

# LUKOIL® POLYFLEX OPTIMUM

## 1-100; 2-100; 3-100

Multipurpose Lithium Greases

### **DESCRIPTION**

LUKOIL® POLYFLEX OPTIMUM 100 series are multipurpose anti-friction greases based on high-quality mineral base oil blend thickened with lithium soap fortified with high-performance additive package improving anti-wear, adhesive, and anti-corrosion properties.

LUKOIL® POLYFLEX OPTIMUM 100 grease has good tribological features and can operate within a wide temperature range from -40 up to +120°C.

LUKOIL® POLYFLEX OPTIMUM 100 grease is formulated to provide effective lubrication, good thermal stability, and good structure stability during storage and use. NLGI #1, #2, #3 class versions are available.



### **ADVANTAGES:**

- Excellent low-temperature properties
- Excellent mechanical and colloidal stability
- Low coefficient of friction
- Good anti-wear properties
- Good water resistance
- High anti-corrosion properties
- Good pumping ability (NLGI #1, #2 classes)

### **COMPOSITION:**

- High-purified mineral oil
- Specialty lithium soap
- Additive package: anti-oxidation, anti-corrosion, AW, and adhesive additives

### **APPLICATION IN UNITS:**

- Rolling and sliding bearings
- Splined joints, studs, pivots, pins, axes
- Centralized lubrication systems (NLGI #1, #2 classes)

### **APPLICATION EXAMPLES:**

- Widely used on bearings of the industrial equipment, passenger cars, agricultural machinery
- Centralized lubrication systems in trucks, agricultural machinery, off-road vehicles, lumbering and construction machinery
- Replace Litol-24, FIOL-1, FIOL-2 greases

This product is manufactured according to STO 65561488-054-2015

## **LUKOIL® POLYFLEX OPTIMUM 100**

### **TYPICAL PROPERTIES**

Standard*	Property	Unit	OPTIMUM 1-100	OPTIMUM 2-100	OPTIMUM 3-100
DIN 51502	Marking according to DIN 51502		K1K-40	K2K-40	K3K-40
ISO 6743-9	Marking according to ISO 6743-9		L-XDCEA 1	L-XDCEA 2	L-XDCEA 3
	Color, appearance	Straw, brown, homogeneous			
	Service temperature range	°C	-40 to +120	-40 to +120	-40 to +120
DIN 51818	NLGI consistency class		1	2	3
ISO 2137	Worked penetration (mixed, 60 double strokes)	mm/10	310-340	265-295	220-250
ISO 2137	Penetration change at 25°C after 10,000 cycles	mm/10	±20	±15	±15
DIN 51562	Base oil viscosity at 40°C	mm <sup>2</sup> /s	90-110	90-110	90-110
DIN 51562	Base oil viscosity at 100°C	mm <sup>2</sup> /s	11	11	11
ISO 2176	Drop point	°C	>185	>185	>185
DIN 51817	Oil separation (18 h. 40°C)	%		3	
DIN 51805	Flow pressure at -30 °C	mbar		1075	
ASTM D2596	Weld load (4-ball machine test) at 25°C	N	2000	2100	2100
ASTM D2596	Scar load	N	490	490	490
ASTM D2266	Wear scar (4-ball machine test)	mm	0,45	0,45	0,45
DIN 51802	Corrosion degree (rolling bearings, distilled water)		0-0	0-0	0-0
ASTM D4048	Corrosion degree (copper strip)		< 1b	< 1b	< 1b
DIN 51807 b	Water washout	%		1,8	

\*DIN: Deutsche Industrie Norm

ISO: International Standardization Organization

ASTM: American Society for Testing and Materials.

### **HOW TO USE**

This grease can be applied manually with brush or spatula, as well as through centralized lubrication system.

### **USABLE LIFE AND STORAGE**

When stored in the original unopened containers in a dry place, this product has a shelf life of at least 36 months from the date of production.

### **HANDLING PRECAUTIONS**

This product doesn't contain any toxic ingredients. During storage, transportation, and application of this product, the safety rules for handling mineral lubricating materials and the environment protection regulations must be observed.

For further information on how to use LUKOIL® products, please refer to the product MSDS.

### **TECHNICAL SUPPORT**

For correct selection of lubricating materials to meet your needs, and to get more detailed information on the products, as well as if you have any other questions, we recommend you to contact our technical support service specialists by e-mail: [grease.support@lukoil.com](mailto:grease.support@lukoil.com)