



# MAK MULTIPLEX L GREASE

Premium quality high temperature lithium complex grease for industrial application

MAK Multiplex L Grease is a high quality lithium complex grease suitable for wide range of applications involving high temperature conditions. It is based on high quality mineral base oils and specially selected additives to provide excellent oxidation stability, protection against rust & corrosion, resistance to water contamination, anti-wear properties and resistance to water contamination. MAK Multiplex L Grease is based on complex thickener. It enables them to retain their structure even at high temperatures and makes them an ideal choice for severe operating conditions offering extended lubrication intervals. This grease has a recommended operating temperature range from -20°C to 160°C.

**Grades:** MAK Multiplex L Grease is available in the following NLGI Grades – 1, 2 and 3.

#### Applications:

MAK Multiplex L Grease is recommended for lubrication of industrial bearings, joints, components operating under high temperatures and heavy loads in wide range of industries including steel, mining, cement, automotive, construction and engineering sectors. Typical applications include conveyor bearings, vibrating sieves, kiln rollers, hot air fan bearings, electric motor bearings, automotive antifriction bearings, chassis components, universal joints and disc brake wheel bearings. MAK Multiplex L Grease 1 and 2 are also used by various steel plants in centralised grease lubrication systems.

#### Performance/ Benefits:

**High Temperature Performance** – higher drop point enables them to retain their structure even at higher temperatures making the grease well suited to lubricate components efficiently under high temperature conditions.

**Outstanding Reliability** – offers outstanding protection to the lubricated components making it the ideal grease for machine components working under heavy loads. Extends equipment life and reduces downtime.

**Excellent Oxidation Stability** – excellent resistance to the effects of oxidising agents. Ensures reliability, longer operating life and lower maintenance.

**Extended Regreasing Interval** – high structural stability offers imparts ability to resist shear and to work longer under harsh working conditions.

**Reliable Corrosion Protection** – protects the bearing components from rust and corrosion in humid environments and enhances their life.

**Good Water Resistance** – offers excellent water washout resistance thereby providing superior lubrication and protection in wet environments.

**Excellent Mechanical Stability** – offers excellent protection by retaining the desired consistency over long service periods and even during severe operations.

**Very Good Pumpability** – good pumpability even at low temperatures makes it the ideal grease for centralised lubrication systems.

**No Harmful Substances** – the grease does not contain Lead and other heavy metals considered harmful to human health and environment.

#### Performance Level/ Specification:

- NLGI Grade 2 and 3 meets IS 14847 : 2000 (Reaffirmed 2016)
- NLGI Grade 2 meets IPSS:1-09-020-99
- NLGI Grade 1 – Proprietary Grade

#### Storage & Handling:

The product should be stored inside. Keep it properly sealed to avoid contamination. Avoid freezing. Shelf life is 2 yrs. under protected conditions.

#### Health & Safety:

It is unlikely to be hazardous when properly used in recommended applications. Contamination of the grease from other oils, greases, chemicals, dirty water etc. can occur during the use. It should be avoided. Regular monitoring of the in-use product is recommended.

**Typical Physico-Chemical Data: MAK Multiplex L Grease**

Characteristics	Method	1	2	3
NLGI	--	1	2	3
Appearance	Visual	Smooth	Smooth	Smooth
Color	Visual	Brownish	Brownish	Brownish
Type of Thickener	-	Li-Complex	Li-Complex	Li-Complex
Worked penetration, @ 25°C 60 strokes	ASTM D217	325	280	235
Drop Point, °C	ASTM D2265	260	262	265
Oxidation Stability (100 hrs.) drop in pressure, kg/cm <sup>2</sup>	ASTM D 942	0.35	0.33	0.30
Operating Temperature Range, °C	-	-20 to 160	-20 to 160	-20 to 160
Emcor Rust Test	ASTM D 6138	0,0	0,0	0,0
Copper Corrosion at 100 °C for 24 hrs.	ASTM D4048	Negative	Negative	Negative