

Slow & Heavy Conditions

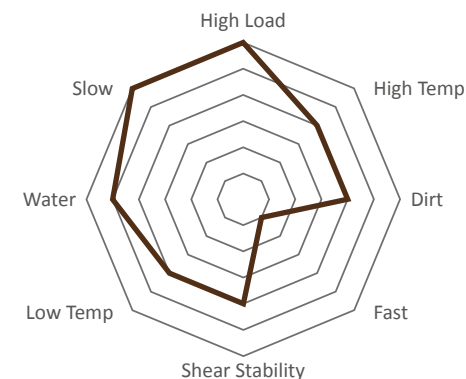


General Info on Conditions and Typical Applications:

Where:	Off-shore, metalworking, mining
Typical applications:	Gears, jacking, kilns, mills, winches, wire ropes, etc.
Important product properties:	Load carrying ability Resistance to vibrations and shock loads Lubricant film formation

High load conditions are present in segments with heavy duty equipment working slowly during high loads, often in combination with vibrations and/or shock loads. These combinations can create boundary lubrication conditions resulting in high wear and weld of components, and mechanical and thermal degradation of the lubricant. An appropriate lubricant can aid these challenges by having good load carrying capacity and resistance to vibrations and shock loads.

Key Performance Aspects

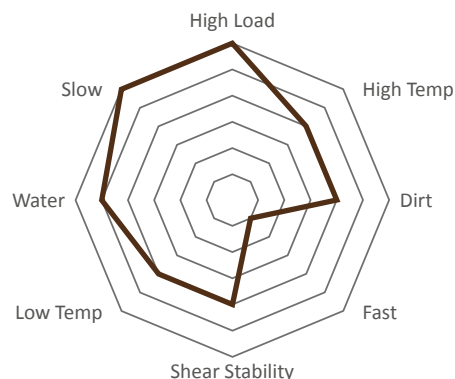


		AXEL Product	Colour	Thickener	NLGI	DP (°C)	BO type	BOV	Solids	T-range (°C)	Approvals
OPTIMAL PERFORMANCE		Alassca 130 LTM5		Alassca	0	>260	Min	70	MoS ₂	-45 to +90	-
		Alassca 1705 OG		Alassca	0,5	>260	Min	850	-	-20 to +140	-
		Alassca 762 BD		Alassca	2	>260	Ester	700	Mix	-30 to +120	SS 155470 / 2013 VGP
		Calsullence 1615 WRM		Ca-S-X	1,5	>280	Min	400	MoS ₂	-20 to +140	-
		Calsullence 630 M5		Ca-S-X	0	>260	PAO	46	MoS ₂	-40 to +140	-
IMPROVED PERFORMANCE		Axellence 162 HQ		Li-X	2	>260	Min	320	-	-20 to +140	GC-LB
		Axellence 662 EPB		Li-X	2	>260	PAO	460	-	-40 to +150	-
		Axellence 681 EPB		Li-X	1	>260	PAO/Pol	1750	-	-40 to +150	-
		Caliac 162 EPWR G3M2		Li-Ca	2	>180	Min	670	Graph/MoS ₂	-20 to +120	-
		Caliac 172 EP		Li-Ca	2	>180	Min	1000	-	-20 to +120	-
GOOD PERFORMANCE		Acinol 1625 EP		Li	2,5	>180	Min	290	-	-20 to +120	-
		Acinol 1800 EP		Li	00	>150	Min	1390	-	0 to +100	-
		Acinol 1815 HD		Li	1,5	>180	Min	1500	-	-20 to +120	-
		Caliac 252 EP Green		Li-Ca	2	>180	Min/Pol	140	-	-20 to +120	-
		Claytac 0805 HTOG		Clay	0,5	N/A	Min	2100	Graph/CaCO ₃	-10 to +150	-

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		AXEL Product	Product Properties	Sample Applications	Sample Industries
OPTIMAL PERFORMANCE		Alassca 130 LTM5		Extremely loaded mills, kilns, gears, chains, etc. operating at low temperatures	
		Alassca 1705 OG		Extremely loaded open gears	
		Alassca 762 BD		Extremely loaded open gears, winches, jackings and cranes operating in wet environments with environmental demands	
		Calsullence 1615 WRM		Extremely loaded rolling mill bearings operating at high temperatures and low speed	
		Calsullence 630 M5		Extremely loaded mills, kilns, gears, chains, and commercial vehicles operating at low temperatures	
IMPROVED PERFORMANCE		Axellence 162 HQ		Moderately loaded low speed wheel bearings	
		Axellence 662 EPB		Wide variety of heavily loaded bearings operating at high temperatures or low speeds	
		Axellence 681 EPB		Heavily loaded bearings operating under extremely low speeds	
		Caliac 162 EPWR G3M2		Highly loaded low speed bearings, joints and chassis components	
		Caliac 172 EP		Highly loaded low speed bearings, pins and joints operating in wet environments	
GOOD PERFORMANCE		Acinol 1625 EP		Wide variety of moderately loaded low speed bearings, joints and chassis components	
		Acinol 1800 EP		Centralized lubrication systems, heavily loaded enclosed gearboxes	
		Acinol 1815 HD		Extremely loaded large journal bearings in sugar cane mills operating at low speed	
		Caliac 252 EP Green		Moderately loaded bearings components operating in wet environments	
		Claytac 0805 HTOG		Heavily loaded gear applications including slew ring gears, hoist gears, rack & pinion operations	

Key Performance Aspects



Product Properties Key

	Central Lubrication		Environmental		Heavy Loads		High Temperature		Multipurpose		Water Resistant
	Corrosion Protection		Extreme Pressure		High Speed		Low Temperature		Special Application		

Sample Industries Key

	Agriculture		Cement		Forestry		Marine		Off-Road		Steel
	Auto		Construction		Industry		Mining		Pulp and Paper		