G. BESUX KOMPLEX ALFA II

HIGH EFFICIENCY ORGANIC THICKENED LUBRICATING GREASE (MULTIPURPOSE LONG LIFE) WITH HIGH VISCOSITY SYNTHETIC OIL

It is a new high performance multipurpose lubricating grease intended for operating in a wide temperatures range within –50 and 180ºC continuous temperature and 200ºC peak temperature.

It is formulated with innovative organic thickeners provided with high chemical and thermal stability together with high viscosity index synthetic oils showing outstanding lubricating capacity and resistance to aging.

G. BESLUX KOMPLEX ALFA II can be used in all mechanism and bearing that rotated at medium-high velocity (Fv=700000), under medium loads like electric motors, pumps, alternators, etc.

The advantages of **G. BESLUX KOMPLEX ALFA II** are**:**

- Mechanism lubricating that can work between -50 to 180ºC.
- Multifunctional long life needed.
- Greasing improvement system.
- Water, steam water and temperatures resistance.
- High plastic and elastomers compatibility.
- High low friction coefficient.
- Low noise.
- Lower electric power consumption.
- Adequate to work in elastohydrodynamic and EHL.
- Lower ashless.

PROPERTIES

Temperature behavior

G. BESLUX KOMPLEX ALFA II is designed to keep stable and adherent the lubricant film under temperature

Durability

The lubricant film has high resistance to aging, the selected additive package will play a very important role in terms of the lubricant life.

G. BESLUX KOMPLEX ALFA II comparing with conventional lubricants has a high resistance to oxidation, which guarantees that it can keep its lubricating properties unalterable for long periods of time.

variations. Thanks to his synthetic oil and high viscosity index, allows an excellent behaviour

Thanks to the organic thickener with high thermic and chemical stability, allows to increase the temperature avoiding the soften grease.

The dynamic viscosity evolution with the temperature will give us an idea of the softening or hardening that the grease will suffer with the temperature variation. As shown in the following graph, the fat **G. BESLUX KOMPLEX ALFA II** will experience a smaller variation in dynamic viscosity with temperature.

An increase in temperature affects the lubricating grease, decreasing the viscosity of its base oil, softening it. While depending on the temperatures reached, evaporation losses are generated.

The combination of both effects, modifies the thickness and lubricating film quality, since when a base oil grease fraction evaporates, it causes hardening.

The **G. BESLUX KOMPLEX ALFA II** behavior, is i significantly superior to a conventional grease, because provides with
lower evaporation losses that guarantee a longer lubricant life and better working conditions.

Also, it is important to consider the grease behavior at low temperatures. With the temperature decrease, it produces a hardening grease, losing its fluidity and increasing its consistency. It generates an internal friction increase, causing a loss of the wetting capacity, as well as, a decrease grease speed recirculation inside the bearing.

G. BESLUX KOMPLEX ALFA II it is capable of maintaining excellent lubrication levels for long time periods.

The test used to demonstrate this property is the SKF ROF test.

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Test

Bearings	SKF Nº 6204 2Z
Velocity	10000 rpm
Temperature	160 ºC
Duration	L50 > 700 hours (no regreases)

Plastic and elastomers compatibility

Non-metallic components type are increasingly used in new industrial designs, such as plastics and elastomers, so optimizing compatibility with the lubricants guaranteeing a long life and a good performance.

The use of a low compatibility lubricant generates a strong variation in volume, modifying its physical-mechanical properties (hardness, elongation, tensile strength, etc.). It affects, in some cases, the adequate flexibility of the parts. It reduces plastic components and elastomers life.

APPLICATIONS

- Bearings and any mechanisms operated under temperatures within -50 and 180ºC (220ºC peak).
- Bearing operated with medium and high speed fv=700000 fv=Dm.rpm , Dm=1/2 (Dext +Dint).
- Electric motor bearings.
- Fan bearings, exhausters, pumps etc.
- Bearing of oven wagons.
- Bearings and drives in cooling systems.
- Bearings of drying tunnels.
- Bearings in conveyor belts.
- Bearing and bolts in chains operated under strong temperatures variations.
- Plain bearings and joints in plastic-plastic and plastic-metal contacts.
- Lubrication of wire guides, plastic bearings and slides.
- Lubrication of bearings and general mechanisms wherever a reduced greasing frequency is needed to improve the useful life.

CAUTIONS

- The usual ones when handling and using lubricants.
- Keep the can closed to avoid contamination.
- Do not mix with different base greases.

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Characteristics	Standard	Typical Value	Unit
Colour	-	Blue	-
Thickener	-	Urea compound	-
Base oil	ASTM D-128	Synthetic	-
Density at 25ºC	EI 530	Approx. - 0,875	g/cm³
NLGI consistency	DIN-51805	Grade 2	-
Penetration at 25ºC	ASTM D-217	270 – 295	0,1 mm
Worked penetration 60W at 25ºC	ASTM D-217	280 – 320	0,1 mm
Worked penetration 100000 W	ASTM D-217	Max. +20	0,1 mm
Drop point	ASTM D-566	Min. 250	ºC
Rusty ashes	ASTM D-482	Max - 0,05	%
Flow pressure at -35 ºC	DIN-51805	Max. 15000	Mbar
Oil separation 18h/40 ºC	DIN-51817	Max. 1	%
Oil separation 7 days/40 ºC	DIN 51817	Max. 4	%
EMCOR corrosion test	DIN-51802	Max. Grade 1	-
Cooper corrosion, 24h/100 ºC	ASTM D-4048	Max. 1b	-
Water resistance, 3h/90 ºC	DIN-51807	Grade 0	-
Water washing resistance, 1h/80ºC	DIN-51807	Max. 1,5	%
Weight loss by steam 100h/100ºC	ASTM D-942	Max. 0,1	Bar
Weight loss by steam 22h/100ºC	ASTM D-972	Max. 0,25	%
Weight loss by steam 22h/150ºC	ASTM D-972	Max. 0,25	%
Dynamic viscosity at 25 ºC	DIN-51805	Max. 3	mPa·S
SRV test at 100 N, 1mm , 50 Hz , 80ºC, 1h, ball 10 mm: - μ minimum, (coefficient de fricción) - μ maximum - μ final - Ball scar - Curve type	ASTM D5707-95	 max. 0.110 max. 0,125 max. 0.120 max. 0.50 Soft	 - - - mm -
SRV Test EP : - Maximum load	ASTM D5706-95	 500	 N
Bearing life test SKF-ROF 160ºC 10000 r.p.m.: - L 50	DIN 51806	 Min. 700	 hrs
Temperature service	-	-50 a 180	ºC

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