Syngear® SH®-7000 Series

Synthetic gears/bearings

Your benefits at a glance

- Enhanced oxidation resistance
- Protection against wear, rust, corrosion and foaming
- Thermal and oxidation stability

Your requirements - our solution

Summit Syngear SH-7000 Series synthetic gear lubricants are formulated using synthesized hydrocarbon fluid and select additives to enhance oxidation resistance and provide maximum protection against wear, rust, corrosion and foaming. These PAO based fluids provide significantly better thermal and oxidation stability, as well as increased protection against the loss of viscosity than do conventional good quality mineral oils. The inherently high viscosity index of these oils provides higher viscosities and therefore greater film thickness at higher temperatures and lower viscosities for easy start-up and minimal internal friction at lower temperatures. The low coefficient of friction of the Summit Syngear SH-7000 Series lubricants substantially reduces power consumption and gearbox operating temperature, further prolonging the useful life of the lubricant.

Application

Summit Syngear SH-7000 Series lubricants are recommended for use under severe high or low temperature conditions when lubricating industrial enclosed gears and heavily loaded plain or rolling element bearings. They are particularly recommended for applications where high oil temperatures result in short oil life or high maintenance costs. Summit Syngear SH-7032, SH-7046 and SH-7068 may be used in piston or gear type pumps, especially where pressures exceed 1000 psi or when operating over a wide temperature range.

Use Summit Syngear SH-7032 through Syngear SH-71000 for applications where the corrosion of yellow metals is a concern, as these lubricants do not contain additives which tend to attack metals such as brass, bronze or copper.

Application notes

The Summit Syngear SH-7000 Series lubricants are compatible with essentially all seal materials, plastics and paints, including Buna-N, neoprene, Viton®, Teflon®, polyethylene, polyurethane ether, fluorocarbon, poly-acrylate, polysulfate, ethylene acrylic, epoxy, plasticol, PVC, acrylic paint and lacquer.

Material safety data sheets

Material safety data sheets can be requested via our website https://www.klsummit.com. You may also obtain them through your contact person at Summit Lubrication.

Characteristics	Syngear SH 7032	Syngear SH 7046	Syngear SH 7068	Syngear SH 7100
Article number	340130	340131	340132	340133
Density	-	-	-	-
Density, 20°C	approx. 0.845 g/cm³	approx. 0.848 g/cm³	approx. 0.852 g/cm³	approx. 0.857 g/cm³
Flash point	-	-	-	≥ 230 °C
Flash point, Cleveland open cup	≥ 215 °C	≥ 220 °C	≥ 220 °C	-
ISO viscosity grade	32	46	68	100
Kinematic viscosity, DIN EN ISO 3104 / DIN 53000-1, based on standard / ASTM D445 / ASTM D7042, 100°C	approx. 6.0 mm²/s	approx. 7.7 mm²/s	approx. 10.7 mm²/s	approx. 14.6 mm²/s
Kinematic viscosity, DIN EN ISO 3104 / DIN 53000-1, based on standard / ASTM D445 / ASTM D7042, 40°C	approx. 32 mm²/s	approx. 46.0 mm²/s	approx. 71 mm²/s	approx. 100 mm²/s
Viscosity index, ASTM D2270	approx. 133	approx. 135	approx. 146	approx. 154

Syngear® SH®-7000 Series

Synthetic gears/bearings

Copper corrosion, ASTM D130, 3 h, 100°C	1 - 100 - 3 corrosion degree	1 - 100 - 3 corrosion degree	1 - 100 - 3 corrosion degree	1 - 100 - 3 corrosion degree
Steel corrosion, DIN ISO 7120 / ASTM D665, method B, 24 h, 60°C	rust-free	rust-free	rust-free	rust-free
Pour point, DIN ISO 3016, ASTM D97, ASTM D5950, ASTM D7346	approx. -63 °C	approx. -61 °C	approx. -57 °C	approx. -47 °C
FZG scuffing test	11	11	12+	14
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	36 months	36 months	36 months	36 months

Characteristics	**Syngear SH 7150**	**Syngear SH 7220**	**Syngear SH 7320**	**Syngear SH 7460**
Article number	340135	340136	340137	340138
Density	-	-	-	0.877 g/cm³
Density, 20°C	approx. 0.862 g/cm³	approx. 0.867 g/cm³	approx. 0.867 g/cm³	-
Flash point	-	-	-	-
Flash point, Cleveland open cup	≥ 230 °C	≥ 230 °C	≥ 240 °C	≥ 235 °C
ISO viscosity grade	150	220	320	460
Kinematic viscosity, DIN EN ISO 3104 / DIN 53000-1, based on standard / ASTM D445 / ASTM D7042, 100°C	approx. 20.0 mm²/s	approx. 27 mm²/s	approx. 36 mm²/s	approx. 47 mm²/s
Kinematic viscosity, DIN EN ISO 3104 / DIN 53000-1, based on standard / ASTM D445 / ASTM D7042, 40°C	approx. 150 mm²/s	approx. 230 mm²/s	approx. 330 mm²/s	approx. 487 mm²/s
Viscosity index, ASTM D2270	approx. 153	approx. 152	approx. 155	approx. 158
Copper corrosion, ASTM D130, 3 h, 100°C	1 - 100 - 3 corrosion degree	1 - 100 - 3 corrosion degree	1 - 100 - 3 corrosion degree	1 - 100 - 3 corrosion degree
Steel corrosion, DIN ISO 7120 / ASTM D665, method B, 24 h, 60°C	rust-free	rust-free	rust-free	rust-free
Pour point, DIN ISO 3016, ASTM D97, ASTM D5950, ASTM D7346	approx. -52 °C	approx. -48 °C	approx. -49 °C	approx. -39 °C
FZG scuffing test	14	14	14	14
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	36 months	36 months	36 months	36 months

Characteristics	**Syngear SH 7680**	**Syngear SH 71000**
Article number	340139	340134
Density	-	-

Product information

Syngear® SH®-7000 Series

Synthetic gears/bearings

Characteristics	Syngear SH 7680	Syngear SH 71000
Density, 20°C	approx. 0.871 g/cm³	approx. 0.88 g/cm³
Flash point	-	-
Flash point, Cleveland open cup	≥ 250 °C	≥ 220 °C
ISO viscosity grade	680	1000
Kinematic viscosity, DIN EN ISO 3104 / DIN 53000-1, based on standard / ASTM D445 / ASTM D7042, 100°C	approx. 64 mm²/s	approx. 87.0 mm²/s
Kinematic viscosity, DIN EN ISO 3104 / DIN 53000-1, based on standard / ASTM D445 / ASTM D7042, 40°C	approx. 702 mm²/s	approx. 1000 mm²/s
Viscosity index, ASTM D2270	approx. 165	approx. 170
Copper corrosion, ASTM D130, 3 h, 100°C	1 - 100 - 3 corrosion degree	1 - 100 - 3 corrosion degree
Steel corrosion, DIN ISO 7120 / ASTM D665, method B, 24 h, 60°C	rust-free	rust-free
Pour point, DIN ISO 3016, ASTM D97, ASTM D5950, ASTM D7346	approx. -40 °C	approx. -36 °C
FZG scuffing test	14	14
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	36 months	36 months

Summit Lubrication

Your expert in specialty lubricants. Since 1982, we have partnered with you to bring you the right solution and advanced lubrication technologies. With over 500 products, from air and gas compressor oils to refrigeration oils, we develop top-of-the-line products tailored to your specific needs. Your success is our success.

Summit Lubrication a brand of Klüber Lubrication NA LP /
9010 County Road 2120, Tyler, TX 75707 /
Phone: +1 800 749 5823 / www.klsummit.com

The data in this document is based on our general experience and knowledge at the time of publication and is intended to give information of possible applications to a reader with technical experience. It constitutes neither an assurance of product properties nor does it release the user from the obligation of performing preliminary field tests with the product selected for a specific application. All data are guide values which depend on the lubricant's composition, the intended use and the application method. The technical values of lubricants change depending on the mechanical, dynamical, chemical and thermal loads, time and pressure. These changes may affect the function of a component. We recommend contacting us to discuss your specific application. If possible we will be pleased to provide a sample for testing on request. Klüber products are continually improved. Therefore, Klüber Lubrication reserves the right to change all the technical data in this document at any time without notice.

Publisher and Copyright: Klüber Lubrication NA LP. Reprints, total or in part, are permitted only prior consultation with Klüber Lubrication NA LP and if source is indicated and voucher copy is forwarded.