

Safety data sheet

according to 1907/2006/EC, Article 31 and 2020/878/EC

Printing date: 26.04.2023

**Version number 1

Revision: 26.05.2021

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

1.1 Product identifier

Trade name: Liebherr Duro Wind PBG

Application / Use: Lubricating grease

Article number:

Set-number MSDS:

18117

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

Application of the substance / the preparation: Grease

Uses advised against: No further relevant information available.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

LIEBHERR-LOGISTICS GmbH

St. Vitus 1

DE - 88457 Kirchdorf an der Iller

LIEBHERR-COMPONENTS BIBERACH GmbH

Hans-Liebherr-Strasse 45

DE - 88400 Biberach an der Riß

LIEBHERR-WERK BIBERACH GmbH

Memminger Straße 120

DE - 88400 Biberach an der Riß

LIEBHERR-WERK EHINGEN GmbH

Dr.-Hans-Liebherr-Strasse 1

DE - 89584 Ehingen

LIEBHERR-MISCHTECHNIK GmbH

Im Elchgrund 12

DE - 88427 Bad Schussenried

LIEBHERR-MINING EQUIPMENT COLMAR SAS

49 rue Frédéric Hartmann

CS 50038

FR - 68025 Colmar Cedex

LIEBHERR-WERK NENZING GmbH

Dr.-Hans-Liebherr-Strasse 1

AT - 6710 Nenzing

Further information obtainable from:

Liebherr-Lubricant-Hotline: +49 (0) 73 54 / 80-6060

email: lubricants@liebherr.com

1.4 Emergency telephone number:

In case of emergency ONLY: During working hours (CET): +49 (0) 73 54 / 80-6060

Emergency response (24 hours) CHEMTREC: 1-800-424-9300 / +1-703-741-5970

+ (44)-203-8073798 (United Kingdom)

+ (31)-858880596 (Netherlands)

+ (64)-98010034 (New Zealand)

+ (61)-290372994 (Australia)

0-800-983-611 (South Africa)

+1-703-527-3887 (USA & Canada)

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 The product is not classified, according to the CLP regulation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 Void

Hazard pictograms Void

Signal word Void

Hazard statements Void

Precautionary statements

P501 Dispose of contents/container in accordance with local regulations.

Additional information:

EUH208 Contains Zinc Naphthenate. May produce an allergic reaction.

EUH210 Safety data sheet available on request.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description: Mixture of base oils with thickener and additives.

Dangerous components:

CAS: 68411-46-1 EINECS: 270-128-1 Reg.nr.: 01-2119491299-23	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene Aquatic Chronic 3, H412	≥2.5-≤10%
CAS: 4259-15-8 EINECS: 224-235-5 Reg.nr.: 01-2119493635-27	Zinc bis[O,O-bis(2-ethylhexyl)]bis(dithiophosphate) Eye Dam. 1, H318; Aquatic Chronic 2, H411 Specific concentration limit: Eye Dam. 1; H318: C ≥ 50 %	≥0.25-<2.5%
CAS: 12001-85-3 EINECS: 234-409-2	Zinc Naphthenate Aquatic Chronic 2, H411; Eye Irrit. 2, H319; Skin Sens. 1B, H317	≥0.25-<1%

Additional information:

The wording of the hazard symbols and H-phrases is specified in section 16 if dangerous ingredients are mentioned.

Components with threshold limit values are mentioned at section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:

Take affected persons out into the fresh air.

Position and transport stably in side position.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing: Do not induce vomiting; call for medical help immediately.

Information for doctor: Treat symptomatically.

4.2 Most important symptoms and effects, both acute and delayed: No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed: No further relevant information available.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

CO₂, sand, extinguishing powder.

Use fire extinguishing methods suitable to surrounding conditions.

For safety reasons unsuitable extinguishing agents: Do not use water with full jet.

5.2 Special hazards arising from the substance or mixture:

In case of fire, the following can be released:

Nitrogen oxides (NO_x)

Carbon monoxide (CO)

Sulphur oxide (SO_x)

5.3 Advice for firefighters

Protective equipment:

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

Wear fully protective suit.

Additional information: Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective clothing.

Particular danger of slipping on leaked/spilled product.

6.2 Environmental precautions:

Do not allow to enter sewers, surface or ground water.

Prevent from spreading (e.g. by damming-in or oil barriers).

Inform respective authorities in case of seepage into water course or sewage system.

6.3 Methods and material for containment and cleaning up:

Pick up mechanically.

Dispose of the material collected according to regulations.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Store in cool, dry place in tightly closed receptacles.

No special precautions are necessary if used correctly.

Information about fire - and explosion protection: Fire class EN 2: B

Handling: When handling product in drums use safety footwear and suitable tools. At work please do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

Store only in the original receptacle.

Provide floor trough without outlet.

Prevent any seepage into the ground.

Use only receptacles specifically permitted for this substance/product.

Information about storage in one common storage facility:

Store away from foodstuffs.

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Store away from oxidising agents.

Further information about storage conditions: Recommended storage temperature: 5 to 40 °C.

Shelf life from date of dispatch: 3 years (at proper storage)

7.3 Specific end use(s): For more information see technical information.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

DNELs		
CAS: 68411-46-1 Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene		
Dermal	DNEL worker (long term exposure)	0.44 mg/kg bw/day (human)
Inhalative	DNEL worker (long term exposure)	0.31 mg/m³ (human)
CAS: 4259-15-8 Zinc bis[O,O-bis(2-ethylhexyl)]bis(dithiophosphate)		
Dermal	DNEL worker (long term exposure)	9.6 mg/kg bw/day (human)
Inhalative	DNEL worker (short term exposure)	6.6 mg/m³ (human)
PNECs		
CAS: 68411-46-1 Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene		
PNEC	0.034 mg/l (fresh water)	
CAS: 4259-15-8 Zinc bis[O,O-bis(2-ethylhexyl)]bis(dithiophosphate)		
PNEC	3.8 mg/l (sewage plant)	
	0.0046 mg/l (sea water)	

Ingredients with biological limit values:

Additional Occupational Exposure Limit Values for possible hazards during processing: TLV-TWA oil mist 5 mg/m³ (USA, ACGIH)

Additional information:

The lists valid during the making were used as basis.

If formation of steam, mist or aerosols take place the concentration in the air has to be kept at the lowest possible level.

8.2 Exposure controls

Appropriate engineering controls No further data; see section 7.

Individual protection measures, such as personal protective equipment

General protective and hygienic measures:

Avoid contact with the skin.

The usual precautionary measures are to be adhered to when handling chemicals.

Wash hands before breaks and at the end of work.

Avoid close or long term contact with the skin.

Respiratory protection:

No respiratory protection is ordinarily required under normal conditions of use. Select a filter suitable for combined particulate/ gases and organic vapours (boiling point > 65 °C, AP2, EN 14387), if exposure limit is exceeded or when aerosol or mist is formed.

Hand protection

Safety gloves of nitrile rubber or viton.

Preventive skin protection by use of skin-protecting agents is recommended.

Material of gloves

Fluorocarbon rubber (Viton)

Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material:

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

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Value for the permeation: Level = 6 (480 min)

Eye/face protection Safety glasses with side shields or chemical goggles are required.

Body protection: Protective work clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Physical state	Fluid
Colour:	Beige
Odour:	Characteristic
Odour threshold:	Not determined.
Melting point/freezing point:	Not determined.
Boiling point or initial boiling point and boiling range	Not determined.
Flammability	Not applicable.
Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	>200 °C (DIN EN ISO 2592)
Auto-ignition temperature:	Not determined.
Decomposition temperature:	Not determined.
pH	Not applicable.
Viscosity:	
Kinematic viscosity	Not determined.
Solubility	
water:	Insoluble.
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure:	Not determined.
Density and/or relative density	
Density at 20 °C:	~0.94 g/cm ³ (DIN 51 757)
Relative density	Not determined.
Vapour density	Not determined.

9.2 Other information

Appearance:	
Form:	Pasty
Important information on protection of health and environment, and on safety.	
Explosive properties:	The product shows no danger of explosion, but it may build explosive mixtures with air (by vaporisation, oil mist formation, heating above the flash point).
Change in condition	
Drip point:	>250 °C (DIN 51 801)
Evaporation rate	Not determined.

Information with regard to physical hazard classes

Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void

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Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

SECTION 10: Stability and reactivity

10.1 Reactivity See 10.2 to 10.6

10.2 Chemical stability: Stable at normal conditions.

Thermal decomposition / conditions to be avoided: Avoid contact with heat, sparks, flames and all other sources of ignition.

10.3 Possibility of hazardous reactions: Reacts with strong oxidising agents.

10.4 Conditions to avoid No specific data available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: Oxides of carbon, nitrogen, sulfur and metal oxides.

Additional information: Product is not classified as inflammable but can burn.

SECTION 11: Toxicological information

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

These statements are based on data for components of the material or for similar materials.

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

LD/LC50 values relevant for classification:		
CAS: 68411-46-1 Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene		
Oral	LD50	>5,000 mg/kg (rat) (OECD 401)
CAS: 4259-15-8 Zinc bis[O,O-bis(2-ethylhexyl)]bis(dithiophosphate)		
Oral	LD50	>3,100 mg/kg (rat) (OECD 401)
Dermal	LD50	>5,000 mg/kg (rabbit) (OECD 402)

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

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

by inhalation: No irritant effect expected.

Respiratory or skin sensitisation

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

There are no indications for a sensitising potential of the product. Contains substances with sensitising potential in low concentration.

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

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

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

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure Based on available data, the classification criteria are not met.

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

Subacute to chronic toxicity:

Prolonged and/or repeated contact may cause defatting of the skin which can lead to dermatitis and may make the skin more susceptible to irritation and penetration by other materials.

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Additional toxicological information:

The product shows the following dangers according to the calculation method of Regulation (EC) No 1272/2008 as issued in the latest version:
Can lead to skin sensitisation in case of sensitive individuals. These statements are based on data for components of the material or for similar materials.

11.2 Information on other hazards

Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

CAS: 68411-46-1 Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene

EC50/48h	51 mg/l (Daphnia magna) (OECD 202)
EC50/72h	>100 mg/l (Desmodesmus subspicatus) (OECD 201)
EC10	1.69 mg/l (Daphnia magna) (reproduction)

CAS: 4259-15-8 Zinc bis[O,O-bis(2-ethylhexyl)]bis(dithiophosphate)

EC50/48h	75 mg/l (Daphnia magna) (OECD 202)
EC50/72h	>240 mg/l (Desmodesmus subspicatus)
LC50/96h	4.4 mg/l (Oncorhynchus mykiss) (OECD 203)
NOEC/21d	0.4 mg/l (daphnia)

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential

CAS: 68411-46-1 Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene

log Pow	>5 (Octanol/water coefficient)
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CAS: 4259-15-8 Zinc bis[O,O-bis(2-ethylhexyl)]bis(dithiophosphate)

log Kow	3.59 (Octanol/water coefficient)
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12.4 Mobility in soil The product is not soluble in water. If it enters soil, it will adsorb to soil particles and will not be mobile.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects:

Additional ecological information:

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow product to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Contact waste processors for recycling information.

European waste catalogue

The recommended waste code refers to the product as delivered.

The assignment of the waste code number according to the application is to be conducted in individual cases by the waste producer based on the European Waste Code Catalogue in coordination with the regional disposal company and with aspects specific to the sector and process in mind.

12 01 12*	spent waxes and fats
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Uncleaned packaging: Empty packing completely. Handover to authorized disposal company.

Recommendation:

Disposal must be made according to official regulations.

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

SECTION 14: Transport information

14.1 UN number or ID number ADR, IMDG, IATA	Void
14.2 UN proper shipping name ADR, IMDG, IATA	Void
14.3 Transport hazard class(es) ADR, IMDG, IATA Class	Void
14.4 Packing group ADR, IMDG, IATA	Void
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Not applicable.
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
UN "Model Regulation":	Void

SECTION 15: Regulatory information

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

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II
None of the ingredients is listed.
REGULATION (EU) 2019/1148
Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))
None of the ingredients is listed.
Annex II - REPORTABLE EXPLOSIVES PRECURSORS
None of the ingredients is listed.
Regulation (EC) No 273/2004 on drug precursors
None of the ingredients is listed.
Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors
None of the ingredients is listed.

National regulations:

Waterhazard class: Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

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Relevant phrases

H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

Department issuing SDS: Liebherr Lubricants

Contact:

Liebherr-Lubricant-Hotline: +49 (0) 73 54 / 80-6060
E-mail: lubricants@liebherr.com

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
vPvB: very Persistent and very Bioaccumulative
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1B: Skin sensitisation – Category 1B
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

*** Data compared to the previous version altered.**

****Information about the version number:** Replaces all previous versions.