

Lubricants

Introduction

HPC high-performance lubricants help reduce friction and wear, extend lubrication time and reduce maintenance and replacement costs in applications that would defeat conventional oils and greases. Formulated to withstand the rigors of heavy loads, dirty, dusty or chemically harsh environments, temperature and speed extremes, HPC lubricants are also ideal for normal service lubrication.

To select the best lubricant for your application, let your specific performance needs be your guide:

Load
Environment
Temperature
Speed

There are six classes of lubricants from which to choose. Each class has a different physical form with properties that make it suitable for specific applications:

► **Pastes** – Grease-like materials containing a very high percentage of solid lubricants. Used for assembly and lubrication of highly loaded, slow moving parts for threaded fasteners.



▶ **Greases** – Solid to semisolid materials consisting of a lubricating fluid, thickening agent and additives. Used on rolling element bearings and other moving parts.

▶ **Compounds** – Grease-like materials composed of silicone fluids and silica fillers. Used for their sealing, dielectric, non-metal-to-metal lubricating and release properties.

▶ **High Performance Industrial Lubricating Oils** – Based on hydroprocessed mineral oils or synthetic base stocks such as polyalphaolefin (PAO) and esters, these lubricating fluids are fortified with carefully selected additives to provide optimum performance and service life while maximising protection of the equipment and machinery they are designed to lubricate

▶ **Anti-Friction Coatings** – “Lubricating paints”; when applied, these materials cure to form dry, solid lubricant coatings that are bonded to the surface.

▶ **Dispersions** – Finely divided solid lubricants suspended in lubricating fluids; preferred when it is necessary to apply solid lubricants in liquid form.

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Applications

Gears

| Application | Temp. Range [°C] | Other Considerations | Part Number |
|---------------------------------------|------------------|-------------------------------------|-------------------|
| Pretreatment (Metal to metal) | -25 to +450 | Run-in lubricant | HPCLUBG-RapidPlus |
| Operation (Metal to metal) | -40 to +150 | Multi-purpose synthetic/food grade | HPCLUBG-4500 |
| | -40 to +177 | Synthetic lubrication/high loads | HPCLUBG-4700 |
| Metal to plastic / plastic to plastic | -73 to +180 | Wide temperature range/low friction | HPCLUB-33L |
| Metal to plastic plastic to plastic | -40 to +130 | Multi-purpose semi-synthetic | HPCLUBPG-75 |

Chain Drives

| Application | Temp. Range [°C] | Other Considerations | Part Number |
|-------------------------------|------------------|--|--------------|
| Greased chains | -40 to +230 | Tacky paste/wide temperature range / water-resistant | HPCLUBP-40 |
| | -180 to +450 | Long-term lubrication | HPCLUBD-321R |
| Oiled chains (Metal to metal) | | Extreme loads/ high MoS_2 content | HPCLUBM-55P |

Power Screw Drives/ Leadscrews

| Application | Temp. Range [°C] | Other Considerations | Part Number |
|---------------------------------------|------------------|-------------------------------------|------------------|
| Operation (Metal to metal) | -40 to +150 | Multi-purpose synthetic/food grade | HPCLUBG-4500 |
| Plastic to metal / plastic to plastic | -73 to +180 | Wide temperature range/low friction | HPCLUB-33L |
| Operation (Metal to metal) | -30 to +130 | General Purpose | HPCLUB-MULITILUB |

Worm & Wheel Gearboxes

| Application | Part Number |
|---------------------------|----------------|
| Worm gear unit, Guideways | HPCLUB-GLY-460 |

HPCLUBG-Rapidplus

- ▶ **Description** – Solid lubricating paste with particularly low friction coefficient for assembly and running-in of metal components.
- ▶ **Application** – Suitable for the press-fit production of all types of machine elements, as a running-in lubricant for new machines and gears, as permanent lubrication of machine elements which are submitted to slight or intermittent movement only, as well as for drilling, sawing and thread cutting; Used to lubricate threaded spindles, splined shafts, tooth gearing, worm gearing, moving screws, fittings, pumps, guides on machine tools, as well as for fitting of ball and roller bearings, pulleys, wheel flanges and bolts.
- ▶ **Features** – Low friction coefficient; High load-carrying capacity; Prevents seizure and scoring; Suppresses stick-slip; Reduces formation of fretting corrosion; Provides emergency running performance.
- ▶ **Composition** – Mineral oil; Solid lubricants.
- ▶ **Temperature Range** – From -35 to +450°C.
- ▶ **Packages** – Aerosol: 400ml; Tube: 50g; Cans: 250g, 1kg; Pails: 5kg, 25kg.

HPCLUBG-4500

- ▶ **Description** – Specialty lubricant that combines the benefits of wide operating temperature and broad compatibility with varied materials.
- ▶ **Application** – Long-term lubrication for assembly and maintenance; Can be used in food processing applications involving mixers, motors, conveyors, low-temperature equipment, packaging machines and many other applications in or out of the food processing industry where a white grease may be desirable. Such applications may involve furniture, instrumentation, photo and optical equipment.
- ▶ **Features** – Multi-purpose capabilities; Wide temperature operating range; Broad compatibility; Complies with the listing requirements of the FDA regulation 21 CFR 178.3570 and is registered at NSF under H1 category for “incidental food contact”.

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- ▶ **Composition** – Polyalphaolefine; Aluminum complex thickeners; Solid lubricants.
- ▶ **Temperature Range** – From -40 to +150°C
- ▶ **Packages** – Aerosol: 400ml; Cartridge: 400g; Pails: 5kg, 25kg

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HPCLUBG-4700

- ▶ **Description** – Specialty lubricant that combines the benefits of wide operating temperature and broad compatibility with varied materials.
- ▶ **Application** – Long-term lubrication for assembly and maintenance; Can be used in most non-food related grease applications such as metal working machines, motors, fans, blowers, conveyors, wheel bearings and custom machinery where heavy duty, long-lasting lubrication is desired.
- ▶ **Features** – Multi-purpose capabilities; Wide temperature operating range; Broad compatibility; Meets Cinnincinnati Machine P-64, Ford ESA MIC75-B, GM998525H.
- ▶ **Composition** – Polyalphaolefine; Lithium complex thickeners; Solid lubricants.
- ▶ **Temperature Range** – From -40 to +177°C.
- ▶ **Packages** – Cartridge: 400g; Can: 1kg; Pail: 25kg

HPCLUBPG-75

- ▶ **Description** – Lubricating grease for plastic/plastic and plastic/metal combinations with slow to medium-fast movements and light loads.
- ▶ **Application** – Used on vehicle track-rod joints.
- ▶ **Features** – Suitable for long-term lubrication; Good low temperature characteristics; Very low coefficient of friction; Compatible with many plastics and elastomers.
- ▶ **Composition** – Mineral oil; Polyalphaolefine; Lithium soap; Solid lubricants.
- ▶ **Temperature Range** – From -40 to +130°C
- ▶ **Packages** – Can: 1kg; Pails: 5kg, 25kg, 50kg

HPCLUBP-40

- ▶ **Description** – Metal-free adhesive lubrication paste which can be used for all assembly and continuous lubricating jobs, particularly those exposed to corrosive environments such as splash water or humidity.
- ▶ **Application** – Assembly and threaded connections, spline shafts, mounting of bearings, Continuous lubrication: for various parts in brake systems, in brake rods, guide bolts. Axles of commercial vehicles, cams and plain bearings; Open gears; Marine applications.
- ▶ **Features** – Excellent adhesion; Good corrosion protection; Good water resistance; Good anti-fretting; Assembly and continuous lubrication; Metal-free; Low water pollution class.
- ▶ **Composition** – Semi-synthetic oil; Solid lubricants; Corrosion inhibitor.
- ▶ **Temperature Range** – From -40 to +230°C as a paste, -40 to +1200°C as a solid lubricant.
- ▶ **Packages** – Can: 1kg; Pails: 5kg, 25kg

HPCLUBD-321R

- ▶ **Description** – Air-curing dry lubricant.
- ▶ **Application** – For metal/metal combinations with slow to medium-fast movements and high loads; Suitable for the permanent lubrication of highly stressed sliding guides with low sliding speeds, oscillating movements or intermittent operation; Improving the running-in process and for lubrication under high vacuum and at extreme temperatures; Used successfully for cylinder-head bolts, toaster guides, car mirror adjustment mechanisms, high voltage switches, for the running in of highly stressed gear wheel; Emergency lubricant for parts of the rotor head of wind energy installations and for groove-free cold extrusion of steel.
- ▶ **Features** – Air-drying; Avoidance of stick-slip; High ageing resistance.
- ▶ **Composition** – Solid lubricants; Inorganic binder; Solvents.
- ▶ **Temperature Range** – From -180 to +450°
- ▶ **Packages** – Aerosol: 400ml; Can: 1kg; Pail: 5kg

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HPCLUBM-55PLUS

- ▶ **Description** – Black dispersion of solid lubricants in mineral oil.
- ▶ **Application** – Used successfully as an additive for mineral oils.
- ▶ **Features** – Increases load-carrying capacity; Reduces friction and wear; Reduces running noise; Improves running-in; Emergency running properties; Prevents and reduces pitting in gears.
- ▶ **Composition** – Mineral oil; Molybdenum disulphide; Dispersant.
- ▶ **Temperature Range** – Depends on the oil to which it is added.
- ▶ **Packages** – Can: 1l; Pails: 5l, 20l.

HPCLUB-33L

- ▶ **Description** – Lubricating grease for metal/metal, metal/plastic combinations involving slow to medium-fast movements and light loads, especially over a wide range of temperatures.
- ▶ **Application** – Used successfully for rollers in mobile refrigerating equipment and refrigeration plants, control cables, electric clocks, motors, windscreen wiper motors, vehicle starter motors, photographic and optical equipment, surveying instruments.
- ▶ **Features** – High oxidation resistance; Wide service temperature range; Good low temperature performance; Compatible with many plastics; Water-resistant.
- ▶ **Composition** – Silicone oil; Lithium soap.
- ▶ **Temperature Range** – From -73 to +180°C
- ▶ **Packages** – Tube: 100g; Can: 1kg; Pails: 25kg, 50 kg; Drum: 180kg

HPCLUB-MULTILUB

- ▶ **Description** – High-performance grease for metal/metal combinations involving slow to fast movements and medium to high loads.
- ▶ **Application** – Lubrication contacts with light to medium loads and low to high speeds, even in the presence of moisture and spray; Used on roller bearings, plain bearings, sliding guides, roller guides, ball-and-socket joints, splined shafts and threaded spindles; Used for chassis lubrication on cranes, forklift trucks and lifting apparatus.
- ▶ **Features** – Good load-carrying capacity; Suitable for long-term lubrication by virtue of low oil evaporation; Good water wash-out resistance; Good corrosion protection; Good oxidation resistance; Reduction of wear and scoring.
- ▶ **Composition** – Mineral oil; Lithium soap; EP additive; Corrosion inhibitor.
- ▶ **Temperature Range** – From -25 to +120°C
- ▶ **Packages** – Tube: 100g; Cartridge: 400g; Pails: 1kg, 5kg, 20kg, 50kg; Drum: 180kg

HPCLUB-GLY-460

- ▶ **Application & Description** – Polyglycol based lubricants. Designed for the lubrication of filled for life gearboxes and heavy-duty worm gears, severe service applications, also in food grade applications.
- ▶ **Synthetic Benefits** – Improved gear efficiency, Lower oil operating temperature, Easy start-up at low temperatures, Micropitting protection

| ISO VG | Kinematic Viscosity | | VI | Pour Point °C | Flash Point °C |
|--------|---------------------|-------|-----|------------------|-------------------|
| | 40°C | 100°C | | | |
| 460 | 460 | 78 | 250 | -33 | 265 |

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HPCLUBBR2-PLUS

- ▶ **Description** – High performance grease with solid lubricants for metal/metal combinations involving slow to fast movements, particularly with medium to high loads.
- ▶ **Application** – Used successfully on roller bearings, plain bearings, sliding guides, roller guides, ball-and-socket joints, splined shafts and threaded spindles.
- ▶ **Features** – High load carrying capacity; Suitable for long-term lubrication; Good oxidation resistance; Emergency running properties i.e. in case of mixed friction providing of wear protection by solid lubricants and EP additives; Good protection against scaring (false Brinelling); Good water washout resistance; Good corrosion protection; Good protection against fretting corrosion.
- ▶ **Composition** – Mineral oil; Lithium soap; Solid lubricants; EP additive; Corrosion inhibitor.
- ▶ **Temperature Range** – From -30 to +130°C, +150°C for short periods.
- ▶ **Packages** – Tube: 100g, Cartridge: 400g; Can: 1kg; Pails: 5kg, 25kg; Drum: 180kg.

| PART NUMBER | Size | Type | PRICE EACH 1-5 |
|-------------------|---------|-----------|----------------|
| HPCLUBG-RapidPlus | 400 ml | Cartridge | £34.29 |
| HPCLUBG-4500 | 400 ml | Aerosol | £27.14 |
| HPCLUBG-4700 | 400 gr | Cartridge | £29.20 |
| HPCLUB33-L | 100 gr | Tube | £25.98 |
| HPCLUBPG-75 | 1 kg | Can | £46.53 |
| HPCLUBP-40 | 1 kg | Can | £52.61 |
| HPCLUBD-321R | 400 ml | Aerosol | £31.13 |
| HPCLUBM-55PLUS | 1 ltr | Can | £49.62 |
| HPCLUBMULTI-100G | 100 gr | Tube | £9.53 |
| HPCLUBMULTI-1KG | 1 kg | Pale | £27.28 |
| HPCLUBGLY-460 | 0.5 ltr | Can | £86.13 |
| HPCLUBBR2-PLUS | 400 gr | Cartridge | £87.00 |