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

1.1 Product identifier

Trade name : B009-K30 hebro®HB-40 ZK

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

Use of the Substance/Mixture : Cleaner (decalcifying)

1.3 Details of the supplier of the safety data sheet

Company	:	hebro chemie- ZN der Rockwood Specialties Group GmbH Rostocker Str. 40 41199 Mönchengladbach
Contact person	:	Zentrale hebro chemie
Telephone	:	+49 (0) 2166 6009-0
Telefax	:	+49 (0) 2166 6009-99
Contact person product safety		Abteilung Produktsicherheit
Telephone	:	+49(0)2166 6009-311
E-mail address	:	msds.de@hebro-chemie.de

1.4 Emergency telephone number

: Giftinformationszentrum Erfurt:
+49 (0) 361 730 730

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Corrosive to metals, Category 1	H290: May be corrosive to metals.
Skin corrosion, Category 1	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Specific target organ toxicity - single exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.

2.2 Label elements

Labelling (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 :

Prevention:

P261	Avoid breathing mist or vapours.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

Hazardous components which must be listed on the label:

Hydrochloric acid
Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[(dodecylimino)di-2,1-ethanediyl]bis(.omega.-hydroxy)-

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: This substance/mixture does not contain components considered to have endocrine disrupting properties for environment according to UK REACH Article 57(f).

Toxicological information: This substance/mixture does not contain components considered to have endocrine disrupting properties for human health according to UK REACH Article 57(f),

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Preparation based on mineral acid

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Hydrochloric acid	7647-01-0 231-595-7 017-002-01-X 01-2119484862-27	M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1 specific concentration limit Skin Corr. 1B; H314 >= 25 % Skin Irrit. 2; H315 10 - < 25 % Eye Irrit. 2; H319 10 - < 25 % STOT SE 3; H335 >= 10 % Skin Irrit. 2; H315 10 - < 25 % Eye Irrit. 2; H319 10 - < 25 %	>= 10 - < 25
Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[(dodecylimino)di-2,1-ethanediyl]bis(.omega.-hydroxy)-	31017-83-1	Aquatic Chronic 3; H412 Acute Tox. 4; H302 Eye Dam. 1; H318 Aquatic Acute 1; H400	>= 3 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : If symptoms persist, call a physician.

If inhaled : No special precautions required.

In case of skin contact : After contact with skin, wash immediately with plenty of water. Take off all contaminated clothing immediately.

In case of eye contact : In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Call a physician immediately.

If swallowed : Immediately give large quantities of water to drink.
Prevent vomiting if possible.

4.2 Most important symptoms and effects, both acute and delayed

Risks : Causes serious eye damage.
May cause respiratory irritation.
Causes severe burns.

4.3 Indication of any immediate medical attention and special treatment needed

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO2)
Dry powder
Water spray jet

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Combustion may cause:

Hazardous combustion products : Carbon oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Handle in accordance with good industrial hygiene and safety practice.

6.2 Environmental precautions

Environmental precautions : Inform the relevant authorities if it enters sewers, aquatic environment or soil.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

Refer to protective measures listed in sections 7 and 8., For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Avoid contact with skin and eyes. Ensure adequate ventilation. Avoid formation of aerosol. For personal protection see section 8. Have eye wash bottle or eye rinse ready at the work place.
Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep only in the original container at temperature not exceeding 50°C.
Further information on storage conditions	:	Protect from frost, heat and sunlight.
Recommended storage temperature	:	5 - 40 °C

7.3 Specific end use(s)

Specific use(s)	:	Cleaner (decalcifying)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Hydrochloric acid	7647-01-0	TWA (Gas and aerosol mists)	1 ppm 2 mg/m3	GB EH40
		STEL (Gas and aerosol mists)	5 ppm 8 mg/m3	GB EH40

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006

Substance name	End Use	Exposure routes	Potential health effects	Value
Hydrochloric acid	Workers	Inhalation	Long-term local effects	8 mg/m3
	Workers	Inhalation	Acute local effects	15 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

Substance name	Environmental Compartment	Value
Hydrochloric acid	Fresh water	36 µg/L

	Marine water	36 µg/L
	Sewage treatment plant	36 µg/L

8.2 Exposure controls

Personal protective equipment

Eye/face protection : Face-shield
Safety glasses with side-shields conforming to EN166

Hand protection
Material : Protective gloves complying with EN 374.
Break through time : > 60 min
Protective index : Class 3

Material : Nitrile rubber
Glove thickness : 0.4 mm

Material : butyl-rubber
Glove thickness : 0.5 mm

Remarks : The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. The exact break through time can be obtained from the protective glove producer and this has to be observed.

Skin and body protection : Chemical resistant protective clothing according to DIN EN 13034 (Type 6)
Work uniform or laboratory coat.

Respiratory protection : If product forms vapours or aerosols wear breathing protection.

Filter type : ABEK-filter

Protective measures : When using do not eat, drink or smoke.
Wash hands before breaks and at the end of workday.
Follow the skin protection plan.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : liquid

Colour : yellow

Odour : stinging

Melting point/freezing point : not determined

Boiling point/boiling range	:	100 °C Method: DIN 51751
Upper explosion limit / Upper flammability limit	:	not determined
Lower explosion limit / Lower flammability limit	:	not determined
Auto-ignition temperature	:	not determined
pH	:	1.5 (20 °C) Concentration: 10 g/l
Viscosity		
Viscosity, kinematic	:	similar to water
Solubility(ies)		
Water solubility	:	1,000 g/l completely soluble
Partition coefficient: n-octanol/water	:	Not applicable
Vapour pressure	:	23 hPa (20 °C) Information taken from reference works and the literature.
Density	:	1.08 g/cm³ (20 °C) Method: DIN 51757
Relative vapour density	:	not determined

9.2 Other information

Explosives	:	No data available
Substances and mixtures, which in contact with water, emit flammable gases	:	No data available
Metal corrosion rate	:	Corrosive to metals

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid : None known.

10.6 Hazardous decomposition products

Carbon dioxide (CO2)
Carbon monoxide
Smoke
Hazardous decomposition products : No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

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

Acute toxicity

Not classified due to lack of data.

Product:

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Components:

Hydrochloric acid:

Acute dermal toxicity : LD50 (Rabbit): > 5,010 mg/kg

Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[(dodecylimino)di-2,1-ethanediyl]bis(.omega.-hydroxy)-:

Acute oral toxicity : LD50 (Rat): > 300 - 2,000 mg/kg
Method: OECD Test Guideline 401

Skin corrosion/irritation

Causes severe burns.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Skin sensitisation

Not classified due to lack of data.

Respiratory sensitisation

Not classified due to lack of data.

Germ cell mutagenicity

Not classified due to lack of data.

Components:

Hydrochloric acid:

Genotoxicity in vitro	:	Test Type: Ames test Remarks: In vitro tests did not show mutagenic effects
Germ cell mutagenicity- Assessment	:	Not mutagenic in Ames Test

Carcinogenicity

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

Product:

Carcinogenicity - Assessment	:	Not classifiable as a human carcinogen.

Components:

Hydrochloric acid:

Carcinogenicity - Assessment	:	Carcinogenicity classification not possible from current data.

Reproductive toxicity

Not classified due to lack of data.

Components:

Hydrochloric acid:

Reproductive toxicity - Assessment	:	Fertility classification not possible from current data. Embryotoxicity classification not possible from current data.

STOT - single exposure

May cause respiratory irritation.

STOT - repeated exposure

Not classified due to lack of data.

Aspiration toxicity

Not classified due to lack of data.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : This substance/mixture does not contain components considered to have endocrine disrupting properties for human health according to UK REACH Article 57(f),

Further information

Product:

Remarks : Health injuries are not known or expected under normal use.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Hydrochloric acid:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 20.5 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.45 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Chlorella vulgaris (Fresh water algae)): 0.73 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : EC50 (activated sludge): 0.23 mg/l
Method: OECD Test Guideline 209

M-Factor (Chronic aquatic toxicity) : 1

Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[(dodecylimino)di-2,1-ethanediyl]bis(.omega.-hydroxy)-:

Toxicity to fish : LC50 (Brachydanio rerio (Zebra danio)): > 0.1 - 1 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus): > 0.1 - 1 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC10 (Pseudomonas putida): > 10,000 mg/l

12.2 Persistence and degradability

Product:

Biodegradability	:	Remarks: No data available

Components:

Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[(dodecylimino)di-2,1-ethanediyl]bis(.omega.-hydroxy)-:

Biodegradability	:	Biodegradation: > 60 % Exposure time: 28 d Method: OECD Test Guideline 301B Remarks: Readily biodegradable. This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

12.3 Bioaccumulative potential

Product:

Bioaccumulation	:	Remarks: No data available

12.4 Mobility in soil

Product:

Mobility	:	Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment	:	This substance/mixture does not contain components considered to have endocrine disrupting properties for environment according to UK REACH Article 57(f).

12.7 Other adverse effects

Product:

Additional ecological information	:	Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	Do not let product enter drains. Do not dispose of with domestic refuse. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
Contaminated packaging	:	If recycling is not practicable, dispose of in compliance with local regulations. Since emptied containers retain product residues (vapour and/or liquid) follow all MSDS/label warnings after container is emptied.
Waste Code	:	Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

SECTION 14: Transport information

14.1 UN number or ID number

ADR	:	UN 1760
RID	:	UN 1760
IMDG	:	UN 1760
IATA	:	UN 1760

14.2 UN proper shipping name

ADR	:	CORROSIVE LIQUID, N.O.S. (Hydrochloric acid)
RID	:	CORROSIVE LIQUID, N.O.S. (Hydrochloric acid)
IMDG	:	CORROSIVE LIQUID, N.O.S. (Hydrochloric acid)
IATA	:	Corrosive liquid, n.o.s. (Hydrochloric acid)

14.3 Transport hazard class(es)

		Class	Subsidiary risks
ADR	:	8	
RID	:	8	

IMDG	:	8
IATA	:	8

14.4 Packing group

ADR

Packing group	:	II
Classification Code	:	C9
Hazard Identification Number	:	80
Labels	:	8
Tunnel restriction code	:	(E)

RID

Packing group	:	II
Classification Code	:	C9
Hazard Identification Number	:	80
Labels	:	8

IMDG

Packing group	:	II
Labels	:	8
EmS Code	:	F-A, S-B
Remarks	:	Acids, Clear of living quarters.

IATA (Cargo)

Packing instruction (cargo aircraft)	:	855
Packing instruction (LQ)	:	Y840
Packing group	:	II
Labels	:	Corrosives

IATA_P (Passenger)

Packing instruction (passenger aircraft)	:	851
Packing instruction (LQ)	:	Y840
Packing group	:	II
Labels	:	Corrosives

14.5 Environmental hazards

ADR

Environmentally hazardous	:	no

RID

Environmentally hazardous	:	no

IMDG

Marine pollutant	:	no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

UK REACH List of restrictions (Annex 17)	:	Conditions of restriction for the following entries should be considered: Number on list 3
UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation	:	Not applicable
The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain)	:	Not applicable
Regulation (EC) on substances that deplete the ozone layer	:	Not applicable
UK REACH List of substances subject to authorisation (Annex XIV)	:	Not applicable
GB Export and import of hazardous chemicals - Prior Informed Consent (PIC) Regulation	:	Not applicable

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

SECTION 16: Other information

Full text of H-Statements

H302	:	Harmful if swallowed.
H318	:	Causes serious eye damage.
H400	:	Very toxic to aquatic life.
H412	:	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA -

European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Other information : The information provided is based on our current knowledge and experience and apply to the product as delivered. Regarding the product properties, these are not guaranteed. The delivery of this safety datasheet does not free the recipient of the product from his own responsibility to follow the relevant rules and regulations concerning this product.
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Classification of the mixture:		**Classification procedure:**
Met. Corr. 1	H290	Based on product data or assessment
Skin Corr. 1	H314	Based on product data or assessment
Eye Dam. 1	H318	Based on product data or assessment
STOT SE 3	H335	Calculation method

GB / EN