential

General information

Not relevant

Partition coefficient n-octanol/water (log value)

Remarks: No data available

12.4. Mobility in soil

Mobility in soil

Will not adsorb on soil.

Mobility in soil (Components)

hydrochloric acid … %

Will not adsorb on soil.

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

Behaviour in sewers [waste treatment plants]

The product is an acid. Neutralization is normally necessary before a waste water is discharged into sewage treatment plants.

General information / ecology

Harmful to aquatic organisms. Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system. 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

EWC waste code No not dispose with rubbish.
EWC waste code Should not be released into the sanitary sewer system.
Disposal in compliance with local and national regulations.

Disposal recommendations for packaging

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.
Packaging that cannot be cleaned should be disposed off as product waste.
Disposal in compliance with local and national regulations.

SECTION 14: Transport information

	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
Tunnel restriction code	E		
14.1. UN number	1789	1789	1789
14.2. UN proper shipping name	HYDROCHLORIC ACID, Solution	HYDROCHLORIC ACID, Solution	HYDROCHLORIC ACID, Solution
14.3. Transport hazard class(es)	8	8	8
Label			
14.4. Packing group	II	II	II
Limited Quantity	1 l		
Transport category	2		

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 1
Remarks Derivation of WGK according to Annex 1 No. 5.2 AwSV

15.2. Chemical safety assessment

For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information

Hazard statements listed in Chapter 3

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

CLP categories listed in Chapter 3

Eye Dam. 1	Serious eye damage, Category 1
Met. Corr. 1	Substance or mixture corrosive to metals, Category 1
Skin Corr. 1A	Skin corrosion, Category 1A
STOT SE 3	Specific target organ toxicity - single exposure, Category 3

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.