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

1.1 Product identifier

Trade name : XF178-B21 hebro®lub 923 LS

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

Use of the Substance/Mixture : High speed cooling lubricant for metalworking

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)

Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Warning

Hazard statements : H315 Causes skin irritation.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER/ doctor if you feel unwell.
P337 + P313 If eye irritation persists: Get medical advice/ attention.

Additional Labelling

EUH208 Contains 3-iodo-2-propynyl butylcarbamate. May produce an allergic reaction.

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.
The information required is contained in this Material Safety Data Sheet.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Preparation based on mineral oil, ester oils, inhibitors as well as emulsifiers

Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (% w/w)
distillates (petroleum), heavy hydrocracked	64741-76-0 265-077-7 01-2119486951-26	Asp. Tox. 1; H304 Note L	>= 25 - < 50
Alcohols, C16-18 and C18-unsatd., ethoxylated	68920-66-1 500-236-9	Skin Irrit. 2; H315 Aquatic Chronic 2; H411	>= 10 - < 25
2-(2-Butoxyethoxy)ethanol; diethylene glycol monobutyl ether	112-34-5 203-961-6 01-2119475104-44	Eye Irrit. 2; H319	>= 1 - < 2.5
Caprylic acid	124-07-2 204-677-5 01-2119552491-41	Skin Corr. 1C; H314 Eye Dam. 1; H318 Aquatic Chronic 3; H412	>= 1 - < 2.5
Boric acid	10043-35-3 233-139-2 01-2119486683-25	Repr. 1B; H360FD	>= 0.3 - < 1

3-iodo-2-propynyl butylcarbamate	55406-53-6	Acute Tox. 4; H302 Acute Tox. 4; H332 Eye Dam. 1; H318 Skin Sens. 1; H317 STOT SE 3; H335 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor Acute aquatic toxicity:10 M-Factor Chronic aquatic toxicity:1	>= 0.1 - < 0.25

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : No special precautions required.
Call a physician if symptoms occur.

If inhaled : Provide fresh air.
If symptoms persist, call a physician.

In case of skin contact : Take off immediately all contaminated clothing.
Wash off immediately with soap and plenty of water.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
If eye irritation persists, consult a specialist.

If swallowed : Call a physician immediately.
Keep at rest.
Do NOT induce vomiting.
Aspiration hazard.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available.

Risks : No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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: Carbon dioxide (CO2) Carbon monoxide Nitrogen oxides (NOx)

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.
Further information	:	Use water spray to cool unopened containers. 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	:	Avoid contact with skin, eyes and clothing. Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

Environmental precautions	:	Do not flush into surface water or sanitary sewer system. 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

See chapter
8
and
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. When using do not eat, drink or smoke. For personal protection see section 8.

Advice on protection against fire and explosion : No special protective measures against fire required.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Follow the water regulations. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep only in the original container in a cool, well-ventilated place.

Further information on storage conditions : Keep away from heat. Keep at temperatures between 5°C and 40°C.

Advice on common storage : Incompatible with oxidizing agents.

7.3 Specific end use(s)

Specific use(s) : High speed cooling lubricant for metalworking

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
2-(2-Butoxyethoxy)ethanol; diethylene glycol monobutyl ether	112-34-5	TWA	10 ppm 67.5 mg/m3	2006/15/EC
Further information	Indicative			
		STEL	15 ppm 101.2 mg/m3	2006/15/EC
Further information	Indicative			
		TWA	10 ppm 67.5 mg/m3	GB EH40
		STEL	15 ppm 101.2 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
2-(2-Butoxyethoxy)ethanol; diethylene glycol monobutyl ether	Workers	Inhalation	Long-term systemic effects	67.5 mg/m3
	Workers	Inhalation	Long-term local effects	67.5 mg/m3
	Workers	Inhalation	Acute local effects	101.2 mg/m3
	Workers	Skin contact	Long-term systemic effects	20 mg/kg bw/day
Caprylic acid	Workers	Inhalation	Long-term systemic effects	17.63 mg/m3
	Workers	Skin contact	Long-term systemic	10 mg/kg

			effects	bw/day
Boric acid	Workers	Inhalation	Long-term systemic effects	8.3 mg/m3
	Workers	Skin contact	Long-term systemic effects	392 mg/kg bw/day
	Workers	Ingestion	Acute systemic effects	0.98 mg/kg bw/day

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

Substance name	Environmental Compartment	Value
2-(2-Butoxyethoxy)ethanol; diethylene glycol monobutyl ether	Fresh water	1 mg/l
	Marine water	0.4 mg/l
	Estuary sediment	4 mg/l
Caprylic acid	Fresh water	0.02 mg/l
	Marine water	0.002 mg/l
	Sewage treatment plant	912 mg/l
	Fresh water sediment	0.295 mg/kg
	Marine sediment	0.029 mg/kg
	Soil	0.047 mg/kg
Boric acid	Fresh water	1.35 mg/l
	Marine water	1.35 mg/l
	Sewage treatment plant	1.75 mg/l
	Fresh water sediment	1.8 mg/kg
	Marine sediment	1.8 mg/kg

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety glasses with side-shields conforming to EN166

Hand protection

Material : Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.

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 : protective suit

Respiratory protection : not required under normal use
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Do not breathe gas/fumes/vapour/spray.

Protective measures : Handle in accordance with good industrial hygiene and safety practice.
Follow the skin protection plan.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	yellow
Odour	:	amine-like
Odour Threshold	:	No data available
pH	:	9.2 (20 °C) Concentration: 50 g/l
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	> 100 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	0.95 g/cm³ (20 °C) Method: DIN 51757
Solubility(ies)		
Water solubility	:	500 g/l
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	73 mm²/s (40 °C)
Flow time	:	No data available
Explosive properties	:	No data available

Oxidizing properties : No data available

9.2 Other information

Other physico-chemical properties: This information is not available/not determined.

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 : Strong acids and oxidizing agents

10.6 Hazardous decomposition products

In case of fire hazardous decomposition products may be produced such as:
Carbon dioxide (CO2)
Carbon monoxide
Smoke
Nitrogen oxides (NOx)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

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

Acute toxicity

Components:

Alcohols, C16-18 and C18-unsatd., ethoxylated:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

2-(2-Butoxyethoxy)ethanol; diethylene glycol monobutyl ether:

Acute oral toxicity : LD50 (Rat): 3,384 mg/kg

Acute dermal toxicity : LD50 (Rabbit): 2,700 mg/kg

Caprylic acid:

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 401
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg Method: OECD Test Guideline 402

Boric acid:

Acute oral toxicity	:	LD50 (Rat): 3,500 - 4,100 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 2.120 mg/l Exposure time: 4 h
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg

3-iodo-2-propynyl butylcarbamate:

Acute oral toxicity	:	LD50 (Rat): 1,470 mg/kg
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg

Skin corrosion/irritation

Product:

Remarks: Causes skin irritation.

Skin corrosion/irritation

Components:

Alcohols, C16-18 and C18-unsatd., ethoxylated:

Species: Rabbit
Method: OECD Test Guideline 404
Remarks: Causes skin irritation.

Serious eye damage/eye irritation

Product:

Remarks: The liquid splashed in the eyes may cause irritation and reversible damage.

Serious eye damage/eye irritation

Components:

Alcohols, C16-18 and C18-unsatd., ethoxylated:

Species: Rabbit
Method: OECD Test Guideline 405
Remarks: No eye irritation

Respiratory or skin sensitisation

Product:

Remarks: May produce an allergic reaction.

Germ cell mutagenicity

Product:

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

Carcinogenicity

Product:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Reproductive toxicity

Product:

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

STOT - single exposure

Product:

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

STOT - repeated exposure

Product:

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

Aspiration toxicity

Product:

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

Further information

Product:

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

SECTION 12: Ecological information

12.1 Toxicity

Product:

Ecotoxicology studies for the product are not available.

Components:

Alcohols, C16-18 and C18-unsatd., ethoxylated:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 10 - 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to microorganisms : EC50 : > 10,000 mg/l
Method: OECD Test Guideline 209

2-(2-Butoxyethoxy)ethanol; diethylene glycol monobutyl ether:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 2,750 mg/l
Exposure time: 48 h
Method: DIN 38412

LC50 (Lepomis macrochirus (Bluegill sunfish)): 1,300 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 2,850 mg/l
Exposure time: 48 h

Toxicity to algae : NOEC (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

Caprylic acid:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 22 mg/l
Exposure time: 96 h

LC50 (Brachydanio rerio (Zebra danio)): 9.8 mg/l
Exposure time: 28 d

NOEC (Brachydanio rerio (Zebra danio)): 6.4 mg/l
Exposure time: 28 d

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 22 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

EC50 (Daphnia magna (Water flea)): 0.51 mg/l
Exposure time: 21 d

LOEC (Daphnia magna (Water flea)): 0.64 mg/l
Exposure time: 21 d

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 43.73 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to microorganisms : . (Pseudomonas putida): > 100 mg/l

Boric acid:

Toxicity to fish : LC50 (Pimephales promelas (Fathead minnow)): 79.7 mg/l
Exposure time: 96 h

NOEC (Brachydanio rerio (Zebra danio)): 1.8 mg/l
Exposure time: 34 d

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 133 mg/l
Exposure time: 48 h

NOEC (Daphnia magna (Water flea)): 6 - 13 mg/l
Exposure time: 21 d

Toxicity to algae : NOEC (Scenedesmus capricornutum (fresh water algae)): 17.5 mg/l
Exposure time: 74.5 h
Test Type: Growth inhibition

EC50 : 40 mg/l
Exposure time: 72 h

Toxicity to microorganisms : NOEC (Bacteria): 17.5 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition

3-iodo-2-propynyl butylcarbamate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.067 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.16 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (Scenedesmus subspicatus): 0.022 mg/l
Exposure time: 72 h

M-Factor (Short-term (acute) aquatic hazard) : 10

: 10

M-Factor (Long-term (chronic) aquatic hazard) : 1

1

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Components:

Alcohols, C16-18 and C18-unsatd., ethoxylated:

Biodegradability : Biodegradation: > 70 %
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

Components:

3-iodo-2-propynyl butylcarbamate:

Partition coefficient: n-octanol/water	:	log Pow: 2.81

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 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	:	Dispose of in accordance with local regulations. Do not let product enter drains. Do not dispose of with domestic refuse.
Contaminated packaging	:	Dispose of in accordance with local regulations.
Waste Code	:	12 01 09 : machining emulsions and solutions free of halogens

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Refer to protective measures listed in sections 7 and 8.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Other regulations	:	The product is classified and labelled in accordance with EC directives or respective national laws. Regional or national implementations of GHS may not implement all hazard classes and categories.

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: Other information

Full text of H-Statements

H302	:	Harmful if swallowed.
H304	:	May be fatal if swallowed and enters airways.
H314	:	Causes severe skin burns and eye damage.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H332	:	Harmful if inhaled.
H335	:	May cause respiratory irritation.
H360FD	:	May damage fertility. May damage the unborn child.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.
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
Asp. Tox.	:	Aspiration hazard
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Repr.	:	Reproductive toxicity
Skin Corr.	:	Skin corrosion
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT SE	:	Specific target organ toxicity - single exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; 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; 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.

GB / EN