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

1.1 Product identifier

rea-stabil

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

1.2.1 Relevant uses

Preservatives for liquid-cooling and processing systems

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

CHEMOTEC GmbH
Blochbachstrasse 40
63486 Bruchköbel / GERMANY
Phone +49(0)6181 / 72668
Fax +49(0)6181 / 77652
Homepage www.chemotec.de
E-mail info@chemotec.de

Address enquiries to

Technical information info@chemotec.de

Safety Data Sheet sdb@chemiebuero.de (No dispatch of safety data sheets)

Safety data sheets are available from the supplier.

1.4 Emergency telephone number

Advisory body Call NHS 111 or a doctor

Company +49(0)6181 / 72668

SECTION 2: Hazards identification

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

Aquatic Acute 1: H400 Very toxic to aquatic life.
Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects.

2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

Hazard pictograms

Signal word WARNING

Hazard statements H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.
P391 Collect spillage.
P501 Dispose of contents/container in accordance with local/national regulation.

Biocide (528/2012/CE) contains:

3.98 g/100g Polymeric N,N-Dimethyl-2-hydroxypropylammoniumchloride
0.60 g/100g Poly(hexamethylenebiguanide) hydrochloride
Registration: -

2.3 Other hazards

Human health dangers Frequent persistent contact with the skin can cause skin irritation.

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
1 - < 4	Polymeric N,N-Dimethyl-2-hydroxypropylammoniumchloride
	CAS: 25988-97-0, EINECS/ELINCS: Polymer
	GHS/CLP: Acute Tox. 4: H302 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410, M-Factor (acute): 10, M-Factor (chronic): 10
< 1	Poly(hexamethylenebiguanide) hydrochloride
	CAS: 27083-27-8, EINECS/ELINCS: polymer, EU-INDEX: 616-207-00-X
	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 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.
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

Irritant effects
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 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.
Nitrogen oxides (NOx), carbon monoxide (CO).

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

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.
In case the product spills into drains/surface waters/groundwater, immediately inform the authorities.

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

Avoid contact with eyes and skin.
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.
Protect from heat/overheating.

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)

not relevant

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, >480 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. 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.
Respiratory protection	Not required under normal conditions.
Thermal hazards	none
Delimitation and monitoring of the environmental exposition	Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Form	liquid
Color	colourless
Odor	characteristic
Odour threshold	not required
pH-value	not determined
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]	not determined
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 relevant
Relative vapour density	not relevant
Evaporation speed	not relevant
Melting point [°C]	not determined
Auto-ignition temperature [°C]	not applicable
Decomposition temperature [°C]	not determined
Particle characteristics	not applicable

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

No hazardous reactions known.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Oxidizing agent

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

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

Acute oral toxicity

Product
ATE-mix, oral, > 2000 mg/kg

Substance
Polymeric N,N-Dimethyl-2-hydroxypropylammoniumchloride, CAS: 25988-97-0
LD50, oral, Rat (female), 1672 mg/kg
NOAEL, oral, Rat, 625 mg/kg/28d
NOAEL, oral, Rat (female), 50 mg/kg/90d
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
ATE, oral, 500 mg/kg

Acute dermal toxicity

Product
dermal, Based on the available information, the classification criteria are not fulfilled.

Substance
Polymeric N,N-Dimethyl-2-hydroxypropylammoniumchloride, CAS: 25988-97-0
LD50, dermal, Rat, > 2000 mg/kg bw (Lit.)

Acute inhalational toxicity

Product
ATE-mix, inhalative, > 20 mg/L

Substance
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
LC50, inhalative, 0.29 mg/kg (ECHA. CHL Report)

Serious eye damage/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
Polymeric N,N-Dimethyl-2-hydroxypropylammoniumchloride, CAS: 25988-97-0
Eye, Rabbit
Based on the available information, the classification criteria are not fulfilled.
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
No information available.

Skin corrosion/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
Polymeric N,N-Dimethyl-2-hydroxypropylammoniumchloride, CAS: 25988-97-0
dermal, Rabbit, 4h
Based on the available information, the classification criteria are not fulfilled.
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
No information available.

Respiratory or skin sensitisation Based on the available information, the classification criteria are not fulfilled.

Substance
Polymeric N,N-Dimethyl-2-hydroxypropylammoniumchloride, CAS: 25988-97-0
dermal, Guinea pig
Based on the available information, the classification criteria are not fulfilled.
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
No information available.

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

Substance
Polymeric N,N-Dimethyl-2-hydroxypropylammoniumchloride, CAS: 25988-97-0
No information available.
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
No information available.

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

Substance
Polymeric N,N-Dimethyl-2-hydroxypropylammoniumchloride, CAS: 25988-97-0
No information available.
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
No information available.

Mutagenicity Based on the available information, the classification criteria are not fulfilled.

Substance
Polymeric N,N-Dimethyl-2-hydroxypropylammoniumchloride, CAS: 25988-97-0
No information available.
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
No information available.

Reproduction toxicity Based on the available information, the classification criteria are not fulfilled.

- Fertility

Substance
Polymeric N,N-Dimethyl-2-hydroxypropylammoniumchloride, CAS: 25988-97-0
No information available.
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
No information available.

- Development

Substance
Polymeric N,N-Dimethyl-2-hydroxypropylammoniumchloride, CAS: 25988-97-0
No information available.
Poly(hexamethylenebiguanide) hydrochloride, CAS: 27083-27-8
No information available.

Carcinogenicity Based on the available information, the classification criteria are not fulfilled.

Substance
Polymeric N,N-Dimethyl-2-hydroxypropylammoniumchloride, CAS: 25988-97-0

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

Aspiration hazard Based on the available information, the classification criteria are not fulfilled.

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.

11.2 Information on other hazards

Endocrine disrupting properties Contains no ingredients with endocrine-disrupting properties.

Other information none

SECTION 12: Ecological information

12.1 Toxicity

Substance
Polymeric N,N-Dimethyl-2-hydroxypropylammoniumchloride, CAS: 25988-97-0
LC50, (96h), Oncorhynchus mykiss, 0.077 mg/l
EC50, (3h), Activated sludge, 168 mg/l
EC50, (48h), Daphnia magna, 0.084 mg/l
EbC50, (72h), Desmodesmus subspicatus, 0.09 mg/l
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)

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

Contains no ingredients with endocrine-disrupting properties.

12.7 Other adverse effects

Ecological data of complete product are not available.
The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Dispose of as hazardous waste.
Coordinate disposal with the authorities if necessary.

Waste no. (recommended) 070601*

Contaminated packaging

Uncontaminated packaging may be reused.

Waste no. (recommended) 150110* packaging containing residues of or contaminated by hazardous substances
150102

SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID	3082
Inland navigation (ADN)	3082
Marine transport in accordance with IMDG	3082
Air transport in accordance with IATA	3082

14.2 UN proper shipping name

Transport by land according to ADR/RID	Environmentally hazardous substance, liquid, n.o.s. (Polymeric N,N-Dimethyl-2-hydroxypropylammoniumchloride, Poly(hexamethylenebiguanide) hydrochloride)
- Classification Code	M6
- Label	
- ADR LQ	5 l
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 3 (-)
Inland navigation (ADN)	Environmentally hazardous substance, liquid, n.o.s. (Polymeric N,N-Dimethyl-2-hydroxypropylammoniumchloride, Poly(hexamethylenebiguanide) hydrochloride)
- Classification Code	M6
- Label	
Marine transport in accordance with IMDG	Environmentally hazardous substance, liquid, n.o.s. (Polymeric N,N-Dimethyl-2-hydroxypropylammoniumchloride, Poly(hexamethylenebiguanide) hydrochloride)
- EMS	F-A, S-F
- Label	
- IMDG LQ	5 l
Air transport in accordance with IATA	Environmentally hazardous substance, liquid, n.o.s. (Polymeric N,N-Dimethyl-2-hydroxypropylammoniumchloride, Poly(hexamethylenebiguanide) hydrochloride)
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	9 (N)
Inland navigation (ADN)	9 (N)
Marine transport in accordance with IMDG	9
Air transport in accordance with IATA	9

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	yes
Inland navigation (ADN)	yes
Marine transport in accordance with IMDG	MARINE POLLUTANT
Air transport in accordance with IATA	yes

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Maritime transport in bulk according to IMO instruments

not determined

SECTION 15: Regulatory information

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

EEC-REGULATIONS	2008/98/EC 2000/532/EC); 2010/75/EU; 2004/42/EC; (EC) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014
TRANSPORT-REGULATIONS	ADR (2023); IMDG-Code (2023, 41. Amdt.); IATA-DGR (2023)
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011); UK REACH; GB CLP.
- Observe employment restrictions for people	no
- VOC (2010/75/CE)	not relevant

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H372 Causes damage to organs through prolonged or repeated exposure if inhaled.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H330 Fatal if inhaled.
H351 Suspected of causing cancer.

H410 Very toxic to aquatic life with long lasting effects.
H400 Very toxic to aquatic life.
H302 Harmful if swallowed.

16.2 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

16.3 Other information

Classification procedure

Aquatic Acute 1: H400 Very toxic to aquatic life. (Calculation method)
Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects. (Calculation method)

Modified position

none