GHM Messtechnik GmbH Standort Greisinger
93128 Regenstauf

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

1.1 Product identifier

GRL 100

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

1.2.1 Relevant uses

Cleaning agent for measuring electrodes

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

GHM Messtechnik GmbH Standort Greisinger
Hans-Sachs-Strasse 26
93128 Regenstauf / GERMANY
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Address enquiries to

Technical information info@greisinger.de

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body +49 (0)89-19240 (24h) (English)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (GB) CLP]

Eye Dam. 1: H318 Causes serious eye damage.
Met. Corr. 1: H290 May be corrosive to metals.

2.2 Label elements

Hazard pictograms

Signal word DANGER

Contains: Hydrochloric acid

Hazard statements
H318 Causes serious eye damage.
H290 May be corrosive to metals.

Precautionary statements
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read carefully and follow all instructions.
P280 Wear protective gloves / eye protection.
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 / doctor.
P390 Absorb spillage to prevent material damage.

Special labelling Contains: Pepsin A. EUH208 May produce an allergic reaction.

Cleaner, 648/2004/CE, contains: enzymes

2.3 Other hazards

Environmental hazards Does not contain any PBT or vPvB substances.

Other hazards Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is a mixture.

Range [%]	Substance
0,5 - 1	Hydrochloric acid
	CAS: 7647-01-0
	GHS/CLP: Skin Corr. 1A: H314 - Eye Dam. 1: H318 - STOT SE 3: H335 - Met. Corr. 1: H290
< 1	Pepsin A
	CAS: 9001-75-6
	GHS/CLP: Skin Irrit. 2: H315 - Eye Irrit. 2: H319 - STOT SE 3: H335 - Resp. Sens. 1: H334

Comment on component parts Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Take off contaminated clothing and wash before reuse.

Inhalation Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact When in contact with the skin, clean with soap and water.
Consult a doctor if skin irritation persists.

Eye contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Seek medical advice immediately.

Ingestion Get medical advice.
Rinse out mouth and give plenty of water to drink.
Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Risk of serious damage to eyes.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to your doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.

Extinguishing media that must not be used Full water jet.

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

High risk of slipping due to leakage/spillage of product.
Use personal protective equipment (protective gloves, safety glasses, protective clothing).

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up with absorbent material (e.g. general-purpose binder).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid skin contact. Use personal protective equipment.

Do not eat, drink or smoke when using this product.
Wash hands before breaks and after work.
Use barrier skin cream.
Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Prevent penetration into the ground.

Do not store together with food and animal food/diet.

Keep container tightly closed.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

Substance
Hydrochloric acid
CAS: 7647-01-0
Long-term exposure: 1 ppm, 2 mg/m³, gas and aerosol mists
Short-term exposure (15-minute): 5 ppm, 8 mg/m³

DNEL

Substance
Hydrochloric acid, CAS: 7647-01-0
Industrial, inhalative, Long-term - local effects, 8 mg/m³
Industrial, inhalative, Acute - local effects, 15 mg/m³
general population, inhalative, Acute - local effects, 8 mg/m³
general population, inhalative, Acute - local effects, 15 mg/m³

PNEC

Substance
Hydrochloric acid, CAS: 7647-01-0
There are no PNEC values established for the substance.

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation.
Eye protection	Safety glasses. (EN 166:2001)
Hand protection	0,4 mm; Butyl rubber, >120 min (EN 374-1/-2/-3). The details concerned are recommendations. Please contact the glove supplier for further information.
Skin protection	Protective clothing (EN 340)
Other	Avoid contact with eyes and skin.
Respiratory protection	Not required under normal conditions.
Thermal hazards	none
Delimitation and monitoring of the environmental exposition	Comply with applicable environmental regulations limiting discharge to air, water and soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Color	light yellow
Odor	pungent
Odour threshold	not determined
pH-value	ca. 1,2
pH-value [1%]	not determined
Boiling point [°C]	not determined
Flash point [°C]	not applicable
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	not determined
Density [g/cm³]	ca. 1
Relative density	not determined
Bulk density [kg/m³]	not applicable
Solubility in water	miscible
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	not determined
Kinematic viscosity	not applicable
Relative vapour density	not determined
Evaporation speed	not determined
Melting point [°C]	not determined
Auto-ignition temperature	not self-igniting
Decomposition temperature [°C]	not determined
Particle characteristics	No information available.

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Corrosive to metals.

10.4 Conditions to avoid

Warming

10.5 Incompatible materials

Various metals.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

Substance
Hydrochloric acid, CAS: 7647-01-0
LD50, oral, Rabbit, 900 mg/kg

Acute dermal toxicity

Acute inhalational toxicity

Substance
Hydrochloric acid, CAS: 7647-01-0
LC50, inhalative, Rat, 45,6 mg/l/5min (Aerosol)
LC50, inhalative, Rat, 8,3 mg/l/30min (Aerosol)

Serious eye damage/irritation	Risk of serious damage to eyes. Based on the available information, the classification criteria are fulfilled. Classification was carried out based on substance-specific concentration limits.
Skin corrosion/irritation	Based on the available information, the classification criteria are not fulfilled.
Respiratory or skin sensitisation	Based on the available information, the classification criteria are not fulfilled.
Specific target organ toxicity — single exposure	Based on the available information, the classification criteria are not fulfilled.
Specific target organ toxicity — repeated exposure	Based on the available information, the classification criteria are not fulfilled.
Mutagenicity	Based on the available information, the classification criteria are not fulfilled.
Reproduction toxicity	Based on the available information, the classification criteria are not fulfilled.
Carcinogenicity	Based on the available information, the classification criteria are not fulfilled.
Aspiration hazard	Based on the available information, the classification criteria are not fulfilled.
General remarks	
	Toxicological data of complete product are not available.

SECTION 12: Ecological information

12.1 Toxicity

Substance
Hydrochloric acid, CAS: 7647-01-0
LC50, (96h), Lepomis macrochirus, 3,25 mg/l
EC50, (48h), Daphnia magna, 4,92 mg/l

12.2 Persistence and degradability

Behaviour in environment compartments	No information available.
Behaviour in sewage plant	No information available.
Biological degradability	No information available.

12.3 Bioaccumulative potential

Accumulation in organisms is not expected.

12.4 Mobility in soil

Spillages may penetrate the soil causing ground water contamination.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

Do not discharge product unmonitored into the environment or into the drainage.
Ecological data of complete product are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with national regulations.

Product

Dispose of as hazardous waste.

Contaminated packaging

Packaging that cannot be cleaned should be disposed of as for product.

SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID	1789
Inland navigation (ADN)	1789
Marine transport in accordance with IMDG	1789
Air transport in accordance with IATA	1789

14.2 UN proper shipping name

Transport by land according to ADR/RID	Hydrochloric acid, solution
- Classification Code	C1
- Label	
- ADR LQ	5 l
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 3 (E)
Inland navigation (ADN)	Hydrochloric acid, solution
- Classification Code	C1
- Label	
Marine transport in accordance with IMDG	Hydrochloric acid, solution
- EMS	F-A, S-B
- Label	
- IMDG LQ	5 l
Air transport in accordance with IATA	Hydrochloric acid, solution
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	8
Inland navigation (ADN)	8
Marine transport in accordance with IMDG	8
Air transport in accordance with IATA	8

14.4 Packing group

Transport by land according to ADR/RID	III
Inland navigation (ADN)	III
Marine transport in accordance with IMDG	III
Air transport in accordance with IATA	III

14.5 Environmental hazards

Transport by land according to ADR/RID	no
Inland navigation (ADN)	no
Marine transport in accordance with IMDG	no
Air transport in accordance with IATA	no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

TRANSPORT-REGULATIONS	ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2021)
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011).
- Observe employment restrictions for people	Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.
- VOC (2010/75/CE)	not applicable

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform ChemicaL Information Database
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.2 Other information

Classification procedure

Eye Dam. 1: H318 Causes serious eye damage. (Classification was carried out based on substance-specific concentration limits.)
Met. Corr. 1: H290 May be corrosive to metals. (Classification was carried out based on substance-specific concentration limits.)

Modified position

SECTION 2 deleted: The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).

SECTION 4 been added: Risk of serious damage to eyes.

SECTION 12 been added: Ecological data of complete product are not available.