

MATERIAL SAFETY DATA SHEET

In accordance with Regulation (EU) No 1907/2006 and 453/2010 with later amendments

LITEN EP

Made on: 05.09.2012

Updated on: 20.04.2015

Version: 2.0 CLP

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SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name: **LITEN EP-0**
LITEN EP-1
LITEN EP-2
LITEN EP-3

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

LITEN EP-0, LITEN EP-1, LITEN EP-2, LITEN EP-3 greases are applied for lubricating of rolling bearings exposed to high loads and for less loaded bearings which, however, are exposed to impact loads. Grease range of application: from -20°C to +120°C and in water environment.

1.3. Details of the supplier of the safety data sheet

Manufacturer: **ORLEN OIL SP. Z O.O.**
Address: 31-323 Kraków, ul. Opolska 100
Phone/Fax +48 12 66 555 00 / +48 12 66 555 01
No.:
E-mail: msds@orlenoil.pl
Quality related information +48 13 43 84 415(in weekdays from 7.00 till 15.00)

1.4. Emergency telephone number:

112 (Emergency number), 998 (Fire Brigade), 999 (Ambulance Service)
+ 48 13 43 84 415 (in weekdays from 7.00 till 15.00)

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification risks	According to EC Directive No.1272/2008 (CLP):	According to Council Directive No.67/548/EEC:
resulting from physicochemical properties:	Not classified	Not classified
for humans:	Not classified	Not classified
for the environment:	Not classified	Not classified

2.2. Label elements

Pictogram: None
Signal word: None
Hazard statements: None
Precautionary statements: None

2.3. Other hazards

According to Annex XIII, the product does not meet PBT or vPvB criteria.

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SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substances – not applicable

3.2. Mixtures:

Mixture of mineral base oils – unspecified and additives. DMSO extract content in base oil (according to IP 346) <3%.

<u>Substance name</u>	<u>CAS No.</u>	<u>% by wt.</u>	<u>Index No.</u>	<u>Classification according to 67/548/EU</u>	<u>Classification according to 1272/2008 (CLP)</u>
Zinc dialkyl dithiophosphate	68649-42-3/ 272-028-3	< 1	-	Xi, R38-41 N, R51/53	Eye Dam. 1, H318 Skin Irrit. 2, H315 (concentration limit: >15%) Aquatic Chronic 2; H411

Description of the R and H phrases, symbols, hazard classes and category codes is given in Section 16.

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation:

Ensure access to the fresh air. In case worrisome symptoms occur, consult a doctor.

Skin contact:

Immediately remove contaminated/soaked clothes and shoes. Thoroughly wash contaminated skin with soapy water or mild detergent, and then rinse with water. Consult a doctor if irritation symptoms appear and persist.

Eye contact:

Flush the contaminated eyes with a lot of water. Remove contact lenses. Consult a doctor if symptoms appear and persist.

Swallowing:

DO NOT induce vomiting. Obtain medical aid immediately.

4.2. Most important symptoms and effects, both acute and delayed

After inhalation: high concentration of vapours may cause mild irritation of the respiratory system, pains and dizziness.

After skin contact: dryness, reddening possible in case of prolonged contact

After eye contact: reddening, tearing, burning possible

After swallowing: nausea, vomits possible

4.3. Indication of any immediate medical attention and special treatment needed

The decision and choice of rescue treatment are made by doctor: symptomatic treatment.

SECTION 5. PROCEEDING IN CASE OF FIRE

5.1. Extinguishing media

Suitable extinguishing media: carbon dioxide, dry powder, foam; water spray

Unsuitable extinguishing media: water jet.

5.2. Special hazards arising from the substance or mixture

In the fire environment smokes containing carbon oxides, nitrogen oxides, sulphur oxides and other unidentified thermal decomposition products of higher hydrocarbons are formed. Avoid breathing products being released in the fire environment.

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5.3. Advice for fire fighters

Proceed in accordance with procedures applicable for extinguishing chemical fire. In the case of fire involving great amounts of the product, remove all bystanders not participating in action; call emergency brigades and the Fire Brigade.

Cool the containers exposed to fire or high temperature with water spray from a safe distance, if possible and remove them from the endangered area.

Prevent the wastewater after fire extinguishing from penetrating sewage and water tanks. Remove wastewater and residue after firefighting in accordance with valid regulations.

People participating in the fire-extinguishing action should be properly trained, equipped with a full protective clothing and a self-containing breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use individual protection measures – see section 8 of the Safety Data Sheet.

Limit the access of bystanders to the endangered area until proper cleaning operations are finished. Ensure that breakdown and its results are eliminated by a properly trained staff only.

Avoid contact with the eyes, skin and clothes.

NOTE: Product can make surfaces slippery.

6.2. Environmental precautions

Prevent the product from penetrating drains, waters or soil. Notify respective authorities (occupational safety and hygiene, emergency brigades, environmental brigades and organs of administration).

6.3. Methods and material for containment and cleaning up

Collect with the equipment available and remove the residue having it mixed with soil, sand or other absorbent and then place into a sealed, properly labelled container. Utilisation should be performed according to the applicable regulations. If necessary, obtain help from specialist companies dealing with waste transport and utilisation in order to remove the product/absorbent material contaminated with the product.

6.4. Reference to other sections

See also sections 8 and 13 of the Safety Data Sheet.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Provide effective ventilation. Avoid contact with the eyes, skin and clothes. Keep unused containers tightly closed. Essential hygiene rules should be observed: do not eat, drink or smoke during work, wash hands with soapy water after work/after break in work. Do not use contaminated clothing; Immediately remove contaminated clothing and wash before reuse. NOTE: Take off contaminated/soaked clothes and remove it to a safe place, far from heat and ignition sources. Use individual protection measures in accordance with the information contained in section 8 of the Safety Data Sheet.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly sealed and properly labelled containers, in room temperature, protect against contact with water or moisture, keep away from sources of ignition. Keep away from strong oxidisers.

Prevent against releasing the product to the ground and water.

7.3. Specific end use(s)

None.

SECTION 8. EXPOSURE CONTROL AND PERSONAL PROTECTION EQUIPMENT

8.1. Control parameters

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Ingredient	TLV-TWA:	TLV-STEL:
Mineral oils (liquid phase of aerosol)	5 mg/m ³	-

Directive of the Minister of Work and Social Policy dated June 6th, 2014 on the maximum occupational levels of factors hazardous to health at the workplace (Dz.U. 2014, item 817)

DNEL values for hydrotreated heavy paraffinic distillates (crude oil):

DNEL_{worker} (inhalation, chronic toxicity) 5.4 mg/m³/8h (aerosol)

DNEL_{consumer} (inhalation, chronic toxicity) 1.2 mg/m³/24h (aerosol)

PNEC_{water, sediment, soil, sewage treatment} Not applicable (a substance does not pose a hazard to the environment)

PNEC (oral, mammals) 9.33 mg/kg food

8.2. Exposure controls

Appropriate engineering controls:

General ventilation and/or local fume hood in order to maintain hazardous agent concentration in air below acceptable limits.

Eye or face protection:

Tight safety eyeglasses (goggles) in the case of prolonged exposure or the risk of liquid splashing to the eye. It is recommended to equip the workplace with a water shower to flush eyes.

Skin protection:

Wear impermeable, oil resistant gloves (e.g. perbutane, viton, butyl rubber). Glove material should be selected with consideration to the breakthrough time, permeability rate and degradation. It is recommended to change gloves regularly and replace them immediately if any signs of wear or damage (tearing, puncture) or changes in appearance (colour, flexibility, shape) occur. Wear protective apron or protective suit made of coated, product-resistant fabrics; oil-resistant, anti-slippery shoes.

Respiratory protection:

Not required under normal conditions of use. In the case of exceeding the acceptable limits or inadequate ventilation use the approved respirator equipped with a suitable filter or filter-absorber. For activities in the limited space / insufficient oxygen content in air / high uncontrolled emission / any circumstances, in which the mask does not provide adequate protection, use self-contained breathing apparatus.

Thermal hazards:

Not applicable

Environmental exposure controls:

Consider using precautionary measures in order to protect the area against release to environment.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

- | | |
|--|---|
| a) Appearance | : Consistency: paste/ colour : brown |
| b) Odour | : characteristic for petroleum products |
| c) Odour threshold | : Not determined |
| d) pH | : Not determined |
| e) Melting/solidification temperature | : Not determined |
| f) Initial boiling temperature and melting temperature range | : Not determined |
| g) Ignition point | : >200°C |
| h) Evaporation rate | : No data available |
| i) Flammability (solid, gas) | : No data available |
| j) Upper/lower flammability limit or upper/lower explosion limit | : Not applicable |
| k) Vapour pressure | : No data available |
| l) Vapour density | : No data available |
| m) Relative density | : approx. 1,0 g/cm ³ |

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n) Solubility	: Insoluble in water, soluble in hydrocarbons.
o) Distribution coefficient n-octanol/ water	: Not determined
p) Self-ignition point	: Not determined
q) Decomposition temperature	: Not determined
r) Viscosity	: Not determined
s) Explosive properties	: It does not show
t) Oxidizing properties	: It does not show

9.2. Other information

Dropping point : >180⁰C

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

The product is not reactive.

10.2. Chemical stability

The product is stable under normal handling and storage is stable.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid:

Direct sunlight, sources of heat and ignition.

10.5. Incompatible materials

Strong oxidisers

10.6. Hazardous decomposition products

None known.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity (no data for the product – data for distillates heavy hydrotreated)

LD50: >5000 mg/kg (oral, rat)

LC50: >5.53 mg/l (inhalation, rat)

LD50: >5000 mg/kg (skin, rabbit)

Classification criteria have not been met based on the available data.

Skin corrosion/irritation:

Classification criteria have not been met based on the available data.

Serious eye damage/irritation:

Classification criteria have not been met based on the available data.

Respiratory or skin sensitisation:

Classification criteria have not been met based on the available data.

Germ cell mutagenicity:

Classification criteria have not been met based on the available data.

Carcinogenicity:

Classification criteria have not been met based on the available data.

Reproductive toxicity:

Classification criteria have not been met based on the available data.

STOT – single exposure:

Classification criteria have not been met based on the available data.

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STOT – repeated exposure:

Classification criteria have not been met based on the available data.

Aspiration hazard:

Classification criteria have not been met based on the available data.

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity:

No quantitative data available for the mixture.

12.2. Persistence and degradability

hydrotreated heavy paraffinic distillates (crude oil) [CAS64742-54-7]

Biodegradability: hardly biodegradable (2-31% in 28 days)

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

On a basis of physical and chemical characteristics data low mobility in soil.

12.5. Results of PBT and vPvB assessment

Not applicable.

12.6. Other adverse effects

Product of very low volatility. Hydrocarbons which are components of the product show low or no tendency to penetrate into the atmosphere. The product is insoluble in water and lighter than water. The product accumulates on the surface of water, forming a film that hinders oxygen exchange.

SECTION 13. HANDLING OF WASTES

13.1. Waste treatment methods

Recommendations applicable for the mixture: do not allow to enter sewage draining systems. Prevent contamination of surface water and groundwater. Utilise in compliance with applicable regulations. The waste code should be assigned to the site of its generation.

Recommendations concerning used packages: recovery / recycling / package waste decommissioning should be carried out in compliance with applicable regulations. NOTE: Only entirely emptied packages can be submitted to recycling. Use services of authorised companies.

The Act of 14 December 2012 on wastes (Dz.U. of year 2013, item 21)

The Act of 11 May 2001 on packages and package wastes (Dz.U. No. 63, item 638 with amendments)

Regulation of the Minister of Environment of 27 September 2001, on wastes catalogue (Dz. U. No.112, item 1206 with amendments)

SECTION 14. TRANSPORT INFORMATION

The substance is not a subject to transport regulations on hazardous goods included in ADR (road transport), RID (rail transport), IMDG (marine transport) and ICAO/IATA (air transport).

14.1. UN number

Not applicable

14.2. UN Proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for users

Not applicable

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

Not applicable

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SECTION 15. REGULATORY INFORMATION

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

Act of 25 February 2011 on chemicals and their mixtures (Journal of Laws of 2011 No. 63 item 322)

Regulation of the Minister of Health of 20 April 2012 on labelling packaging of dangerous substances and dangerous mixtures and some mixtures (Journal of Laws 12, item 445)

Regulation (EC) No. 1907/2006 of the European Parliament of 18 December 2006 on registration, evaluation and authorisation of chemicals (REACH) and establishing the European Chemicals Agency, amending Directive No.1999/45/WE and repealing regulation of the Council (EEC) No. 793/93 and regulation of the Commission (EC) No. 1488/94, as well as the Council Directive No. 76/769/EEC and Commission Directive No. 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (correction Journal of Laws of 29 May 2007 as amended)

Regulation of the Commission (EC) No. 453/2010 of 20 May 2010 amending regulation (EC) No. 1907/2006 of the European Parliament and the Council of 18 December 2006 on registration, evaluation and authorisation of chemicals (REACH) (Journal of Laws L 133 of 31 May 2010)

Regulation of the European Parliament and the Council (EC) No. 1272/2008 of 16 December 2008 on classification, labelling and packing substances and mixtures, amending and repealing directives 67/548/EEC and 1999/45/EC and amending regulation (EC) No. 1907/2006 (Journal of Laws No. 353 of 31 December 2008 as amended)

Regulation of the Minister of Health of 10 August 2012 on criteria and methods of classifying substances and mixtures (Journal of Laws of 2012 No 0 item 1018)

Regulation of the Minister of Health of 2 February 2011 on tests and measurements of factors harmful to life in the working environment (Journal of Laws of 2011, No. 33, item 166)

Regulation of the Minister of Economy of 21 December 2005 on essential requirements for personal protection (Journal of Laws of 2005 No. 259, item 2173)

Regulation of the Minister of Health and Social Care of 30 May 1996 on medical examination of employees, scope of preventive health care and medical certificates issued for purposes stipulated in the Labour Code (Journal of Laws of 1996, No. 69, item 332; of 1997 No. 60, item 375; of 1998 No. 159, item 1057; of 2001 No. 37, item 451; No. 128, item 1405)

Regulation of the Minister of Health and Social Policy of 26 September 1997 on general occupational health and safety regulations (consolidated text, Journal of Laws of 2003 No. 169, item 1650; of 2007 No. 49, item 330; of 2008 No. 108, item 690)

Regulation of the Minister of Health of 30 December 2004 on occupational health and safety related to the presence of chemical agents in the workplace (Journal of Laws of 2005 No. 11, item 86; of 2008 No. 203, item 1275)

Act of 24 August 1991 on fire protection (consolidated text, appendix to the Journal of Laws of 2002 No. 147 item 1229; of 2003 No. 52, item 452; of 2004 No. 96, item 959; of 2005 No. 100, item 835 and 836; of 2006 No. 191, item 1410; of 2007 No. 89, item 590; of 2008 No. 163, item 1015; of 2009 No. 11, item 59)

European Agreement concerning the international carriage of dangerous goods by road (ADR), concluded in Geneva on 30 September 1957, as amended, effective as of the date of entry into force for the Polish Republic, proclaimed in the right way (Dz. U. of 2011. No 110, item 641);

Act of 19 August 2011 on the carriage of dangerous goods (Dz. U. of 2011, No 227, item 1367).

15.2. Chemical safety assessment

Chemical safety assessment not required for the mixture

SECTION 16. OTHER INFORMATION

Abbreviations and acronyms in the Safety Data Sheet

TLV-TWA	Threshold Limit Value
TLV-STEL	Threshold Limit Value, Short Term Exposure Limit
TLV-C	Ceiling exposure limit
vPvB	very Persistent, very Bioaccumulative (substance)
PBT	Persistent, bioaccumulative, and toxic (substance)
PNEC	Predicted No Effect Concentration
DN(M)EL	Derived No Effect Level
LD ₅₀	Dose that will kill 50% of the test animals
LC ₅₀	Concentration that will kill 50% of the test animals
EC _x	Concentration at which x% inhibition of growth or growth rate is observed
LOEC	Lowest Observed Effect Concentration
NOEL	No Observed Effect Concentration
RID	Regulations Concerning the International Carriage of Dangerous Goods by Rail
ADR	Agreement on Dangerous Goods by Road

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IMDG International Maritime Transport of Dangerous Goods
IATA International Air Transport Association
UVCB Unknown substances, of Variable Composition, or of Biological Origin

References:

Legal regulations quoted in sections 2 – 15 of the Safety Data Sheet.

The list of applicable H-phrases

H315 – Irritant to skin
H318 - Causes serious eye damage.
H411- Toxic to aquatic life with long lasting effects

The list of applicable CLP classification phrases

Skin Irrit. 2 Skin irritating effects category 2
Eye Dam. 1 Eye damage category 1
Aquatic Chronic 2 Chronic aquatic hazard - Category 2

The list of applicable R-phrases

R38 - Irritating to eyes.
R41 - Risk of serious damage to eyes.
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

DSD/DSP classification

Xi – irritant product
N – hazardous to environment

Advice on training for employees:

Employees who use the product should be trained on risks for health, hygiene, use of individual protection, accident preventive actions, rescue actions, etc.,

This MSDS is not a quality certificate for the product. All data presented in this sheet are to be taken only as a help in safe handling in transport, distribution, use and storage. Persons handling the product should be informed about risks and precautionary measures. Information in the Safety Data Sheet relates to the above mentioned product and its specified uses only. They may be obsolete or insufficient for this product used in conjunction with other materials or in different applications than those specified in the Safety Data Sheet.

The user is obliged to follow all applicable standards and regulations and is also responsible for inappropriate use of information contained in this sheet or for an inappropriate use of the product. In the case of special applications evaluate exposure and develop the appropriate procedure and training programs in order to ensure safety at work.
