CITGO CITGEAR® SYNTHETIC EP LUBRICANTS

Date 08/11

DESCRIPTION: CITGO CITGEAR Synthetic EP Gear Lubricants are a complete line of products designed for gear applications operating at high temperatures and/or very low temperatures, severe conditions, or requiring extreme pressure (EP) protection.

QUALITIES: Compared to conventional mineral oil based products, CITGEAR Synthetic EP lubricants offer exceptionally low pour points and high viscosity indexes. The high viscosity index provides higher viscosities and greater film thickness at high temperatures and lower viscosities at low temperatures for easy start-up. Extreme Pressure (EP) additives protect gears operating in boundary lubrication regime and guard against failures associated with heavy loading and severe operation. CITGO CITGEAR Synthetic EP Gear Lubricants exhibit low foaming tendencies, oxidation resistance, and provide excellent rust and corrosion protection.

CITGO CITGEAR Synthetic EP Gear Lubricants have lower coeffecients of friction than conventional mineral oils as determined in steel on steel measurements. This characteristic translates to lower operating temperatures which can extend component life as well as reduce energy consumption.

These fluids are compatible with essentially all commonly used elastomers, gaskets, seals such as nitrile, Buna N, Viton®, Teflon®, polyethylene, flourocarbon, polyacrylate, epoxy, and PVC. They will not deteriorate acrylic paints or lacquers.

APPLICATIONS: CITGO CITGEAR Synthetic EP Gear Lubricants are recommended for gears requiring EP protection, operating under high temperatures, for applications which experience a wide range of temperatures and where a long lasting fluid is desired for extended drain intervals.

They are particularly recommended for lubricating industrial enclosed gears, “sealed-for-life” systems, and heavily loaded plain or roller element bearings. With proper maintenance, the useful service life of the lubricants may be extended beyond the traditional six months or 2500 operating hours associated with mineral oils. They are recommended for splash, idler immersion systems, forced drip and mechanical spray systems. The ISO 320 grade is recommended for splash and pressure lubrication systems operating between 50°F and 125°F with pitch line velocity under 1000 ft/minute; the ISO 460 grade is recommended for the same temperatures if the pitch line velocity is over 1000 ft/minute. Higher viscosity grades are recommended for idler immersion systems. No flushing or cleaning is required when converting from mineral oils to these synthetic products.

CITGO CITGEAR Synthetic EP Gear Lubricants **ISO 68 and ISO 100** are formulated for use in the lubrication of manual transmissions and transaxles which require an API GL-4 lubricant. They can be used in foreign and domestic passenger cars, light trucks, sport utility vehicles and vans.

Viton is a registered trademark of DuPont Dow Elastomers.

Teflon is a registered trademark of DuPont.

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TYPICAL PROPERTIES:

CITGO CITGEAR® SYNTHETIC EP GEAR LUBRICANTS

Grade	**68**	**100**	**150**	**220**	**320**	**460**	**680**
Material Code	632581001	632582001	632583001	632584001	632585001	632587001	632588001
Specific Gravity	0.847	0.851	0.856	0.857	0.864	0.864	0.867
API Gravity	35.6	34.7	33.8	33.6	32.3	32.3	32
Pounds Per Gallon	7.05	7.09	7.13	7.14	7.19	7.19	7.21
Viscosity, cSt at 40°C	66.44	101.4	155	220	340	434	689
cSt at 100°C	10.82	14.85	19.9	25.6	35.5	43.0	60.4
Viscosity Index	154	153	144	148	150	152	154
Brookfield at -40	27,850	58,800	–	–	–	–	–
Flash Point, °F (°C)	453 (234)	435 (224)	432 (222)	500 (260)	464 (240)	460 (238)	457 (236)
Pour Point, °F (°C)	-74 (-60)	-71 (-57)	-54 (-48)	-54 (-48)	-49 (-45)	-44 (-42)	-38 (-39)
Copper Corr	1B	1B	1B	1B	1B`	1B	1B
Rust A/B	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Demulsibility	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Timken OK Load	65	65	65	75	75	75	75
Four Ball Weld, Kg	250	250	250	250	250	250	250
Four Ball Wear at 40KG	0.35	0.35	0.35	0.35	0.35	0.35	0.35
at 20KG	0.31	0.31	0.31	0.29	0.29	0.29	0.29
Foam Test, Seq. I, II, III	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Color	L1.0	L1.0	L1.0	L1.0	L1.0	L1.0	L1.0
AGMA Grade	2 EP	3 EP	4 EP	5 EP	6 EP	7 EP	8 EP
US Steel 224	Pass	Pass	Pass	Pass	Pass	Pass	Pass
SAE Grade	70W80	75W90	–	–	–	–	–
API Classfication	GL-4	GL-4	–	–	–	–	–