

Safety data sheet

according to 1907/2006/EC, Article 31 and 453/2010/EC respectively

Printing date: 02.05.2015

**Version number 1

Revision: 24.04.2015

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

1.1 Product identifier

Trade name: **Liebherr Gear PG 220**

Application / Use: Industrial transmission oil, synthetic

Article number:

Set-number MSDS:
18022, 21022

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

Application of the substance / the preparation: Industrial gear oil

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
D - 88457 Kirchdorf an der Iller

LIEBHERR-COMPONENTS BIBERACH GmbH
Hans-Liebherr-Strasse 45
D - 88400 Biberach an der Riß

LIEBHERR-WERK BIBERACH GmbH
Memminger Straße 120
D - 88400 Biberach an der Riß

LIEBHERR-WERK EHINGEN GmbH
Dr.-Hans-Liebherr-Strasse 1
D - 89584 Ehingen

LIEBHERR-MISCHTECHNIK GmbH
Im Elchgrund 12
D - 88427 Bad Schussenried

LIEBHERR-MINING EQUIPMENT COLMAR SAS
49 rue Frédéric Hartmann
CS 50038
F - 68025 Colmar Cedex

LIEBHERR-WERK NENZING GmbH
Dr.-Hans-Liebherr-Strasse 1
A - 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:

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+1-703-527-3887
+44-870-8200418 (United Kingdom)
+31-858880596 (Netherlands)
0-800-983-611 (South Africa)

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 N,N-bis(2-ethylhexyl)-methylbenzotriazol-methanamine. 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 Mixture

Description: Mixture

Dangerous components:

CAS: 25322-69-4 NLP: 500-039-8	Polypropylene glykol Acute Tox. 4, H302	< 10%
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	< 5%
CAS: 35074-77-2 EINECS: 252-346-9	Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-1,6-hexanediyl ester Aquatic Chronic 4, H413	< 5%

Additional information:

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

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Components with threshold limit values are mentioned at section 8.

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SECTION 4: First aid measures

4.1 Description of first aid measures

General information: No special measures required.

After inhalation: Supply fresh air.

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

After eye contact: Rinse opened eye for several minutes under running water.

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

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

Information for doctor: Treat symptomatically.

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

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

Particular danger of slipping on leaked/spilled product.

Wear protective clothing.

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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).

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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.

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

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

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.

Information about storage in one common storage facility:

Store away from foodstuffs.

Store away from oxidising agents.

Store away from water.

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

Shelf life from date of dispatch: 5 years (at proper storage)

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

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see section 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

DNELs

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

Dermal	DNEL worker	0.62 mg/kg bw/day (human)
Inhalative	DNEL worker	4.37 mg/m ³ (human)

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PNECs

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

PNEC | 0.051 mg/l (fresh water)

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

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

Personal protective equipment:

General protective and hygienic measures:

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

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, EN 14387), if exposure limit is exceeded or when aerosol or mist is formed.

Protection of hands:

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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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

Eye protection: Goggles recommended during refilling.

Body protection: Protective work clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form: Fluid

Colour: Brown

Odour: Mild

Odour threshold: Not determined.

pH-value: Not determined.

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Change in condition

Melting point/Melting range:	Not determined.
Boiling point/Boiling range:	Undetermined.
Drip point:	Not determined.
Pour point:	-36 °C (DIN ISO 3016)

Flash point: 280 °C (DIN ISO 2592)

Flammability (solid, gaseous): Not applicable.

Ignition temperature: Not applicable.

Decomposition temperature: Not determined.

Self-igniting: Product is not selfigniting.

Danger of explosion: 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).

Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

Vapour pressure:	Not determined.
Density at 15 °C:	1.0 g/cm ³ (DIN 51 757)
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.

Solubility in / Miscibility with water: Not miscible or difficult to mix.

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

Kinematic at 40 °C:	228 mm ² /s (DIN 51 562)
9.2 Other information	No further relevant information available.

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.

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10.6 Hazardous decomposition products: No dangerous decomposition products known.

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

SECTION 11: Toxicological information

11.1 Information on toxicological effects These statements are based on data for components of the material or for similar materials.

Acute toxicity:

LD/LC50 values relevant for classification:

25322-69-4 Polypropylene glykol

Oral	LD50	500 mg/kg (ATE)
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Primary irritant effect:

on the skin: No irritant effect.

on the eye: No irritant effect.

by inhalation: Inhalation of vapor or mist may cause irritation.

Sensitisation:

There are no indications for a sensitising potential of the product. Contains substances with sensitising potential in low concentration (<1%).

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.

Additional toxicological information:

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

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

EC50/48h	> 51 mg/l (Daphnia magna)
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EC50/72h	> 100 mg/l (Desmodesmus subspicatus)
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12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

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.

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.

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12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects: No further relevant information available.

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

13 02 06* | synthetic engine, gear and lubricating oils

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

ADR, ADN, IMDG, IATA

Void

14.2 UN proper shipping name

ADR, ADN, IMDG, IATA

Void

14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class

Void

14.4 Packing group

ADR, IMDG, IATA

Void

14.5 Environmental hazards:

Marine pollutant:

No

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

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UN "Model Regulation":

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SECTION 15: Regulatory information

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

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.

Relevant phrases

H302 Harmful if swallowed.

H412 Harmful to aquatic life with long lasting effects.

H413 May cause long lasting harmful effects to aquatic life.

Department issuing MSDS: Department of Environmental Protection

Contact:

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

E-mail: lubricants@liebherr.com

Abbreviations and acronyms:

ADR: Accord européen sur le transport 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

Acute Tox. 4: Acute toxicity, Hazard Category 4

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

Aquatic Chronic 4: Hazardous to the aquatic environment - Chronic Hazard, Category 4

* Data compared to the previous version altered.

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

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