

## **Festo Spezialfett LUB-KC 1**

Version 1.0

Revision Date 06.06.2014

Print Date 06.06.2014

### **1. Identification of the substance/mixture and of the company/undertaking**

#### **1.1 Product identifier**

Product name : Festo Spezialfett LUB-KC 1  
Article-No. : 020328

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

Use of the : Grease  
Substance/Mixture

#### **1.3 Details of the supplier of the safety data sheet**

KLÜBER LUBRICATION MÜNCHEN  
Geisenhausenerstrasse 7  
D-81379 München  
Deutschland  
Tel: +49 (0) 897876-0  
Fax: +49 (0) 897876-333

E-mail address : mcm@klueber.com  
Responsible/issuing person : Material Compliance Management

National contact : Klüber Lubrication Great Britain Ltd.  
Hough Mills, Northowram  
Halifax, HX3 7BN  
Great Britain  
Tel: +44-1422-205115  
Fax: +44-1422-206073  
sales@uk.klueber.com

#### **1.4 Emergency telephone number**

0049 (0) 897876-700 (24hrs)

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### **2. Hazards identification**

#### **2.1 Classification of the substance or mixture**

##### **Classification (REGULATION (EC) No 1272/2008)**

Chronic aquatic toxicity, Category 3 H412: Harmful to aquatic life with long lasting effects.

##### **Classification (67/548/EEC, 1999/45/EC)**

Dangerous for the environment R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### **2.2 Label elements**

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### Labelling (REGULATION (EC) No 1272/2008)

Hazard statements : H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P273 Avoid release to the environment.

### 2.3 Other hazards

## 3. Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Mineral oil.  
lithium soap

#### Hazardous components

Chemical Name	CAS-No. EC-No. Index-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	4259-15-8 224-235-5	N; R51/53	Aquatic Chronic 2; H411	>= 2.5 - < 10

For the full text of the R-phrases mentioned in this Section, see Section 16.

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. First aid measures

### 4.1 Description of first aid measures

If inhaled : Remove person to fresh air. If signs/symptoms continue, get medical attention.  
Keep patient warm and at rest.  
If unconscious place in recovery position and seek medical advice.  
Keep respiratory tract clear.  
If breathing is irregular or stopped, administer artificial respiration.

In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.  
In case of contact, immediately flush skin with plenty of water.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.

In case of eye contact : If eye irritation persists, consult a specialist.  
Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes.

If swallowed : If unconscious place in recovery position and seek medical

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advice.  
Keep respiratory tract clear.  
Never give anything by mouth to an unconscious person.  
Get medical attention if symptoms occur.

: Move the victim to fresh air.

: Rinse mouth with water.

### **4.2 Most important symptoms and effects, both acute and delayed**

### **4.3 Indication of any immediate medical attention and special treatment needed**

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## **5. Firefighting measures**

### **5.1 Extinguishing media**

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : none

### **5.2 Special hazards arising from the substance or mixture**

Specific hazards during firefighting : Fire may cause evolution of:  
Carbon oxides  
Metal oxides  
Oxides of phosphorus  
Sulphur oxides

### **5.3 Advice for firefighters**

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.  
In the case of respirable dust and/or fumes, use self-contained breathing apparatus.  
Exposure to decomposition products may be a hazard to health.

Further information : Standard procedure for chemical fires.  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

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## **6. Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Evacuate personnel to safe areas.  
Use personal protective equipment.  
Ensure adequate ventilation.  
Refer to protective measures listed in sections 7 and 8.

### **6.2 Environmental precautions**

Environmental precautions : Do not allow contact with soil, surface or ground water.  
Prevent further leakage or spillage if safe to do so.

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If the product contaminates rivers and lakes or drains inform respective authorities.

### 6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

### 6.4 Reference to other sections

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## 7. Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling : Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Wash hands and face before breaks and immediately after handling the product.  
Do not ingest.  
Do not repack.  
Do not re-use empty containers.  
These safety instructions also apply to empty packaging which may still contain product residues.  
Keep container closed when not in use.  
Avoid inhalation of vapour or mist.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in original container.  
Keep container closed when not in use.  
Keep in a dry, cool and well-ventilated place.  
To maintain product quality, do not store in heat or direct sunlight.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Store in accordance with the particular national regulations.  
Keep in properly labelled containers.

### 7.3 Specific end use(s)

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## 8. Exposure controls/personal protection

### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

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zinc bis[O,O-bis(2-ethylhexyl)]  
bis(dithiophosphate)

: End Use: Workers  
Exposure routes: Inhalation  
Potential health effects: Long-term systemic effects  
Value: 6.6 mg/m<sup>3</sup>

End Use: Workers  
Exposure routes: Skin contact  
Potential health effects: Long-term systemic effects

End Use: Consumers  
Exposure routes: Inhalation  
Potential health effects: Long-term systemic effects  
Value: 1.67 mg/m<sup>3</sup>

End Use: Consumers  
Exposure routes: Skin contact  
Potential health effects: Long-term systemic effects

End Use: Consumers  
Exposure routes: Ingestion

PNEC  
zinc bis[O,O-bis(2-ethylhexyl)]  
bis(dithiophosphate)

: Fresh water  
Value: 0.004 mg/l

Marine water  
Value: 0.0046 mg/l

Microbiological Activity in Sewage Treatment Systems  
Value: 3.8 mg/l

Fresh water sediment  
Value: 0.0701 mg/kg

Marine sediment  
Value: 0.00701 mg/kg

Soil  
Value: 0.0548 mg/kg

Oral  
Value: 8.33 mg/kg

## 8.2 Exposure controls

### Engineering measures

Maintain air concentrations below occupational exposure standards.

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment.

Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

none

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### Personal protective equipment

- Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
- Hand protection : For prolonged or repeated contact use protective gloves.  
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.  
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 break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case.
- Eye protection : Safety glasses with side-shields conforming to EN166
- Hygiene measures : Wash face, hands and any exposed skin thoroughly after handling.
- Protective measures : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.  
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

### Environmental exposure controls

- General advice : Do not allow contact with soil, surface or ground water.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

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## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- Form : paste
- Colour : brown
- Odour : characteristic
- Odour Threshold : No data available
- pH : No data available
- Melting point/range : No data available
- Boiling point/boiling range : No data available
- Flash point : not applicable
- Evaporation rate : No data available
- Flammability (solid, gas) : No data available
- Lower explosion limit : No data available

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Upper explosion limit	: No data available
Vapour pressure	: < 0.001 hPa, 20 °C
Relative vapour density	: No data available
Density	: 0.90 g/cm <sup>3</sup> , 20 °C
Water solubility	: insoluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Ignition temperature	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Oxidizing properties	: No data available

### 9.2 Other information

Sublimation point	: No data available
Bulk density	: No data available

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## 10. Stability and reactivity

### 10.1 Reactivity

### 10.2 Chemical stability

No decomposition if stored and applied as directed.

### 10.3 Possibility of hazardous reactions

Hazardous reactions	: No dangerous reaction known under conditions of normal use.
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### 10.4 Conditions to avoid

Conditions to avoid	: No conditions to be specially mentioned.
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### 10.5 Incompatible materials

Materials to avoid	: No materials to be especially mentioned.
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### 10.6 Hazardous decomposition products

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## 11. Toxicological information

### 11.1 Information on toxicological effects

#### Product

Acute inhalation toxicity	: This information is not available.
Acute dermal toxicity	: This information is not available.
Skin corrosion/irritation	: This information is not available.
Serious eye damage/eye	: This information is not available.

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irritation

Respiratory or skin sensitisation : This information is not available.

Germ cell mutagenicity

Genotoxicity in vitro : No data available

Genotoxicity in vivo : No data available

Carcinogenicity : No data available

Reproductive toxicity : No data available

Teratogenicity : No data available

Repeated dose toxicity : This information is not available.

Aspiration toxicity : This information is not available.

Further information : Information given is based on data on the components and the toxicology of similar products.

### **Components:**

**zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) :**

Acute oral toxicity : LD50: 3,100 mg/kg, rat

Acute dermal toxicity : LD50: > 5,000 mg/kg, rabbit

Skin corrosion/irritation : rabbit, Result: No skin irritation, Classification: No skin irritation, OECD Test Guideline 404, GLP: yes

Respiratory or skin sensitisation : Maximisation Test (GPMT), guinea pig, Result: Does not cause skin sensitisation., Classification: Does not cause skin sensitisation., OECD Test Guideline 406, GLP: yes

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## 12. Ecological information

### 12.1 Toxicity

#### **Product:**

Toxicity to fish : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Toxicity to daphnia and other aquatic invertebrates : No data available

Toxicity to algae : No data available

Toxicity to bacteria : No data available

#### **Components:**

**zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) :**

Toxicity to fish : LC50: 4.4 mg/l, 96 h, Oncorhynchus mykiss (rainbow trout), semi-static test, OECD Test Guideline 203, GLP: yes



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Toxicity to daphnia and other aquatic invertebrates : EC50: 75 mg/l, 48 h, Daphnia magna (Water flea), static test, OECD Test Guideline 202, GLP: yes

Toxicity to algae : EC50: 240 mg/l, 72 h, Desmodesmus subspicatus (green algae), static test, OECD Test Guideline 201, GLP: yes

### 12.2 Persistence and degradability

#### Product:

Biodegradability : No data available

Physico-chemical removability : No data available

#### Components:

**zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) :**

Biodegradability : aerobic, < 5 %, Result: Not readily biodegradable., OECD Test Guideline 301D

### 12.3 Bioaccumulative potential

#### Product:

Bioaccumulation : This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)., This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

### 12.4 Mobility in soil

#### Product:

Mobility : No data available

Distribution among environmental compartments : 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.

#### Components:

**zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) :**

Assessment : Non-classified PBT substance, Non-classified vPvB substance

### 12.6 Other adverse effects

#### Product:

Additional ecological information : Harmful to aquatic life with long lasting effects.

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## 13. Disposal considerations

### 13.1 Waste treatment methods

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- |                        |   |
|------------------------|---|
| Product                | : The product should not be allowed to enter drains, water courses or the soil.                       |
|                        | : Waste codes should be assigned by the user based on the application for which the product was used. |
| Contaminated packaging | : Empty containers can be landfilled, when in accordance with the local regulations.                  |

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### 14. Transport information

#### 14.1 UN number

**ADR**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

#### 14.2 Proper shipping name

**ADR**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

#### 14.3 Transport hazard class

**ADR**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

#### 14.4 Packing group

**ADR**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

#### 14.5 Environmental hazards

**ADR**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

#### 14.6 Special precautions for user

No data available

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### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not available

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## 15. Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).
Major Accident Hazard Legislation	:	96/82/EC      Update: not applicable

### 15.2 Chemical Safety Assessment

This information is not available.

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## 16. Other information

### Full text of R-phrases referred to under sections 2 and 3

R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Full text of H-Statements referred to under sections 2 and 3.

H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

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