OPTIMOL® VISCOGEN® KL

Product Data Sheet

Special synthetic oils for lubrication at high temperatures and in hostile environments when the use of mineral oils or conventional synthetic oils leads to wear, carbonization and residue formation. These oils are extremely adherent, thermally stable with excellent penetration and suitable for use at low or high temperatures. Polarized long-chain molecules with special solid-free and silicone-free additives carry extremely heavy loads and form exceptionally adherent, transparent, odorless lubricating films. They exhibit extraordinary penetration due to low surface tension, penetrating even small clearances (such as between chain rollers and side plates). These oils are also used for high temperature gear and bearing lubrication.

FEATURES

- Extremely low evaporation rate, low residue formation and low smoke generation at high temperatures.
- Continuous service over 200°C/392°F, intermittent service up to 250°C/482°F
- Exceptional adhesion gives reduced lubricant consumption with virtually no dripping
- Outstanding load carrying ability under severe mechanical loads and high temperatures
- Excellent penetration on chains and wire rope strands
- Odorless, transparent and colorless in thin films
- Excellent rust protection, extraordinary aging and oxidation resistance
- Resistant to hot and cold water wash
- Retains viscosity at high temperatures (high VI)
- Compatible and fully miscible with mineral oil
- All grades are acceptable to USDA for H2 service (for use where there is no possibility of food contact)

USES

OPTIMOL VISCOGEN KL3 and VISCOGEN KL 9 for chains in deep freeze operations, bakery and cigarette wrapping machines, painting lines, underfloor chains, chains that can be lubricated with very thin oils and chains operating in dusty environment (textile “fly” lint).

OPTIMOL VISCOGEN KL 15 for chains with oil spray lubrication, drip-feed lubricators with narrow openings of U-shaped deflections, oven chains. Silent chains in glass machines.

OPTIMOL VISCOGEN KL 23 most universal, for all central lubrication systems on chains of film stretching machines, driers, steamers and slashers in the textile industry; for all types of conveyor chains in the wood industry, vulcanization plants and paint lines; for conveyor systems in food processing machines; for all types of chains in heated equipment up to 250°C/482°F. Approved by all major tenter frame manufacturers.

OPTIMOL VISCOGEN KL 130 for drip-feed lubricators with wide cross-sections in large baking ovens, waffle baking machines, sheet-fed offset and printing machines. Also used on high temperature gears and bearings.

OPTIMOL VISCOGEN KL 300 for manual lubrication (brush lubrication), for all chains working at extremely low or extremely high circumferential speeds, for lubrication of slideways (prevention of stick-slip), spindles, open gears, ropes, oven chains. Reduces wear and ensures smooth running of cog type plastic belts. Can replace or relubricate block grease on plain bearings. It is the most stable against water wash. Excellent on slow moving gearing.

APPLICATION

Follow the viscosity selection of the chain lubrication system manufacturers. If lubricant drips off, select next higher viscosity. **OPTIMOL VISCOGEN KL 3, KL 23 AND KL 300** are available as spray for safe and simple application. Foam produced during spraying remains until oil has penetrated into friction surface. Specially designed adjustable spray head allows accurate placement even for very narrow lubrication points such as wire ropes or conveyor chains.

Castrol Industrial North America Inc.
Performance Lubricants Division
1001 West 31st Street, Downers Grove, Illinois 60515-1280
Telephone: (800) GEAR-OIL **Fax:** (800) 986-6447

OPTIMOL VISCOGEN KL 07-00 –R03
Formerly PDS 4193-3 7/00

TYPICAL PROPERTIES

OPTIMOL VISCOGEN KL

	KL 3	KL 9	KL 15	KL 23	KL 130	KL 300
Color				Greenish - transparent		
ISO Viscosity, DIN 51519	32	100	220	-	1500	-
Base Fluid				Synthetic		
Density, DIN 51757, g/cm^3 @15°C/59°F	0.930	0.967	0.948	0.950	0.930	0.923
Viscosity, DIN 51562						
@ 40°C/104°F, mm^2/s	31.5	102	213.5	252.4	1600	4290
@100°C/212°F, mm^2/s	6.48	12.5	19.85	23.36	98	209
Viscosity, ASTM D-445, D 2161						
@ 100°F cSt/SUS	34/160	114/529	242/1123	286/1327	1848/8561	5002/23172
@210°F cSt/SUS	6.62/48	12.9/70	20.5/100	24.1/116	101.7/475	217.8/1016
Viscosity Index, ASTM D 2270	165	116	107	115	141	159
Pour point, ISO 3016						
°C/°F	-47/-52.6	-39/-38.2	-34/-29.2	-40/-40	-18/-0.4	-7/+19.4
Flash point, ASTM D-92, °C/ºF	428/220	260/500	252/485	257/495	243/470	241/465
Fire point, ASTM D-92, °C/ºF	------	277/530	274/525	285/545	254/490	246/475
Ash Content	None	None	None	None	None	None

Subject to Usual Manufacturing Tolerances