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

1.1 Product identifier

Trade name : D501-AE4 hebro®sol 15

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

Use of the Sub-
stance/Mixture : Cleaner (solvent) for professional application in industry and trade

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)

Aerosols, Category 2 H223: Flammable aerosol.
H229: Pressurised container: May burst if heated.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements : H223 Flammable aerosol.
H229 Pressurised container: May burst if heated.

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Precautionary statements : **Prevention:**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
Storage:
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Additional Labelling

The following percentage of the mixture consists of ingredient(s) with unknown acute oral toxicity: 100 %
The following percentage of the mixture consists of ingredient(s) with unknown acute dermal toxicity: 100 %
The following percentage of the mixture consists of ingredient(s) with unknown acute inhalation toxicity: 100 %
The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 100 %

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Isoparaffins

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Substances with a workplace exposure limit :			
Butane	106-97-8 203-448-7 601-004-00-0 01-2119474691-32		>= 2.5 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Call a physician if symptoms occur.

If inhaled : Provide fresh air.
Keep patient warm and at rest.
If symptoms persist, call a physician.

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- In case of skin contact : Take off immediately all contaminated clothing.
Wash skin thoroughly with soap and water or use recognized skin cleanser.
Do NOT use solvents or thinners.
- 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.

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

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 : Provide sufficient air exchange and/or exhaust in work rooms.
Remove all sources of ignition.
Do not breathe vapour.
Refer to protective measures listed in sections 7 and 8.

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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

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 : Do not breathe vapours or spray mist. When using do not eat, drink or smoke. For personal protection see section 8. Take precautionary measures against static discharges. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking. Keep away from children.

Advice on protection against fire and explosion : Vapours are heavier than air and may spread along floors.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Electrical installations / working materials must comply with the technological safety standards. Follow the water regulations.

Further information on storage conditions : Keep only in the original container in a cool, well-ventilated place. Keep away from heat. Keep away from sources of ignition - No smoking.

Advice on common storage : Incompatible with oxidizing agents.

7.3 Specific end use(s)

Specific use(s) : Cleaner (solvent) for professional application in industry and trade

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Butane	106-97-8	TWA	600 ppm 1,450 mg/m ³	GB EH40
	Further information: Capable of causing cancer and/or heritable genetic damage., Carcinogenic only applies if butane contains more than 0.1% of buta-1,3-diene			
		STEL	750 ppm 1,810 mg/m ³	GB EH40
	Further information: Capable of causing cancer and/or heritable genetic damage., Carcinogenic only applies if butane contains more than 0.1% of buta-1,3-diene			
		STEL	750 ppm 1,810 mg/m ³	GB EH40
	Further information: Capable of causing cancer and/or heritable genetic damage., Carcinogenic only applies if butane contains more than 0.1% of buta-1,3-diene			
		TWA	600 ppm 1,450 mg/m ³	GB EH40
	Further information: Capable of causing cancer and/or heritable genetic damage., Carcinogenic only applies if butane contains more than 0.1% of buta-1,3-diene			

8.2 Exposure controls

Engineering measures

Provide sufficient air exchange and/or exhaust in work rooms.

Personal protective equipment

Eye/face 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.

Skin and body protection : Wear suitable protective clothing.

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

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

Physical state : aerosol

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Colour	:	colourless
Odour	:	mild
	:	Not applicable
	:	Not applicable
Upper explosion limit / Upper flammability limit	:	Upper flammability limit 10.9 %(V)
Lower explosion limit / Lower flammability limit	:	Lower flammability limit 0.6 %(V)
Flash point	:	< 1 °C
Auto-ignition temperature	:	230 °C
pH	:	Not applicable
Viscosity	:	
Viscosity, kinematic	:	Not applicable
Solubility(ies)	:	
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	Not applicable
Vapour pressure	:	3,500 hPa (20 °C) Information taken from reference works and the literature.
Density	:	0.75 g/cm ³ (20 °C) Method: DIN 51757
Relative vapour density	:	not determined

9.2 Other information

Explosives	:	Vapours may form explosive mixture with air.
Substances and mixtures, which in contact with water, emit flammable gases	:	In use, may form flammable/explosive vapour-air mixture.
Metal corrosion rate	:	Not applicable

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.

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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 : Oxidizing agents

10.6 Hazardous decomposition products

In case of fire hazardous decomposition products may be produced such as:

Carbon dioxide (CO₂)

Carbon monoxide

SECTION 11: Toxicological information

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

Skin corrosion/irritation

Product:

Remarks : Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in desiccation of the skin.

Serious eye damage/eye irritation

Product:

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

Respiratory or skin sensitisation

Product:

Remarks : This information is not available.

Carcinogenicity

Product:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

11.2 Information on other hazards

Further information

Product:

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

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SECTION 12: Ecological information

12.1 Toxicity

No data available

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

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

No data available

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 : 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 : Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

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SECTION 14: Transport information

14.1 UN number or ID number

ADR : UN 1950
RID : UN 1950
IMDG : UN 1950
IATA : UN 1950

14.2 UN proper shipping name

ADR : AEROSOLS
RID : AEROSOLS
IMDG : AEROSOLS
IATA : Aerosols, flammable

14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADR	: 2	2.1
RID	: 2	2.1
IMDG	: 2	2.1
IATA	: 2.1	

14.4 Packing group

ADR
Packing group : Not assigned by regulation
Classification Code : 5F
Labels : 2.1
Tunnel restriction code : (D)

RID
Packing group : Not assigned by regulation
Classification Code : 5F
Hazard Identification Number : 23
Labels : 2.1

IMDG
Packing group : Not assigned by regulation
Labels : 2.1
EmS Code : F-D, S-U
Remarks : "IMDG-Code segregation group not applicable"., Protected from sources of heat., For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS or WASTE GAS CARTRIDGES: Category C, Clear of living quarters., For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.

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IATA (Cargo)

Packing instruction (cargo aircraft) : 203
Packing instruction (LQ) : Y203
Packing group : Not assigned by regulation
Labels : Flammable Gas

IATA_P (Passenger)

Packing instruction (passenger aircraft) : 203
Packing instruction (LQ) : Y203
Packing group : Not assigned by regulation
Labels : Flammable Gas

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

UK REACH List of substances subject to authorisation (Annex XIV) : Not applicable

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

Other regulations:

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: Other information

Full text of other abbreviations

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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; AIIIC - 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:

Aerosol 2

H223, H229

Classification procedure:

Calculation method

GB / EN