

LUKOIL FREO MP 15L

High-quality universal cutting fluid

PRODUCT DESCRIPTION

Cutting Fluid LUKOIL FREO MP 15L is a technological lubricating cooling agent which form a stable aqueous emulsion.

Emulsions **Cutting Fluid LUKOIL FREO MP 15L** provides protection from corrosion, have a high washing ability, emulsion properties, lubricating characteristics, resistance to biological contamination and low foam even under high pressure flow of MWF. Recommended emulsion use rate: from 3% to 8%.

APPLICATION

Emulsions **Cutting Fluid LUKOIL FREO MP 15L** are intended for use in such operations of mechanical metal-working as general-duty grinding, lathe work, milling work, drilling, counterbore, cutting (sawing).

LUKOIL FREO MP 15L is suitable for use in universal machine tools, including machine tools with computerized numerical control (CNC).

Process materials: foundry-iron, low-carbon steels, simple steels, alloy steels, aluminium and

its alloys. The product also can be used for pressing and forming operations in low-tonnage production.

BENEFITS

- Manufactured on a mineral base stocks of the highest level of clarity
- Good water miscibility. Stable water emulsification even at manual mixing
- Good lubrication extends tool life, reduces process cost and amount of defective products
- Low corrosivity to ferrous and non-iron metals
- Excellent storage stability and high emulsion stability
- The product contains biocide, what drops rate of bioaffection of the cutting fluid and leads to cost saving at purchasing additional materials
- Very low foaming tendency even under high pressure flow of MWF

Recommended concentration of the emulsion

| Operation mode | Concentration of emulsion, % |
|-----------------------------|------------------------------|
| Grinding | 3-5 |
| Lathe work, cutting, sawing | 5-6 |
| Milling, screwcutting | 6-8 |

The product name in an order:
Cutting Fluid LUKOIL FREO MP 15L, STO 79345251-090-2016

TYPICAL TEST DATA

| PROPERTY | Test methods | LUKOIL FREO MP 15L |
|--|---------------------------------------|--------------------|
| Kinematic viscosity at 40 °C, mm ² /s | GOST 33 / ASTM D445 / GOST R 53708 | 35.5-50.6 |
| Stability at -15°C | GOST 6243, section 5 | Pass |
| Storage stability | GOST 6243, section 6 | Pass |
| Corrosion activity 3% emulsion: drop-test in 8 distilled water | GOST 6243, p. 2.1 | Pass |
| pH 3% emulsion contact pair test in water of total hardness 4.6 mg-eq/decimeter ³ /s | GOST 6243, section 4 and 7.2 | 8.7 |
| Foaming tendency in water of total hardness 4.6 mg-eq/decimeter ³ , ml: | STO 79345251-090-2016, p. 7.3 | 0 |
| 3% emulsion | | |
| 5% emulsion | | |
| 8% emulsion | | 0 |
| Hard water influence on emulsion in water of total hardness 4.6 mg-eq/decimeter ³ /, sm ³ : on 3% emulsion | GOST 6243, section 8 | 0 |
| The factor of refraction | | 1.0 |

The information given in the typical data does not constitute a specification but is an indication based on current production and can be affected by allowable production tolerances. The right to make modifications is reserved by OOO "LLK-International".