



# Special Product Catalogue

**Grease Products**

**2025**





## ABOUT US

In 2019 a group of German and Singaporean managers discussed on the chances and opportunities by bundling their individual networks of regional suppliers, product expertise and market knowledge.

So in 2020 BHM International was founded as a Singaporean-German Trading and Sourcing Joint Venture Company – managed by German and Singaporean citizens. BHM International is strictly focussing on **B2B wholesale in chemical raw & intermedia products** as well as on **fertilizers**.

This approach of combining expert knowledge, existing networks and cultural competences based on a defined set of business principles turned out as a clear success. Within just 4 years BHM International was able to grow to a 2-digit Million US-\$ company. Due to this dynamic growth BHM-subsidies can be found in Germany as well as in Middle East.



### High-Quality Products & Suppliers

We ensure that our products meet the highest international quality requirements as well as established specification and testing standards. Our suppliers are on a world-class level and are already proven exporters.



### Reliability

BHM International's commitment to quality means you can count on us for all your fertilizer needs. We rigorously test our products and offer expert advice and support.



### Competitive Pricing

At BHM International we are committed to providing you with the most competitive and cost-effective pricing available in the market.



### Trust, Honesty & Growth

We at BHM International believe in collaborative, honest and sustainable partnerships & communication in each business relation. We have already proven that we grow together with our suppliers and customers.



### Efficient Logistics & Punctuality

With our advanced logistics competence & network, we guarantee timely delivery and efficient distribution. You can trust BHM to provide prompt and reliable service, keeping your operations running smoothly and ensuring you never miss a crucial window of supply and delivery.



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## Multipurpose Lithium Grease

High Performance

### Description:

PPM-100 MP2 is a mineral oil based Lithium grease fortified with, anti-wear, anti-oxidation and anti-corrosion additives. This high performance grease is suitable for wide range of industrial and automotive applications.

### Performance & Features:

- Good high temperature performance up to 130°C
- Good oxidation resistance
- Excellent wear and corrosion protection
- Long storage life
- Good mechanical stability
- Equivalent to SHELL GADUS S2 V100 2 & SKF LGMT 2

### Typical Applications:

- Electric motor bearing
- Automotive wheel bearing
- Agricultural equipment
- Water pump bearing
- Conveyors
- Industrial fans

### Properties:

Specifications	Methods	Conditions	Unit	PPM-100 MP2
Base oil type				Mineral oil
Base oil viscosity @ 40 °C	ASTM D 445		cSt (mm <sup>2</sup> /s)	100
Thickener type				Lithium Soap
Dropping point	ASTM D566		°C	>185
NLGI Consistency			NLGI- class	2
Worked penetration	ASTM D217	60 Dh	mm/10	265 – 295
Operating Temperature Range				-20 °C to + 130 °C
Colour				Brown





## Multipurpose Lithium Grease

High Performance

### Description:

PPM-100 EP3 is a mineral oil based Lithium grease fortified with anti-wear, anti-oxidation and anti-corrosion additives. This premium quality, general purpose grease is suitable for a wide range of industrial and automotive applications requiring stiff grease.

### Performance & Features:

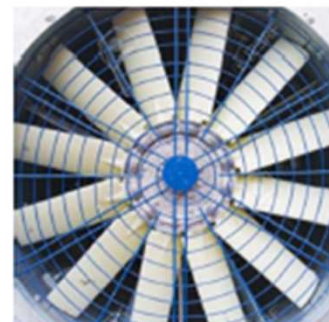
- Good high temperature performance up to +130 °C
- Good oxidation and mechanical stability
- Excellent wear and corrosion protection
- Long storage life
- Equivalent to SKF LGMT 3 & Shell Gadus S2 V100 3

### Typical Applications:

- Electric motor bearing
- Car, truck and trailer wheel bearings
- Agricultural equipment
- Continuous high ambient temperature
- Water pump bearings
- Vertical shaft applications
- Propeller shafts

### Properties:

Specifications	Methods	Conditions	Unit	PPM-100 MP3
Base oil type				Mineral oil
Base oil viscosity @ 40 °C	ASTM D 445		cSt (mm <sup>2</sup> /s)	100
Thickener type				Lithium Soap
Dropping point	ASTM D566		°C	>185
NLGI Consistency			NLGI- class	3
Worked penetration	ASTM D217	60 Dh	mm/10	220 – 250
Operating Temperature Range				-20 °C to + 130 °C
Colour				Brown



## Multipurpose Extreme Pressure Lithium Grease

Extreme Pressure, High Performance

### Description:

PPM-LithiumEP is a mineral oil based Lithium grease fortified with Extreme pressure (EP), anti-wear, anti-oxidation and anti-corrosion additives. This grease is recommended for most types of industrial applications including heavy-duty applications where high unit pressures or shock loads are present.

### Performance & Features:

- Good high temperature performance up to 130°C
- Good oxidation resistance
- Excellent wear and corrosion protection
- Excellent EP performance
- Long storage life
- Excellent mechanical stability
- Equivalent to SHELL GADUS S2 V220 & SKF LGMT 2

### Typical Applications:

- Construction machinery
- Heavy duty bearing and general industrial lubrication
- Jaw crushers
- Crane wheels, sheaves
- Conveyors
- Automotive

### Properties:

Specifications	Methods	Conditions	Unit	PPM-Lithium EP2	PPM-Lithium EP3
Base oil type				Mineral oil	Mineral oil
Base oil viscosity @ 40 °C	ASTM D 445		cSt (mm <sup>2</sup> /s)	220	220
Thickener type				Lithium Soap	Lithium Soap
Dropping point	ASTM D566		°C	>185	>185
NLGI Consistency			NLGI- class	2	3
Worked penetration	ASTM D217	60 Dh	mm/10	265 – 295	220 – 250
Four Ball Weld Load	ASTM D 2596		Kgf	>=250	>=250
Operating Temperature Range				-20 °C to + 130 °C	-20 °C to + 130 °C
Colour				Brown	Brown





## Multipurpose Lithium Complex Grease

High Temperature, High Performance

### Description:

PPM-100 LX is a mineral oil based Lithium Complex grease fortified with Extreme pressure (EP), anti-wear, anti-oxidation and anti-corrosion additives. PPM-100LX is recommended for general industrial and automotive applications, when loads or temperatures exceed the range of general purpose greases.

### Performance & Features:

- Excellent high temperature performance up to 150°C (180°C Peak)
- Excellent oxidation resistance
- Excellent corrosion protection
- Long life
- Excellent mechanical stability
- Equivalent to SHELL GADUS S3 V100

### Typical Applications:

- Electric motor bearing operating at high temperature
- Automotive wheel bearing
- Industrial fan bearing
- Industrial air blower

### Properties:

Specifications	Methods	Conditions	Unit	PPM-100 LX2	PPM-100 LX3
Base oil type				Mineral oil	Mineral oil
Base oil viscosity @ 40 °C	ASTM D 445		cSt (mm <sup>2</sup> /s)	100	100
Thickener type				Lithium Complex Soap	Lithium Complex Soap
Dropping point	ASTM D566		°C	>250	>250
NLGI Consistency			NLGI- class	2	3
Worked penetration	ASTM D217	60 Dh	mm/10	265 – 295	220 – 250
Operating Temperature Range				-20 °C to + 150 °C (Peak +180 °C)	-20 °C to + 150 °C (Peak +180 °C)
Colour				Brown	Brown



## Multipurpose Lithium Complex Grease

Extreme Pressure, High Performance, High Temperature

### Description:

PPM-220 LX is multipurpose greases based on mineral oil and Lithium Complex thickener fortified with Extreme Pressure (EP), Anti-wear, Anti-Oxidation and Anti-Corrosion additives. PPM-220LX is suitable for bearings operating at high temperature under load and vibrations.

### Performance & Features:

- Excellent high temperature performance up to 180°C
- Excellent oxidation resistance
- Excellent wear and corrosion protection
- Excellent EP performance
- Long life
- Excellent mechanical stability
- Equivalent to SHELL GADUS S3 V220 & MOBIL GREASE XHP 222

### Typical Applications:

- Car, truck and trailer wheel bearing
- Various shock loaded or vibrating applications
- Jaw crushers
- Agriculture and off road vehicles
- Construction machinery
- U-joints

### Properties:

Specifications	Methods	Conditions	Unit	PPM-220 LX2	PPM-220 LX3
Base oil type				Mineral oil	Mineral oil
Base oil viscosity @ 40 °C	ASTM D 445		cSt (mm <sup>2</sup> /s)	220	220
Thickener type				Lithium Complex Soap	Lithium Complex Soap
Dropping point	ASTM D566		°C	>260	>260
NLGI Consistency			NLGI- class	2	3
Worked penetration	ASTM D217	60 Dh	mm/10	265 – 295	220 – 250
Four Ball Weld Load	ASTM D 2596		Kgf	>=250	>=250
Operating Temperature Range				-20 °C to + 150 °C (Peak 180 °C)	-20 °C to + 150 °C (Peak 180 °C)
Colour				Brown	Brown





## Multipurpose Calcium Sulfonate Complex Grease

Extreme Pressure, High Temperature, Water Resistant

### Description:

PPM-220 CS is based on mineral oil and latest Calcium Sulfonate Complex thickener technology fortified with high performance additives. PPM-220 CS is recommended for most types of industrial applications including heavy-duty applications where high unit pressures or shock loads, wet environments and high temperatures are present.

### Performance & Features:

- Outstanding high temperature performance up to 200°C
- Excellent oxidation resistance
- Excellent wear and corrosion protection
- Excellent Extreme Pressure performance
- Water Resistant
- Long life
- Excellent mechanical stability

### Typical Applications:

- Heavy duty bearing and general industrial lubrication
- Loaders, Excavators, Cranes
- Stone crushers, Excavators
- Conveyors
- Car & Truck wheel bearing
- Pellet mills
- Pulp and paper making machines

### Properties:

Specifications	Methods	Unit	PPM-220 CS1	PPM-220 CS2
Base oil type			Mineral oil	Mineral oil
Base oil viscosity @ 40 °C	ASTM D 445	cSt (mm <sup>2</sup> /s)	220	220
Thickener type			Calcium Sulfonate Complex	Calcium Sulfonate Complex
Dropping point	ASTM D566	°C	≥300	≥300
NLGI Consistency		NLGI- class	1	2
Worked penetration	ASTM D217	mm/10	310 – 340	265 – 295
Four Ball Weld Load	ASTM D 2596	Kgf	>=400	>=400
Water Washout Test	ASTM D 1264	%Loss	-	1.5
Operating Temperature Range			-20 °C to + 200 °C	-20 °C to + 200 °C
Colour			Light Brown	Light Brown



## Multipurpose Calcium Sulfonate Complex Grease

High Temperature, Extreme Pressure, Water Resistant

### Description:

PPM-460 CS is mineral oil based grease using the latest Calcium Sulfonate Complex thickener technology. It is suitable for applications subjected to high loads, vibrations, wet environments and high temperatures. This Grease is an excellent choice for steel mill and marine applications.

### Performance & Features:

- Outstanding high temperature performance up to +200 °C
- Excellent oxidation and mechanical stability
- Excellent corrosion resistance characteristics
- Very high load carrying capacity
- Extremely water resistant
- Equivalent to TOTAL CERAN XM

### Typical Applications:

- Work roll bearings in steel industry
- Continuous casting machines
- Marine and offshore applications
- Sealed spherical roller bearings operating up to 180 °C
- PPM-460 CS 1.5 is recommended for central lubrication systems

### Properties:

Specifications	Methods	Conditions	Unit	PPM-460 CS 1.5	PPM-460 CS 2
Base oil type				Mineral oil	Mineral oil
Base oil viscosity @ 40 °C	ASTM D 445		cSt (mm <sup>2</sup> /s)	460	460
Thickener type				Calcium Sulfonate Complex	Calcium Sulfonate Complex
Dropping point	ASTM D566		°C	>300	>300
NLGI Consistency			NLGI- class	1.5	2
Worked penetration	ASTM D217	60 Dh	mm/10	280 – 310	265 – 295
Four Ball Weld Load	ASTM D 2596		Kgf	>=400	>=400
Operating Temperature Range				-20 °C to + 180 °C (Peak +200 °C)	-20 °C to + 180 °C (Peak +200 °C)
Colour				Brown	Brown





## High Viscosity Bentone Grease

High Temperature, Extreme pressure

### Description:

PPM-500 B is formulated from a special blend of high viscosity solvent refined paraffin base oil thickened with bentonite clay. This non-soap grease is recommended for extremely high temperature applications. Unlike normal greases, Benton greases retain their consistency under increasing temperatures.

### Performance & Features:

- Excellent high temperature performance up to +200 °C.
- High oxidation resistance.
- High load carrying capacity.
- Good mechanical stability.
- Highly resistant to change in consistency with temperatures.
- Water resistant.
- Good boundary lubrication.

### Typical Applications:

- Kiln car wheel bearings.
- Furnace door bearings.
- Heat exchange motor bearings.
- Oven conveyor bearings and other applications where extremely high temperatures are encountered.

### Properties:

Specifications	Methods	Conditions	Unit	PPM-500 B2	PPM-500 B3
Base oil type				Mineral oil	Mineral oil
Base oil viscosity @ 40 °C	ASTM D 445		cSt (mm <sup>2</sup> /s)	500	500
Thickener type				Inorganic	Inorganic
Dropping point	ASTM D566		°C	None	None
NLGI Consistency			NLGI- class	2	3
Worked penetration	ASTM D217	60 Dh	mm/10	265 – 295	220 – 250
4 Ball Weld Load	ASTM D2596		Kgf	>=250	>=250
Operating Temperature Range				-20 °C to + 200 °C	-20 °C to + 200 °C
Colour				Beige	Beige

## High Viscosity Bentone Grease with MoS2 & Graphite

High Temperature, Extreme Pressure, Water Resistant

### Description:

PPM-460 BMG is a mineral oil based Bentone grease suitable for high temperature applications. It contains fine molybdenum disulfide and graphite solid lubricants, anti-oxidant and anti-corrosion additives. It does not melt and resists chemical degradation at high temperatures and thus protects equipment under severe high temperature operating conditions.

### Performance & Features:

- Excellent high temperature performance up to +200 °C.
- High load carrying capacity
- High oxidation resistance.
- Good mechanical stability.
- Highly resistant to change in consistency with temperatures.
- Water resistant.
- Excellent boundary lubrication.

### Typical Applications:

- Kiln car wheel bearings.
- Furnace door bearings.
- Heat exchange motor bearings.
- Low speed bearings
- Oven conveyor bearings and other applications where extremely high temperatures are encountered.

### Properties:

Specifications	Methods	Conditions	Unit	PPM-460 BMG 2	PPM-460 BMG 3
Base oil type				Mineral oil	Mineral oil
Base oil viscosity @ 40 °C	ASTM D 445		cSt (mm <sup>2</sup> /s)	460	460
Thickener type				Inorganic	Inorganic
Dropping point	ASTM D566		°C	None	None
NLGI Consistency			NLGI- class	2	3
Worked penetration	ASTM D217	60 Dh	mm/10	265 – 295	220 – 250
4 Ball Weld Load	ASTM D2596		Kgf	>=315	>=315
Operating Temperature Range				-20 °C to + 200 °C	-20 °C to + 200 °C
Colour				Black	Black



## Anhydrous Calcium Grease with Polymer

Water Resistant, Anti-Wear, High Adhesiveness

### Description:

PPM-1000CA is anhydrous calcium grease based on mineral oil and special polymer. PPM-1000 CA provides excellent water resistance and stickiness to surfaces as well as very good anti-wear properties.

### Performance & Features:

- Good high temperature performance up to 120°C
- Excellent wear and corrosion protection
- Extremely water resistant
- Excellent mechanical stability
- High Adhesiveness
- Economic

### Typical Applications:

- Construction equipment
- Heavy duty off-road applications such as excavators, wheel loaders, etc
- Forestry and agricultural equipment
- Low to medium speed plain and rolling bearings

### Properties:

Specifications	Methods	Unit	PPM-1000 CA 2	PPM-1000 CA 3
Base oil type			Mineral oil + Polyme	Mineral oil + Polyme
Base oil viscosity @ 40 °C	ASTM D 445	cSt (mm <sup>2</sup> /s)	1000	1000
Thickener type			Anhydrous Calcium>	Anhydrous Calcium>
Dropping point	ASTM D566	°C	=145	=145
NLGI Consistency		NLGI- class	2	3
Worked penetration	ASTM D217	mm/10	265 – 295	220 – 250
Four Ball Weld Load	ASTM D 2596	Kgf	>=200	>=200
Operating Temperature Range			-20 °C to + 120 °C	-20 °C to + 120 °C
Colour			Brown	Brown



## High Viscosity Calcium Sulfonate Complex Grease with Solid Lubricants

Extreme Pressure, High Performance, High Temperature

### Description:

PPM-500CSG is based on high viscosity mineral oil and Calcium Sulfonate Complex thickener technology. This grease is fortified with extreme pressure (EP), anti-wear, anti-oxidation, anti-corrosion and Solid Lubricants to provide outstanding protection under high pressure conditions at startups, slow rotations and vibrations.

### Performance & Features:

- Good high temperature performance up to +200 °C.
- Contains Graphite.
- Excellent protection under extreme pressure and vibrations.
- Excellent mechanical stability.
- Very high oxidation stability.
- Excellent boundary lubrication during startups and oil starvation.

### Typical Applications:

- Rolling element bearings running at low speed and very high loads.
- Jaw crushers.
- Building machines such as mechanical rams, crane arms and crane hooks.
- PPM-500 CSG 1 is recommended for centralized lubrication systems.

### Properties:

Specifications	Methods	Conditions	Unit	PPM-500 CSG 1	PPM-500 CSG 2
Base oil type				Mineral oil	Mineral oil
Base oil viscosity @ 40 °C	ASTM D 445		cSt (mm <sup>2</sup> /s)	500	500
Thickener type				Calcium Sulfonate Complex	Calcium Sulfonate Complex
Dropping point	ASTM D566		°C	>260	>260
NLGI Consistency			NLGI- class	1	2
Worked penetration	ASTM D217	60 Dh	mm/10	310 – 340	265 – 295
4 Ball Weld Load	ASTM D2596		Kgf	>=400	>=400
Operating Temperature Range				-20 °C to + 200 °C	-20 °C to + 200 °C
Colour				Black	Black





## Extremely High Viscosity Calcium Sulfonate Complex Grease with Solid Lubricants

Extreme Pressure, High Performance, High Temperature

### Description:

PPM-1500CSG is based on extremely high viscosity semi-synthetic oil and Calcium Sulfonate Complex thickener technology. This Grease is fortified with extreme pressure (EP), anti-wear, anti-oxidation and anti-corrosion additives and Solid Lubricants to provide outstanding protection under high pressure conditions at startups, very slow rotations and vibrations.

### Performance & Features:

- Good high temperature performance up to +200 °C.
- Contains Graphite.
- Excellent protection under extreme pressure and vibrations.
- Excellent mechanical stability.
- Very high oxidation stability.
- Excellent boundary lubrication during startups and oil starvation.

### Typical Applications:

- Trunnion bearings on rotating drums
- Support and thrust rollers on rotary kilns and dryers
- Bucket wheel excavators
- High pressure roller press mills
- Highly-loaded rolling bearings operating at low speeds
- PPM-1500 CSG 1 is recommended for centralized lubrication systems.

### Properties:

Specifications	Methods	Conditions	Unit	PPM-1500 CSG 1	PPM-1500 CSG 2
Base oil type				Semi-Synthetic oil	Semi-Synthetic oil
Base oil viscosity @ 40 °C	ASTM D 445		cSt (mm <sup>2</sup> /s)	1500	1500
Thickener type				Calcium Sulfonate Complex	Calcium Sulfonate Complex
Dropping point	ASTM D566		°C	>260	>260
NLGI Consistency			NLGI- class	1	2
Worked penetration	ASTM D217	60 Dh	mm/10	310 – 340	265 – 295
4 Ball Weld Load	ASTM D2596		Kgf	>=500	>=500
Operating Temperature Range				-20 °C to + 200 °C	-20 °C to + 200 °C
Colour				Black	Black



## Sprayable Open Gear Grease with Graphite

### Description:

PPM-301 is operating lubricant for open gear drives. This Grease is manufactured based on high viscosity mineral oil and Calcium Sulfonate Complex thickener fortified with high performance additives and colloidal graphite. Comparing to conventional Aluminium Complex open gear greases, PPM-301 provides much higher thermal and oxidation stability, lower wear rate, higher film strength and excellent corrosion protection. Despite its adhesiveness, PPM-301 is easily sprayable. PPM-301 is free of asphalt, heavy metals and solvents.

### Performance & Features:

- Excellent high temperature performance up to 180 °C
- High adhesiveness and water resistant
- Excellent corrosion protection
- Prevents wear, pitting and scuffing
- Very high load carrying capacity
- Sprayable

### Typical Applications:

- Rotary kilns
- Ball mill
- Wire rope
- Chains

### Properties:

Specifications	Methods	PPM-301-500	PPM-301-1100	PPM-301-1500	PPM-301-2500
Base oil type		Mineral oil	Mineral oil	Mineral oil	Mineral oil
Base oil viscosity @ 40 °C, cSt	ASTM D 445	500	1100	1500	2500
Thickener type		Calcium Sulfonate Complex	Calcium Sulfonate Complex	Calcium Sulfonate Complex	Calcium Sulfonate Complex
NLGI Consistency		0-00	0-00	0-00	0-00
Dropping Point	ASTM D 2265	>250 °C	>250 °C	>250 °C	>250 °C
4 Ball Weld Load, Kgf	ASTM D 2596	≥800	≥800	≥800	≥800
4 Ball Wear Test, mm	ASTM 2266	< 0.55	< 0.55	< 0.55	< 0.55
FZG Scuffing Load Stage	DIN 51354	>12	>12	>12	>12
Operating Temperature Range		-10 to + 180°C	-10 to + 180°C	0 to + 180°C	+5 to + 180°C
Colour	Visual	Black	Black	Black	Black





## Running-in Open Gear Grease with Graphite

### Description:

PPM-301 RN is a sprayable running-in/lapping lubricant for open gear drives. This Grease is manufactured based on high viscosity mineral oil and Lithium soap thickener fortified with high performance additives and colloidal graphite. This semi-liquid lubricant provokes controlled wear at zones that are under heavy load, through chemical reactions between the lubricant and the metal surface. This process results in flattening of asperities and increase in contact surface area. PPM-301 RN is free of asphalt, heavy metals and solvents.

### Performance & Features:

- Easily sprayable
- Reduces surface roughness to a minimum
- Increase in contact surface area
- Extends lifetime of the gears
- Good adhesiveness
- Equivalent to CEPLATTYN RN

### Typical Applications:

- Rotary kilns
- Ball mill

### Properties:

Specifications	Methods	PPM-301-RN
Base oil type		Mineral oil
Base oil viscosity @ 40 °C, cSt	ASTM D 445	500
Thickener type		Lithium Soap
NLGI Consistency		00
Dropping Point	ASTM D 2265	>150 °C
4 Ball Weld Load, Kgf	ASTM D 2596	≥500
FZG Scuffing Load Stage	DIN 51354	>12
Operating Temperature Range		-10 to + 140°
Colour	Visual	Black



## Wire Rope Grease with Graphite

### Description:

PPM-302 is a wire rope grease based on high viscosity mineral oil and calcium sulfonate complex thickener, fortified with high performance additives and colloidal Graphite. This grease has excellent adhesiveness and it is extremely water resistant. PPM-302 effectively protects the metal surface from wear and corrosion even in wet environments. PPM-302 is available in different consistencies depending on mode of application. This grease is free from any solvent, asphalt and heavy metals.

### Performance & Features:

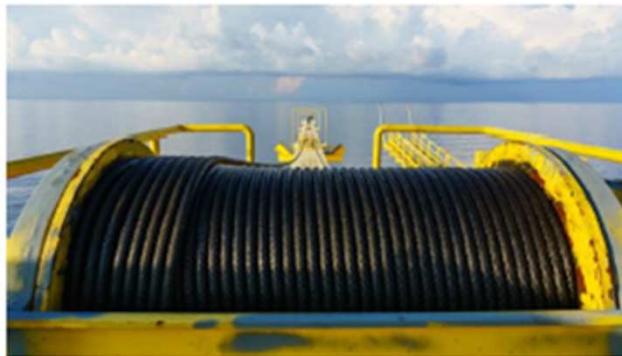
- Excellent high temperature performance up to 180 °C
- High adhesiveness
- Extremely water resistant
- Excellent wear and corrosion protection
- Very high load carrying capacity
- Good pumpability

### Typical Applications:

- Wire rope dressing
- Port and offshore fields
- Building machine industry
- Wind energy plants

### Properties:

Specifications	Methods	PPM-302/00	PPM-302/0	PPM-302/1	PPM-302/2
Base oil type		Mineral oil	Mineral oil	Mineral oil	Mineral oil
Base oil viscosity @ 40 °C, cSt	ASTM D 445	500	500	500	500
Thickener type		Calcium Sulfonate Complex	Calcium Sulfonate Complex	Calcium Sulfonate Complex	Calcium Sulfonate Complex
NLGI Consistency		00	0	1	2
Dropping Point	ASTM D 2265	>250 °C	>250 °C	>250 °C	>250 °C
4 Ball Weld Load, Kgf	ASTM D 2596	≥500	≥500	≥500	≥500
Operating Temperature Range		-20 to + 130 °C	-20 to + 130 °C	-20 to + 150 °C	-20 to + 150 °C
Colour	Visual	Black	Black	Black	Black





## Biodegradable Wire Rope Grease

### Description:

PPM-303 is a biodegradable wire rope grease based on high viscosity vegetable oil and Bentonite clay thickener, fortified with high performance additives and solid lubricants. This grease has excellent adhesiveness and it is extremely water resistant. PPM-303 effectively protects the metal surface from wear and corrosion even in wet environments. PPM-303 is available in different consistencies depending on mode of application. This grease is free from any solvent, asphalt and heavy metals.

### Performance & Features:

- Good high temperature performance up to 150 °C
- Biodegradable
- High adhesiveness
- Extremely water resistant
- Excellent wear and corrosion protection
- Very high load carrying capacity
- Good pumpability

### Typical Applications:

- Wire rope dressing
- Port and offshore fields
- Building machine industry
- Wind energy plants

### Properties:

Specifications	Methods	PPM-303/00	PPM-303/0	PPM-303/1	PPM-303/2
Base oil type		Vegetable oil	Vegetable oil	Vegetable oil	Vegetable oil
Base oil viscosity @ 40 °C, cSt	ASTM D 445	500	500	500	500
Thickener type		Inorganic	Inorganic	Inorganic	Inorganic
NLGI Consistency		00	0	1	2
Dropping Point	ASTM D 2265	>250 °C	>250 °C	>250 °C	>250 °C
4 Ball Weld Load, Kgf	ASTM D 2596	≥300	≥300	≥300	≥300
Operating Temperature Range		-20 to + 130 °C	-20 to + 130 °C	-20 to + 150 °C	-20 to + 150 °C
Colour	Visual	Cream	Cream	Cream	Cream



## Biodegradable Wire Rope Grease

### Description:

PPM-304 is a biodegradable wire rope grease based on vegetable oil and Bentonite clay thickener, fortified with high performance additives and solid lubricants. This grease has good adhesiveness and it is extremely water resistant. PPM-304 effectively protects the metal surface from wear and corrosion even in wet environments. PPM-304 is available in different consistencies depending on mode of application. This grease is free from any solvent, asphalt and heavy metals.

### Performance & Features:

- Good high temperature performance up to 150 °C
- Biodegradable
- Good adhesiveness
- Extremely water resistant
- Excellent wear and corrosion protection
- Very high load carrying capacity
- Good pumpability

### Typical Applications:

- Wire rope dressing
- Port and offshore fields
- Building machine industry
- Wind energy plants

### Properties:

Specifications	Methods	PPM-304/00	PPM-304/0	PPM-304/1	PPM-304/2
Base oil type		Vegetable oil	Vegetable oil	Vegetable oil	Vegetable oil
Base oil viscosity @ 40 °C, cSt	ASTM D 445	170	170	170	170
Thickener type		Inorganic	Inorganic	Inorganic	Inorganic
NLGI Consistency		00	0	1	2
Dropping Point	ASTM D 2265	>250 °C	>250 °C	>250 °C	>250 °C
4 Ball Weld Load, Kgf	ASTM D 2596	≥300	≥300	≥300	≥300
Operating Temperature Range		-20 to +130 °C	-20 to +130 °C	-20 to +150 °C	-20 to +150 °C
Colour	Visual	Beige	Beige	Beige	Beige





## Extremely High Viscosity Open Gear Fluid Lubricant

### Description:

PPM-305 is operating lubricant for open gear drives. This Lubricant is manufactured based on Extremely high viscosity semi-synthetic oil fortified with high performance additives. This lubricant has very high load carrying capacity and it effectively protects the gears from wear, pitting and scuffing. PPM-305 provides excellent adhesion and extends relubrication intervals. PPM-305 is free of asphalt, heavy metals, solvents and solid lubricants.

### Performance & Features:

- Good high temperature performance up to 120°C
- High adhesiveness and water resistant
- Effectively prevents wear, pitting and scuffing
- Very high load carrying capacity
- Transparent
- Sprayable

### Typical Applications:

- Rotary kilns
- Ball mill
- Wire rope

Equivalent to LUBRILOG Gear Fluid 550 & 1000

### Properties:

Specifications	Methods	PPM-305/550	PPM-305/1000
Base oil type		Semi-Synthetic	Semi-Synthetic
Viscosity @ 100 °C, cSt	ASTM D 445	550	1000
Viscosity @ 40 °C, cSt	ASTM D 445	17000	25000
4 Ball Weld Load, Kgf	ASTM D 2596	≥800	≥800
4 Ball Wear Test, mm	ASTM 2266	< 0.55	< 0.55
FZG Scuffing Load Stage	DIN 51354	>12	>12
Flash Point, °C	ISO 2592	≥ 200 °C	≥ 200 °C
Operating Temperature Range		0 to + 120 °C	0 to + 120 °C
Colour	Visual	Brown	Brown



## High Viscosity Open Gear Fluid Lubricant

### Description:

PPM-306 is operating lubricant for open gear drives. This Lubricant is manufactured based on high viscosity semi-synthetic oil fortified with high performance additives. This lubricant has very high load carrying capacity and it effectively protect the gears from wear, pitting and scuffing. PPM-306 is highly adhesive and water resistant. PPM-306 is free of asphalt, heavy metals and solvents.

### Performance & Features:

- Good high temperature performance up to 120°C
- High adhesiveness and water resistant
- Effectively prevents wear, pitting and scuffing
- Very high load carrying capacity
- Transparent
- Sprayable
- Equivalent to Whitmore Envirolube XE Extreme

### Typical Applications:

- Rotary kilns
- Ball mill
- Wire rope

### Properties:

Specifications	Methods	PPM-306 M	PPM-306 H
Base oil type		Semi-Synthetic	Semi-Synthetic
Viscosity @ 40 °C, cSt	ASTM D 445	1100	4500
4 Ball Weld Load, Kgf	ASTM D 2596	≥800	≥800
4 Ball Wear Test, mm	ASTM 2266	< 0.55	< 0.55
FZG Scuffing Load Stage	DIN 51354	>12	>12
Flash Point, °C	ISO 2592	≥ 200 °C	≥ 200 °C
Operating Temperature Range		-15 to + 120 °C	-7 to + 120 °C





## Jacking Grease

### Description:

PPM-307 is a biodegradable grease based on vegetable oil and Bentonite clay thickener, fortified with high performance additives and solid lubricants. PPM-307 has good adhesiveness and it is extremely water resistant. This grease provides excellent wear and corrosion protection even in wet environments. PPM-307 is free of asphalt, heavy metals and solvents.

### Performance & Features:

- Good high temperature performance up to 150°C
- High adhesiveness and water resistant
- Effectively prevents wear, pitting and scuffing
- Very high load carrying capacity
- Biodegradable
- Equivalent to Jet-Lube Jacking Grease ECF

### Typical Applications:

PPM-307 is designed to lubricate a wide array of heavily loaded gear applications. It can also be used on slides, jacking systems, cantilever type rigs and assemblies, nuts, bolts, and a wide range of other applications making Jacking Grease a nearly universal product.

### Properties:

Specifications	Methods	Conditions	Unit	Value
Base oil type				Vegetable oil
Thickener type				Inorganic
Dropping point	ASTM D566		°C	>250
NLGI Consistency			NLGI- class	1-2
Worked penetration	ASTM D217	60 Dh	mm/10	275 – 300
4 Ball Weld Load	ASTM D 2596		Kgf	800
Operating Temperature Range				-20 °C to + 150 °C
Colour				Beige

## Food Grade Calcium Complex Grease

Multipurpose, High Performance, High Temperature

### Description:

PPM-701 is a multipurpose, food grade Calcium Complex grease based on white mineral oil. This Grease is fortified with food grade anti-wear, anti-corrosion and anti-oxidation additives. PPM-701 is suitable for applications where incidental food contact is possible.

### Performance & Features:

- Formulated based on NSF H1 requirements.
- Excellent high temperature performance.
- Excellent mechanical stability.
- Wear resistant.
- Water resistant.
- High oxidation stability.
- Good corrosion protection.

### Typical Applications:

- Food processing equipment.
- Grease lubrication of rolling and friction bearings, joints, linear drives and chains.
- Anywhere lubrication is needed where it may come in contact with food.

### Properties:

Specifications	Methods	Unit	PPM-701/1	PPM-701/2	PPM-701/3
Base oil type			White oil	White oil	White oil
Base oil viscosity @ 40 °C	ASTM D 445	cSt (mm <sup>2</sup> /s)	70	70	70
Thickener type			Calcium Complex	Calcium Complex	Calcium Complex
Dropping point	ASTM D566	°C	>260	>260	>260
NLGI Consistency		NLGI- class	1	2	3
Worked penetration	ASTM D217	mm/10	310 – 340	265 – 295	220 – 250
Operating Temperature Range			-20 °C to + 150 °C	-20 °C to + 150 °C	-20 °C to + 150 °C
Colour			Light Cream	Light Cream	Light Cream





## Food Grade Silicone Grease

### Description:

PPM-702 is a Silicone oil based grease formulated to meet the food grade grease specifications. This Grease is designed for lubricating and sealing of rubber and plastic parts, and as an insulator for valves and Electrical contacts. It is also suitable for applications where incidental food contact is possible.

### Performance & Features:

- Formulated based on NSF H1 requirements.
- Wide temperature range -40\_+200 °C
- Excellent mechanical stability
- Odourless, tasteless and non-toxic
- Excellent rubber and plastic compatibility
- Does not dry out
- Water resistant

### Typical Applications:

- Food processing equipment
- Waterproofing and lubrication of O-rings and other rubber and plastic parts
- Lubrication and sealing of valves
- Electrical insulator
- Moisture and corrosion inhibitor

### Properties:

Specifications	Methods	Unit	PPM-702/1	PPM-702/2	PPM-702/3
Base oil type			Silicone oil	Silicone oil	Silicone oil
Thickener type			Inorganic	Inorganic>	Inorganic
Dropping point	ASTM D566	°C	>260	260	>260
NLGI Consistency		NLGI- class	1	2	3
Worked penetration	ASTM D217	mm/10	310 – 340	265 – 295	220 – 250
Operating Temperature Range			-40 °C to + 200 °C	-40 °C to + 200 °C	-40 °C to + 200 °C
Colour			Translucent White	Translucent White	Translucent White

## Food Grade Aluminium Complex Grease

Multipurpose, High Performance

### Description:

PPM-703 is a multipurpose, food grade grease based on white mineral oil and Aluminum Complex thickener. This Grease is fortified with food grade anti-wear, anti-corrosion and anti-oxidation additives. PPM-703 is suitable for moderately loaded applications where incidental food contact is possible.

### Performance & Features:

- Formulated based on NSF H1 requirements.
- Excellent high temperature performance.
- Excellent mechanical stability.
- Excellent pumpability
- Wear resistant.
- Water resistant.
- High oxidation stability.
- Good corrosion protection.

### Typical Applications:

- Food processing equipment.
- Grease lubrication of rolling and friction bearings, joints, linear drives and chains.
- Anywhere lubrication is needed where it may come in contact with food.

### Properties:

Specifications	Methods	Unit	PPM-703/1	PPM-703/2	PPM-703/3
Base oil type			White oil	White oil	White oil
Base oil viscosity @ 40 °C	ASTM D 445	cSt (mm <sup>2</sup> /s)	70	70	70
Thickener type			Aluminium Complex	Aluminium Complex	Aluminium Complex
Dropping point	ASTM D566	°C	>250	>250	>250
NLGI Consistency		NLGI- class	1	2	3
Worked penetration	ASTM D217	mm/10	310 – 340	265 – 295	220 – 250
4 Ball Weld Load	ASTM D 2596	Kgf	250 min	250 min	250 min
Operating Temperature Range			-20 °C to + 130 °C	-20 °C to + 130 °C	-20 °C to + 130 °C
Colour			Light Cream	Light Cream	Light Cream





## Food Grade Aluminium Complex Grease

Multipurpose, Extreme pressure, High Temperature

### Description:

PPM-704 is a multipurpose, food grade grease based on white mineral oil and Aluminium Complex thickener. This Grease is fortified with food grade extreme pressure, anti-wear, anti-corrosion and anti-oxidation additives. PPM-704 is suitable for moderate to heavily loaded applications where incidental food contact is possible.

### Performance & Features:

- Formulated based on NSF H1 requirements.
- Excellent high temperature performance.
- Excellent mechanical stability.
- Excellent pumpability
- Wear resistant.
- Water resistant.
- High oxidation stability.
- Good corrosion protection.

### Typical Applications:

- Food processing equipment.
- Grease lubrication of rolling and friction bearings, joints, linear drives and chains.
- Anywhere lubrication is needed where it may come in contact with food.

### Properties:

Specifications	Methods	Unit	PPM-704/1	PPM-704/2	PPM-704/3
Base oil type			White oil	White oil	White oil
Base oil viscosity @ 40 °C	ASTM D 445	cSt (mm <sup>2</sup> /s)	220	220	220
Thickener type			Aluminium Complex	Aluminium Complex	Aluminium Complex
Dropping point	ASTM D566	°C	>250	>250	>250
NLGI Consistency		NLGI- class	1	2	3
Worked penetration	ASTM D217	mm/10	310 – 340	265 – 295	220 – 250
4 Ball Weld Load	ASTM D 2596	Kgf	250 min	250 min	250 min
Operating Temperature Range			-20 °C to + 150 °C	-20 °C to + 150 °C	-20 °C to + 150 °C
Colour			Light Cream	Light Cream	Light Cream



## Food Grade Calcium Complex Grease

Multipurpose, Extreme Pressure, High Temperature

### Description:

PPM-706 is a multipurpose, food grade grease based on white mineral oil and Calcium Complex thickener. This Grease is fortified with food grade Extreme Pressure, anti-wear, anti-corrosion and anti-oxidation additives. PPM-706 is suitable for heavily loaded applications where incidental food contact is possible.

### Performance & Features:

- Formulated based on NSF H1 requirements.
- Excellent high temperature performance.
- Excellent mechanical stability.
- High load carrying capacity
- Wear resistant.
- Water resistant.
- High oxidation stability.
- Good corrosion protection.

### Typical Applications:

- Food processing equipment.
- Grease lubrication of rolling and friction bearings, joints, linear drives and chains.
- Anywhere lubrication is needed where it may come in contact with food.

### Properties:

Specifications	Methods	Unit	PPM-706/1	PPM-706/2	PPM-706/3
Base oil type			White oil	White oil	White oil
Base oil viscosity @ 40 °C	ASTM D 445	cSt (mm <sup>2</sup> /s)	220	220	220
Thickener type			Calcium Complex	Calcium Complex	Calcium Complex
Dropping point	ASTM D566	°C	>260	>260	>260
NLGI Consistency		NLGI- class	1	2	3
Worked penetration	ASTM D217	mm/10	310 – 340	265 – 295	220 – 250
4 Ball Weld Load	ASTM D 2596	Kgf	250 min	250 min	250 min
Operating Temperature Range			-20 °C to + 150 °C (Peak 180 °C)	-20 °C to + 150 °C (Peak 180 °C)	-20 °C to + 150 °C (Peak 180 °C)
Colour			Light Cream	Light Cream	Light Cream





## Cotton Picker Spindle Grease

### Description:

PPM-LS004 is a semi-fluid grease based on high quality mineral oil and Lithium soap thickener fortified with anti-wear, anti-corrosion and anti-oxidation additives.

### Performance & Features:

- Excellent wear protection
- Excellent corrosion resistance
- Excellent anti-oxidation performance
- Excellent low temperature pumpability
- Good water resistance
- Leakage resistant

### Typical Applications:

- Cotton picker spindle assembly
- Drum drive gears
- Cam truck

### Properties:

Specifications	Methods	Conditions	Unit	PPM-LS 004
Base oil type				Mineral oil
Base oil viscosity @ 100 °C	ASTM D 445		cSt (mm <sup>2</sup> /s)	4.7
Thickener type				Lithium Soap
Dropping point	ASTM D566		°C	>150
NLGI Consistency			NLGI- class	00
Worked penetration	ASTM D217	60 Dh	mm/10	400 – 430
Operating Temperature Range				-20 °C to + 115 °C
Color				Green



## Tail Seal Grease

### Description:

PPM-T.S.G is a driving grade tail sealing grease for shielded tunnel boring machine. This Grease is extremely water resistant and can effectively seal the gap between the shield and the concrete segments against ingress of high pressure water, soil and dust. PPM-T.S.G has excellent adhesiveness and good pumping properties and it does not clog the pumping systems. This sealant is manufactured using biodegradable base oil.

### Performance & Features:

- Excellent Pumpability
- Extremely water resistant
- Excellent Lubricating properties
- Biodegradable and non-toxic
- Resists high water and ground pressure
- Excellent adhesiveness
- Lower consumption

### Properties:

Specifications	Methods	Conditions	Unit	PPM-H.S.G
Base oil type				Vegetable oil
Dropping point	ASTM D566		°C	None
NLGI Consistency			NLGI- class	2-3
Worked penetration	ASTM D217	60 Dh	mm/10	240 – 260
Density		at 20°C	[kg/m <sup>3</sup> ]	1200 ± 50
Water Washout	ASTM D1264		Mass %	<5
Flash Point	ASTM D 92		°C	>280
Minimum Service Temperature				+10 °C
Storage Temperature				+5°C - +40°C
Colour				Light Brown





## Main Bearing Seal Grease

### Description:

PPM-H.S.G is a main bearing sealing grease for shielded tunnel boring machine. This Grease is extremely water resistant and can effectively seal and protect the main bearing against ingress of water, soil and dust.

PPM-H.S.G has excellent adhesiveness and excellent pumping properties and it does not clog the pumping systems. This sealant is manufactured using biodegradable base oil.

### Performance & Features:

- Excellent Pumpability
- Extremely water resistant
- Excellent lubricating properties
- Resists against high water pressure
- Biodegradable and non-toxic
- Resists high water and ground pressure
- Excellent adhesiveness
- Lower consumption

### Properties:

Specifications	Methods	Conditions	Unit	PPM-H.S.G
Base oil type				Vegetable oil
Dropping point	ASTM D566		°C	None
NLGI Consistency			NLGI- class	2
Worked penetration	ASTM D217	60 Dh	mm/10	250 – 280
Density		at 20°C	[kg/m <sup>3</sup> ]	1150 ± 50
Water Washout	ASTM D1264		Mass %	<5
Flash Point	ASTM D 92		°C	>280
Minimum Service Temperature				+10 °C
Storage Temperature				+5°C - +40°C
Colour				Black





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