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1. Commercial product name and company identification:

Trade name: Turmogrease Bio LC 1302

Intended use: Application as lubricant

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2. Hazards identification:

The product when properly handled is not dangerous for the human health.

3. Composition / Information on ingredients:

Combination of biodegradable ester oils, lithium and calcium soap and additives.

4. First aid measures:

Skin contact: Wash with water and soap. Remove contaminated clothing.

If grease has penetrated skin by force (in case of misuse of a grease press): See a

physician* immediately.

Eye contact: Flush with plenty of water for at least 15 minutes. See a physician* if the eye

irritation remains.

Ingestion: See a physician* if necessary. Do not induce vomiting.

Inhalation: Remove the patient to fresh air.

*Show the physician this safety data sheet.

5. Fire fighting measures:

Suitable extinguishing media: dry chemicals, powder, foams, carbon dioxide

Do not use water.

In the case of fire, the vapour can involve toxic compounds (carbon monoxide).

Use a respirator to protect from vapours.

6. Accidental release measures:

Pick up free grease for recycle or disposal. Absorb small amounts on inert material.

Collect the released product and the used absorbent materials in suitable containers for disposal (see sect. 13). Danger of slipping!

Do not smoke while handling with the released grease. Avoid the contact with fire and sparks.

7. Handling and store measures:

Store in cool and dry areas. Protect from water and wetting.

Keeping quality in original drums for the storage conditions mentioned above: minimum 5 years. If the grease is exposed to high temperatures, good ventilation in the working areas is necessary.



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7. Handling and store measures (continuation):

Avoid the contact of sparks and flames.

Do not eat, drink and smoke in working areas.

8. Exposure control / Personal protection:

Hand protection: Not necessary in normal use. When often handling the product wear

gloves (i.e. made from Latex, permanent using time >30 min.; made from

butyl rubber, permanent using time >8 hours and other materials).

Respiratory protection: Not necessary in normal use. Avoid breathing the vapours above the de-

composition temperature.

Eye protection: Not necessary in normal use. Wear safety glasses, if necessary.

Keep away from foodstuffs. Wash your hands before making a break and when you finish the work. Separate your working clothes from other clothes. Change dirty clothes. Observe also the ordinary precaution instructions, which describe the sure handling with chemicals.

9. Physical and chemical properties:

Physical state: pasty

Colour: light brownish

Odour: weak

Dropping point: > 165°C (> 330°F) DIN ISO 2176 Boiling point: > 300°C (> 570°F) DIN 51 356

Density: 0.95 g/cm^3 at 20°C (68°F) Vapour pressure: < 0.1 mbar at 20°C (68°F)

Viscosity (base oil): 130 mm²/s at 40°C (100°F) DIN EN ISO 3104

 $21 \text{ mm}^2/\text{s}$ at 100°C (212°F)

Solubility in water: insoluble

pH-value: not determined

Flash point: approx. 250°C (approx. 480°F) DIN EN ISO 2592

Ignition temperature: > 300°C (> 570°F)

Explosion limits: unknown

10. Stability and reactivity:

Thermal decomposition: > 250°C (480°F)

Hazardous decomposition products: No decomposition under normal storage and handling con-

ditions.

In the case of misuse at temperatures above the decomposition temperature or in case of fire harmful vapours may arise from the product (carbon monoxide, crack

products).

Materials to avoid contact: strong oxidising agents (liquid or compressed oxygen), very strong

acids, very strong alkalis.



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11. Toxicological information:

Experimental toxicological data.

oral*: $LD_{50} > 5000 \text{ mg/kg (rat)}$ epidermal*: $LD_{50} > 5000 \text{ mg/kg (rabbit)}$

Turmogrease Bio LC 1302 when properly handled is not dangerous for human health.

Turmogrease Bio LC 1302 has no known effects of chronic toxicity or carcino-genesis (Based on data from components).

*in analogy to comparable products

12. Ecotoxicological information:

Use the product according to the good working practices avoiding polluting the environment.

Water Pollution Class WGK 1: Slightly water endangering (Classification according to German VwVwS from May, 1999): Avoid the contamination of soil and water.

The oil used for Turmogrease Bio LC 1302 is easily and readily biodegradable (> 70 weight-% in 21 days OECD-method 301; approx. > 95% according to CEC- L-33-A-93*)

* When ester oils are tested according to CEC L-33-A-93 the results always seem to be excellent. But in reality any result tested according to "OECD 301 > 60% BSB/CSB " is at least as good as the result "90% biodegradable according to CEC- L-33-A-93"!

13. Disposal considerations:

Destroy the waste product by incineration according to local laws and regulations.

Turmogrease Bio LC 1302 contains no halogens and no toxic metals.

LAGA- Waste code number (Germany)*:

542 02 for waste lubricants.

542 09 for solid materials contaminated with grease or oil.

EWC- Waste code number (European Community):

for used waxes and greases 12 01 12

15 02 02 for used absorbent and filter materials, cleaning rags and protection

clothes contaminated with grease or oil.

for wood, glass and plastics containing grease or oil (for example: residu-17 02 04

als of grease in plastic tubes).

The indicated EWC-Waste code numbers should be considered only as recommendation (orientation). Because the system of the European Waste Catalogue (EWC) does not differ between substantial criteria, but uses branch-oriented code numbers. Depending on the kind of company, in which the waste was generated, also other EWC-Waste code numbers may be the case. The correct EWC-Waste code numbers should be harmonised between the consumer, public authorities and the waste management company according to the European Waste Catalogue.

*All LAGA-Waste code numbers are invalid since 1999.

14. Transport information:

The product is not dangerous for transportation

Road transportation: not classified (ADR)



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14. Transport information (continuation):

Rail transportation: (RID) not classified
Sea transportation: IMDG / IMO not classified
Air transportation: ICAO / IATA not classified
U.N.-number: not assigned
Packaging group: not assigned

15. Regulatory information:

No regulation and classification according to EEC directives necessary.

No labelling with hazard symbols.

The product does not contain any volatile organic compounds listened in the VOC Substance Catalogue of Switzerland (appendix 1 of the edition of November 12th, 1997) or listened in VOC (TRGS 220; 31. BImSch).

Aquatic toxicity: 1 (= German water hazard classification)

US hazard ratings: Health

Flammability 1 Reactivity 0

0=minimal, 1=slight, 2=moderate, 3=serious, 4=extreme

16. Further Information:

The information given in this safety data sheet is for safety purpose only. It is given in good faith and based on the best knowledge and experience of the company at the date of issuing. The company is not responsible for damages caused by the use of the product in applications for which it was not intended or for conditions of use outside its control. All data refer to the product in the delivering condition.

Former versions of this safety data sheet are no longer valid.