

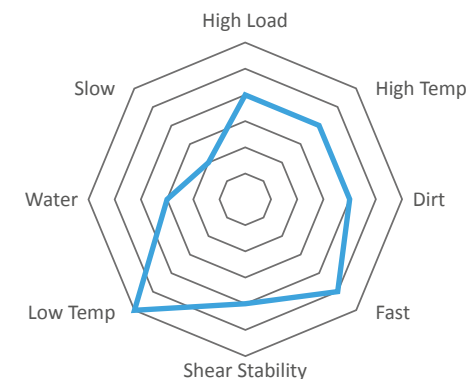
Low Temperature Conditions

General Info on Conditions and Typical Applications:

Where:	Forestry, marine, mining
Typical applications:	Ball bearings, mills, kilns, gears, roller bearings, winches, etc.
Important product properties:	Flow properties Viscosity and viscosity index (VI)

Low temperature conditions are present in arctic or sub-arctic regions where temperatures frequently drop below -30°C. At these conditions poor flow properties or even solidification of the lubricant can cause inadequate lubrication, resulting in rapid damage on components and lubricant degradation. An appropriate lubricant can aid these challenges with its ability to flow and lubricate at the needed temperatures.

Key Performance Aspects

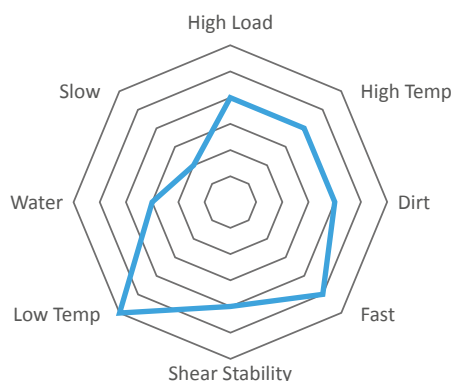


		AXEL Product	Colour	Thickener	NLGI	DP (°C)	BO type	BOV	Solids	T-range (°C)	Approvals
OPTIMAL PERFORMANCE		Alassca 130 LTM5		Alassca	0	>260	Min	70	MoS ₂	-45 to +90	-
		Axellence 632 EPB		Li-X	2	>260	PAO	44	-	-55 to +140	-
		Calsullence 630 M5		Ca-S-C	0	>260	PAO	46	MoS ₂	-40 to +140	-
		Noion 5215 EPB		Poly	1,5	>140	Min/Ester	26	-	-30 to +120	-
IMPROVED PERFORMANCE		Axellence 132 EP Red		Li-X	2	>260	Min	60	-	-30 to +140	-
		Acinol 621 LT		Li	1	>180	PAO	20	-	-50 to +120	-
GOOD PERFORMANCE		Acinol 112 EPLT		Li	2	>180	Min	9	-	-50 to +90	-
		Acinol 1400		Li	00	>160	Min	130	-	-35 to +100	-

Low Temperature Conditions

		AXEL Product	Product Properties	Sample Applications	Sample Industries
OPTIMAL PERFORMANCE		Alassca 130 LTM5		Extremely loaded mills, kilns, gears, chains, etc. operating at low temperatures	
		Axellence 632 EPB		Heavily loaded spindles, electrical motor or fan bearings operating at high speeds or low temperatures	
		Calsullence 630 M5		Extremely loaded mills, kilns, gears, chains, and commercial vehicles operating at low temperatures	
		Noion 5215 EPB		Wide variety of moderately loaded spindles, fans, electrical motors, linear guidance and frequency regulated bearings operating at high and/or low speeds. Chucks and bearings in contact with process fluids or applications sensitive to ions.	
IMPROVED PERFORMANCE		Axellence 132 EP Red		Moderately loaded bearings at high speeds or low temperature	
		Acinol 621 LT		Lightly loaded small bearings and gears in automotive industry operating at high speeds or low temperatures	
GOOD PERFORMANCE		Acinol 112 EPLT		Moderately loaded spindles and smaller electric or fan motor bearings operating at high speeds or low temperatures	
		Acinol 1400		Centralized lubrication systems, moderately loaded enclosed gearboxes	

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	