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

1.1 Product identifier

Mirawet
Article number: 554105

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

1.2.1 Relevant uses

Wetting agent

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

Hager & Werken GmbH & Co. KG
Ackerstr. 1
47269 Duisburg / GERMANY
Phone +49(0)203-99269-0
Fax +49 (0)203 29 92 83
Homepage www.hagerwerken.de
E-mail info@hagerwerken.de

Address enquiries to

Technical information info@hagerwerken.de

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body +49 (0) 551-19240 Giftinformationszentrum-Nord

SECTION 2: Hazards identification

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

No classification.

2.2 Label elements

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

Hazard pictograms none

Signal word none

Hazard statements none

Precautionary statements none

Special labelling EUH210 Safety data sheet available on request.

Contains: Poly(hexamethylenebiguanide) hydrochloride. EUH208 May produce an allergic reaction.

2.3 Other hazards

Environmental hazards Does not contain any PBT or vPvB substances.
Contains no ingredients with endocrine-disrupting properties.

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
<0,25	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides
	CAS: 68424-85-1
	GHS/CLP: Acute Tox. 4: H302 - Skin Corr. 1B: H314 - Eye Dam. 1: H318 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410, M-Factor (acute): 10, M-Factor (chronic): 1
<0,25	Poly(hexamethylenebiguanide) hydrochloride
	CAS: 27083-27-8
	GHS/CLP: Carc. 2: H351 - Acute Tox. 4: H302 - Acute Tox. 2: H330 - Skin Sens. 1B: H317 - Eye Dam. 1: H318 - STOT RE 1: H372 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410, M-Factor (acute): 10

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 Change soaked clothing.

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.
If eye irritation persists: Get medical advice/attention.

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

4.2 Most important symptoms and effects, both acute and delayed

Nausea, vomiting.
Allergic reactions

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Carbon dioxide.
Foam.
Dry powder.
Water spray jet.

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, carbon monoxide (CO), not combusted hydrocarbons

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

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

6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, sawdust, universal absorbent, diatomaceous earth).
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

No special measures necessary if used correctly.

Wash hands before breaks and after work.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.

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
Glycerol
CAS: 56-81-5
Long-term exposure: 10 mg/m³

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.
Eye protection	Safety glasses. (EN 166:2001)
Hand protection	0,7 mm; Butyl rubber, >480 min (EN 374-1/-2/-3). The details concerned are recommendations. Please contact the glove supplier for further information.
Skin protection	light protective clothing
Other	Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier. Avoid contact with eyes and skin.
Respiratory protection	In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection. Short term: filter apparatus, combination filter A-P2. (DIN EN 14387)
Thermal hazards	No dangerous reactions known if used as directed.
Delimitation and monitoring of the environmental exposition	See SECTION 6+7.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Color	colourless
Odor	characteristic
Odour threshold	not determined
pH-value	5,2 - 5,8
pH-value [1%]	not determined
Boiling point [°C]	not determined
Flash point [°C]	not determined
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 applicable
Density [g/cm³]	1,06 - 1,08
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 determined
Relative vapour density	not applicable
Evaporation speed	not applicable
Melting point [°C]	not determined
Auto-ignition temperature	not determined
Decomposition temperature [°C]	not applicable
Particle characteristics	No information available.

9.2 Other information

Refractive index: 1,365 - 1,375

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

No hazardous reactions known.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity Based on available data, the classification criteria are not met.

Substance
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
ATE, oral, 500 mg/kg
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides, CAS: 68424-85-1
LD50, oral, Rat, 300 - 2000 mg/kg, OECD 401

Acute dermal toxicity Based on available data, the classification criteria are not met.

Acute inhalational toxicity Based on available data, the classification criteria are not met.

Substance
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
LC50, inhalative, 0,29 mg/kg (ECHA, CHL Report)

Serious eye damage/irritation Based on available data, the classification criteria are not met.

Substance
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
No information available.

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Substance
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
No information available.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
May cause an allergic skin reaction.

Substance
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
No information available.

Specific target organ toxicity — single exposure Based on available data, the classification criteria are not met.

Substance
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
No information available.

Specific target organ toxicity — repeated exposure Based on available data, the classification criteria are not met.

Substance
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
No information available.

Mutagenicity Does not contain a relevant substance that meets the classification criteria.

Substance
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
No information available.

Reproduction toxicity Does not contain a relevant substance that meets the classification criteria.

Substance
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
No information available.

Carcinogenicity Does not contain a relevant substance that meets the classification criteria.

Substance
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
No information available.

Aspiration hazard Based on available data, the classification criteria are not met.

General remarks

Toxicological data of complete product are not available.
The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 12: Ecological information

12.1 Toxicity

Substance
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
LC50, (96h), Oncorhynchus mykiss, 0,026 mg/l
EC50, Bacteria, 38 mg/l (4h)
EC50, (48h), Daphnia magna, 0,09 mg/l (OECD 202)
ErC50, (72h), Pseudokirchneriella subcapitata, 0,0191 mg/l (OECD 201)
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides, CAS: 68424-85-1
LC50, (96h), Lepomis macrochirus, 0,1 - 1 mg/l
EC50, (48h), Daphnia magna, 0,01 - 0,1 mg/l
NOEC, (72h), Pseudokirchneriella subcapitata, 0,001 - 0,01 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

No information available.

12.4 Mobility in soil

No information available.

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

Contains no ingredients with endocrine-disrupting properties.

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

For recycling, consult manufacturer.

Contaminated packaging

Uncontaminated packaging may be taken for recycling.

SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable

14.2 UN proper shipping name

Transport by land according to ADR/RID	NO DANGEROUS GOODS
Inland navigation (ADN)	NO DANGEROUS GOODS
Marine transport in accordance with IMDG	NOT CLASSIFIED AS "DANGEROUS GOODS"
Air transport in accordance with IATA	NOT CLASSIFIED AS "DANGEROUS GOODS"

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable

14.4 Packing group

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable

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	no
- VOC (2010/75/CE)	0 %

15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

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

Modified position none