

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/10/2020

**Version number 3

Reviewed on 01/10/2020

* 1 Identification

Product identifierTrade name: **Liebherr Universalfett 9900**

Application: Lubricating grease

Article number:

Set-number SDS:

18014, 21014

Application of the substance / the preparation: Grease

Uses advised against: No further relevant information available.

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

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FR - 68025 Colmar Cedex

LIEBHERR-WERK NENZING GmbH

Dr.-Hans-Liebherr-Strasse 1

AT - 6710 Nenzing

LIEBHERR NENZING CRANE Co.

7075 Bennington Street

US - Houston, Texas 77028

LIEBHERR CONSTRUCTION EQUIPMENT Co.

LIEBHERR CRANES, Inc.

LIEBHERR MINING EQUIPMENT Co.

LIEBHERR CONCRETE TECHNOLOGY Co.

4100 Chestnut Avenue

US - Newport News, VA 23607

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Information department:

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

email: lubricants@liebherr.com

Emergency telephone number:

In case of emergency ONLY:

During working hours (CET): + 49 (0) 73 54 / 80-6060

Emergency response (24 hours) CHEMTREC: +1-703-527-3887 / +1-703-741-5970

1-800-424-9300 (within USA & Canada)

+(44)-870-8200418 (United Kingdom)

+(61)-290372994 (Australia)

+(31)-858880596 (Netherlands)

0-800-983-611 (toll free within South Africa)

* 2 Hazard(s) identification

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).**Hazard pictograms**

GHS08

Signal word Warning**Hazard-determining components of labeling:**

Zink-bis(2-ethylhexanoat)

Hazard statements

Suspected of damaging fertility or the unborn child.

Precautionary statements

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/protective clothing/eye protection/face protection.

If on skin: Wash with plenty of soap and water.

Store locked up.

Dispose of contents/container in accordance with local regulations.

Information pertaining to particular dangers for man and environment:

Contains Zinc Naphthenate, Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts. May produce an allergic reaction.

Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

* 3 Composition/information on ingredients

Chemical characterization: Mixture**Description:** Mixture of base oils with thickener and additives.**Dangerous components:**

64742-52-5	Distillates (Petroleum), hydrotreated heavy naphthenic	25-50%
85203-81-2	Zink-bis(2-ethylhexanoat)	≥0.1-≤5%
4259-15-8	Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	≤2.5%

Additional information:

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

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Components with threshold limit values are mentioned in section 8.

* 4 First-aid measures

Description of first aid measures

General information:

Take affected persons out into the fresh air.

Position and transport stably on side.

After inhalation: Supply fresh air; consult doctor in case of complaints.**After skin contact:** Immediately wash with water and soap and rinse thoroughly. Remove contaminated clothing.**After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:

Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Do not induce vomiting; immediately call for medical help.

Information for doctor: Treat symptomatically.**Most important symptoms and effects, both acute and delayed:** No further relevant information available.**Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents:

CO₂, sand, extinguishing powder.

Use fire fighting measures that suit the environment.

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

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)

Advice for firefighters

Protective equipment:

Wear self-contained breathing apparatus.

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.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective clothing and equipment according to section 8.

Particular danger of slipping on leaks or spills of this product.

Environmental precautions:

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

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

Methods and material for containment and cleaning up:

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

Dispose of the collected material according to local regulations.

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.

Local authorities should be advised if significant spillages cannot be contained.

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Protective Action Criteria for Chemicals

PAC-1:
None of the ingredients is listed.
PAC-2:
None of the ingredients is listed.
PAC-3:
None of the ingredients is listed.

* 7 Handling and storage

Handling: Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists.

Precautions for safe handling

Store in cool, dry place in tightly closed containers.

No special precautions are necessary if used correctly.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

Store only in the original container.

Provide floor trough without outlet.

Prevent any seepage into the ground.

Use only containers specifically permitted for this substance/product.

Information about storage in one common storage facility:

Store away from foodstuffs.

Store away from oxidizing agents.

Store away from water.

Further information about storage conditions:

Keep container tightly sealed.

Storage temperature 5°C (41°F) to 40°C (104°F)

Minimum shelf life/durability from dispatch on: 3 years (at proper storage)

Work Practices: Read instructions for use of the product on label.

Empty Container Warning:

Empty containers retain residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, bronze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity or other sources of ignition; they may explode and cause injury or death. Do not attempt to refill containers since residue is difficult to remove. Empty drums should be completely drained, properly bunged and returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner in accordance with governmental regulations.

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

* 8 Exposure controls/personal protection

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

Control parameters

Components with limit values that require monitoring at the workplace:

Mineral oil, pure lightly, severely refined TWA 5 mg/m³, STEL 10 mg/m³ air (ACGIH)

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

Additional information: If formation of steam, mist or aerosols takes place, the concentration in the air must be kept at the lowest possible level.

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Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid close or long term contact with the skin.

Breathing equipment:

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.

Protection of hands:



Protective gloves

Where hand contact with the product may occur the use of gloves approved to relevant standards (ASTM F 739) made from fluorcarbon rubber (Viton) or nitrile rubber may provide suitable chemical protection. Suitability, penetration time of substances and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness and dexterity. Always seek advice from glove supplier. Protective gloves will deteriorate over time due to physical and chemical damage. Inspect and replace gloves on a regular basis. The frequency of replacement will depend upon circumstances of use. Consult with manufacturer of the gloves in case of long term exposure.

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

Eye protection:

Safety glasses with side shields or chemical goggles are required.

Contact lenses should also not be worn if the product could be splashed into the eyes.

Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

The listed ASTM testing standards are similar to, but not identical to, the DIN testing standards under which Liebherr Lubricants and Coolants have been evaluated.

Corresponding standards :

ASTM D86 - DIN ISO 3405

ASTM D97 - DIN ISO 3016

ASTM D92 - DIN EN ISO 2592

ASTM D93 - DIN EN ISO 2719

ASTM D1298 - DIN 51 757

ASTM D445 - DIN 51 562

Appearance:

Form: Pasty

Color: Beige

Odor: Characteristic

Odor threshold: Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: > 250 °C (> 482 °F)

Drip point > 230 °C (> 446 °F)

Flash point: > 200 °C (> 392 °F) (DIN EN ISO 2592)

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Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	Not determined.
Decomposition temperature:	Not determined.
Auto igniting:	Product is not self-igniting.
Danger of explosion:	This fluid exhibits no danger of explosion but may form explosive mixtures with air (by vaporisation, formation of oil mist, heating above the flash point).
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not determined.
Density at 20 °C (68 °F):	0.97 - 1.01 g/cm ³ (8.095 - 8.428 lbs/gal) (DIN 51 757)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Insoluble.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Kinematic:	Not applicable.
Other information	No further relevant information available.

* 10 Stability and reactivity

Reactivity: See section 10.

Chemical stability: Stable at normal conditions.

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

Possibility of hazardous reactions: Reacts with strong oxidizing agents.

Conditions to avoid: No further relevant information available.

Incompatible materials: No further relevant information available.

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

Additional information: Not classified as flammable but can burn.

* 11 Toxicological information

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

Acute toxicity:

LD/LC50 values that are relevant for classification:		
64742-52-5 Distillates (Petroleum), hydrotreated heavy naphthenic		
Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)
85203-81-2 Zink-bis(2-ethylhexanoat)		
Oral	LD50	6,600 mg/kg (rat)
4259-15-8 Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)		
Oral	LD50	>3,000 mg/kg (rat)

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Dermal	LD50	>5,000 mg/kg (rabbit)
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Primary irritant effect:**on the skin:** Based on available data, the classification criteria are not met.**on the eye:** Based on available data, the classification criteria are not met.**Inhalation:** No irritant effect expected.**Sensitization:** There are no indications for a sensitising potential of the product. Contains substances with sensitising potential in low concentration.**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:

This product shows the following dangers according to internally approved calculation methods for preparations:

Repr. 2

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

The product contains one or more substances of the following category:

Repr. 2 (EU): CAS 85203-81-2

Repr. 2

12 Ecological information

Toxicity**Aquatic toxicity:****4259-15-8 Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)**

EC50/48h 1-1.5 mg/l (Daphnia magna)

LC50/96h 10-35 mg/l (Pimephales promelas)

Persistence and degradability: No further relevant information available.**Behavior in environmental systems:****Bioaccumulative potential** No further relevant information available.**Mobility in soil** This 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 2 (Self-assessment): hazardous for water

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

Danger to drinking water if even small quantities leak into the ground.

Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects:** No further relevant information available.

13 Disposal considerations

Waste treatment methods

All recovered material should be packaged, labeled, transported and disposed or reclaimed in conformance with Good Engineering Practices.

Comply with all applicable governmental regulations. Avoid land filling. Reclaim where possible.

Recommendation:

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

Contact waste processors for recycling information.

Delivery of waste oil/product to officially authorized collectors only.

Contaminated packaging: Clean packaging completely. Hand over to authorized disposal company.**Recommendation:**

Disposal of product and packaging must be made according to official regulations (state, federal or local).

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Drain used containers thoroughly. They can be recycled after thorough and proper cleaning.
Incinerate or dispose of in accordance with existing federal, state or local environmental regulations.

14 Transport information

UN-Number DOT, ADR, ADN, IMDG, IATA	Void
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	Void
Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA Class	Void
Packing group DOT, ADR, IMDG, IATA	Void
Environmental hazards: Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Void

* 15 Regulatory information

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

SARA

SARA Section 313 (Specific toxic chemical listings):

Toxic chemical - yes

Product is regulated as zinc compounds N982

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

2-Ethylhexanoic acid, zinc salt, CAS 136-53-8

Zincdialkyldithiophosphate, CAS 68457-79-4

Section 311:

Hazardous Chemical - yes

Immediate - yes

Delayed - no

Fire - no

Sudden Release - no

Reactive - no

TSCA (Toxic Substances Control Act):

All ingredients are listed or are exempt.

Hazardous Air Pollutants

None of the ingredients is listed.

Cal. Proposition 65

This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

OSHA hazard category: Hazardous under OSHA Hazard Communication Standard: yes

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CERCLA Reportable Quantity

Component - Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS 4259-15-8 (regulated as zinc and compounds)

2-Ethylhexanoic acid, zinc salt, CAS 136-53-8

Zincdialkyldithiophosphate, CAS 68457-79-4 (regulated as zinc and compounds)

No RQ established for this general class

National regulations:**Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.*** 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.

Disclaimer:

The information contained herein is correct to the best of our knowledge. Technical data are average values and subject to normal product variation. [See ***below.] All sales are subject to our standard terms and conditions of sale, copies of which are available upon request and which are part of our order acknowledgments. NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS MADE WITH RESPECT TO THE PRODUCT DESCRIBED HEREIN. Nothing contained herein shall constitute a license or recommendation to practice any invention covered by a patent without a license from the owner of the patent.

***Liebherr reserves the right to change this technical data due to changes in the product and product innovation.

Department issuing SDS: Liebherr Lubricants**Contact:**

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

email: lubricants@liebherr.com

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

PBT: Persistent, Bioaccumulative and Toxic

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

DOT: US Department of Transportation

IATA: International Air Transport Association

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

vPvB: very Persistent and very Bioaccumulative

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Repr. 2: Reproductive toxicity – Category 2

*** Data compared to the previous version altered.******Information about the version numer:** Replaces all previous versions.