Starplex HM 3

High performance long-service multi-purpose grease

(previously known as Starplex EP 3)

Product description

Starplex HM 3 is a high performance long-service multi-purpose lead-free grease, formulated for long-term service in roller-and ball-bearing applications, operating at high temperatures and under high loads.

Starplex HM 3 is an uncoloured lithium complex grease formulated with high quality mineral oils with extreme pressure/anti-wear additives and corrosion- and oxidation inhibitors, offering performance across a wide operating temperature range and good mechanical stability. This grease is suited for bearing lubrication under conditions where strong vibrations are present.

Customer benefits

- Designed for consistent performance across a wide temperature range.
- Formulated to help protect against water and aggressive atmospheres.
- Good mechanical stability properties offer effective lubrication in bearings subject to strong vibrations.
- Offers advanced protection under high temperatures and high-pressure load capacity.
- Good sealing characteristics help shield lubrication points from dust, dirt, and water.

Product highlights

- **Designed for applications across a wide temperature range.**
- **Formulated for good water resistance.**
- **Offers good mechanical stability properties.**
- **Helps provide advanced protection under high temperatures and loads.**
- **Good sealing characteristics help protect from dust, dirt, and water.**

Selected specification standards include:

DIN	ISO

Applications

Starplex HM 3 grease is used for lubricating machines, units, and components in which they are subjected to high thermal and mechanical loads over a long service life.

Typical applications are:

- Automobile wheel bearings and generators
- Clutch thrust bearings, brake cylinders, fan bearings.
- Electric motors, kiln cars, rollers in drying plants, paper machines, washing and dish washing machines.
- Special DIY machines and household appliances

Starplex HM 3 grease is tested in all applications involving extreme pressures, vibrations and impact stress, wet conditions, dust, and the presence of plastics seals.

This product largely covers the applications of conventional lithium, sodium and calcium greases, as well as of aluminium and calcium complex greases.

Starplex HM 3 can substitute for many different grease types, therefore reducing the number of different greases that must be kept in storage in a factory.

Product maintenance and handling

Maintaining a clean work environment is critical when equipment greasing is performed. Grease fittings should be wiped clean prior to grease injection to prevent contaminants from entering the equipment. Bearing housings should be maintained one-third to one-half full of grease. Over-greasing should be avoided as excessive heat build-up can result. Periodic relubrication via grease gun or centralized system should be supplemented by complete cleaning and packing with fresh grease on an appropriate schedule.

Approvals, performance and suitable for use

Performance

	DIN 51 502	ISO 6743-09	Operating temperature
Starplex HM 3	KP 3 P-20	ISO-L-XBDEB3	-20°C up to +150°C, with frequent re-lubrication up to +200°C[1]

[1] Short time admissible peak value.
Permanent temperature over 150°C require regreasing at shorter intervals subject to thermal load.

Typical test data

Test	Test Methods	Results
Typical Shelf Life: 36 months from date of filling indicated on the product label		
Appearance	Visual	Brown, smooth
NLGI grade	ASTM D217 mod	3
Penetration worked, mm/10	ISO 2137	220 - 250
Thickener type		Lithium Complex
Base oil type		Mineral
Base oil viscosity at 40°C, mm²/s (pure base oil mix)	ASTM D445	115
Dropping Point, °C	IP 396	>250
Oil Bleeding	DIN 51 817	2.0
Oxidation stability, 100h/100°C, bar	DIN 51 5808	<0.3
Copper corrosion 24h/150°C	DIN 51811	1
Emcor corrosion test, distilled water	DIN 51 802	0/0
Timken OK load, N	DIN 51 434/4	222.5
Four ball Weld Load, N	DIN 51 350/4	2800
Four ball Wear, mm	DIN 51 350	0.3
Water resistance static	DIN 51 807/1	1-90
Useful life of grease at 150°C: FE9 (A/1500/6000-150)	DIN 51 821	F_{50}>100h

The typical test data set out above does not constitute a specification. It is indicative only and can be affected by allowable production tolerances. Chevron may modify this test data. Modified data will supersede all previous data, so please ensure you refer to the latest version of this Product Data Sheet (PDS).