

# Lubrication

The lubricant's main role is to avoid metallic contact between elements in motion: rings, balls, cages. It is also a protection for the bearing against weariness and corrosion. It will have the single biggest influence on bearing performance and life.

How to choose an appropriate lubricant depends on temperatures, rotation speed, and environment. An oil and grease lubrication is suitable for bearings: there is no limit between the two kinds of lubrication. Technical and commercial expectations define the lubrication mode.

For a life long lubrication for sealed bearings, grease is usually applied. The standard filling is done according to DIN 51825 K2K, at 30% ± 5% of volume between rings.

For applications where the kind of lubrication is unknown or when oil and grease are not permitted, a so called dry lubrication is available.

**The following chart gives an overview of lubricants used at JESA (other are available on request):**

Code JESA	Soap thickener	Base Oil	Additive	NLGI	Service temp. [°C] Min	Service temp. [°C] Max	Viscosity base oil at 40°C [mm² /s]	General applications
GL001	LiK	Min	EP	2	-20	120	160	- Track rollers in steel - Track rollers overmoulded in plastic
GL002	Li	Min		2	-30	130	100	Track rollers overmoulded in plastic
GL003	Li	Min		2	-25	120	75	Track rollers overmoulded in plastic
GL004	Li	SYNTH		2, 3	-50	150	26	Deep groove ball bearings
GL005	SpLi	Min		3	-30	140	108	Track rollers in steel
GL006	Ph	SYNTH		2	-30	220	80	Track rollers in steel
GL008	K	SYNTH	PTFE	2	-40	260	390	Deep groove ball bearings
GL010	BaK	SYNTH	EP	2	-50	150	30	- Deep groove ball bearings - Track rollers in steel - Track rollers overmoulded in plastic
GL011	NCA	Min / SYNTH	EP	2	-35	140	130	Track rollers in steel
GL026	Li	SYNTH		2	-60	130	18	- Deep groove ball bearings
GL054	LiK		EP	2	-50	150	150	- Track rollers overmoulded in plastic - Track rollers
GL100B	LiK, Ba, Ca	Min (SYNTH)		2, 3	-30	120	100 - 160	Track rollers in steel
GL101B	Li (others)	Min (SYNTH)		2, 3	-30	120	20 - 100	Track rollers overmoulded in plastic
GL102B	Li (others)	Min (SYNTH)		2, 3	-40	140	20 - 50	Deep groove ball bearings
GL150	SpLi	PAO/Ester		2	-50	120	25	High speed grease

## SOAP THICKENER :

Li = Lithium  
LiK = Lithium complex  
SpLi = Lithium special  
Ba = Barium  
BaK = Barium complex  
Ca = calcium  
CaK = calcium complex  
NCA = calcium special  
Ph = Polyurea  
K = Synthetic (PE, PTFE, FEP)  
Al = Aluminium complex  
Nak = sodium complex

## ADDITIVE :

EP = extreme pressure

## BASE OIL :

Min = Mineral  
SYNTH = Synthetic