

THE CASTROL RANGE OF INDUSTRIAL LUBRICANTS

THE TECHNOLOGY
INSIDE

IT'S MORE THAN JUST OIL. IT'S LIQUID ENGINEERING.


Castrol
Industrial

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KEY TO PAGES

Temperatures shown are maximum recommended for the range

EP = Extreme Pressure

PTFE = Polytetrafluoroethylene

AW = Anti-wear

R&O = Rust and Oxidation

Deter/Disp = Detergent/Dispersant

MFT = Microflux Trans

PAO = Polyalpha Olefin

NA = Not applicable

PFPE = Perfluoropolyether

O = Oxidation

CI = Corrosion Inhibitor (Boosted)

TGOA = Tribol Grease/Oil Additive

PAG = PolyGlycol

Indicates increasing performance: ✓ ✓✓ ✓✓✓

ONLY CASTROL HAS THE TECHNOLOGY INSIDE

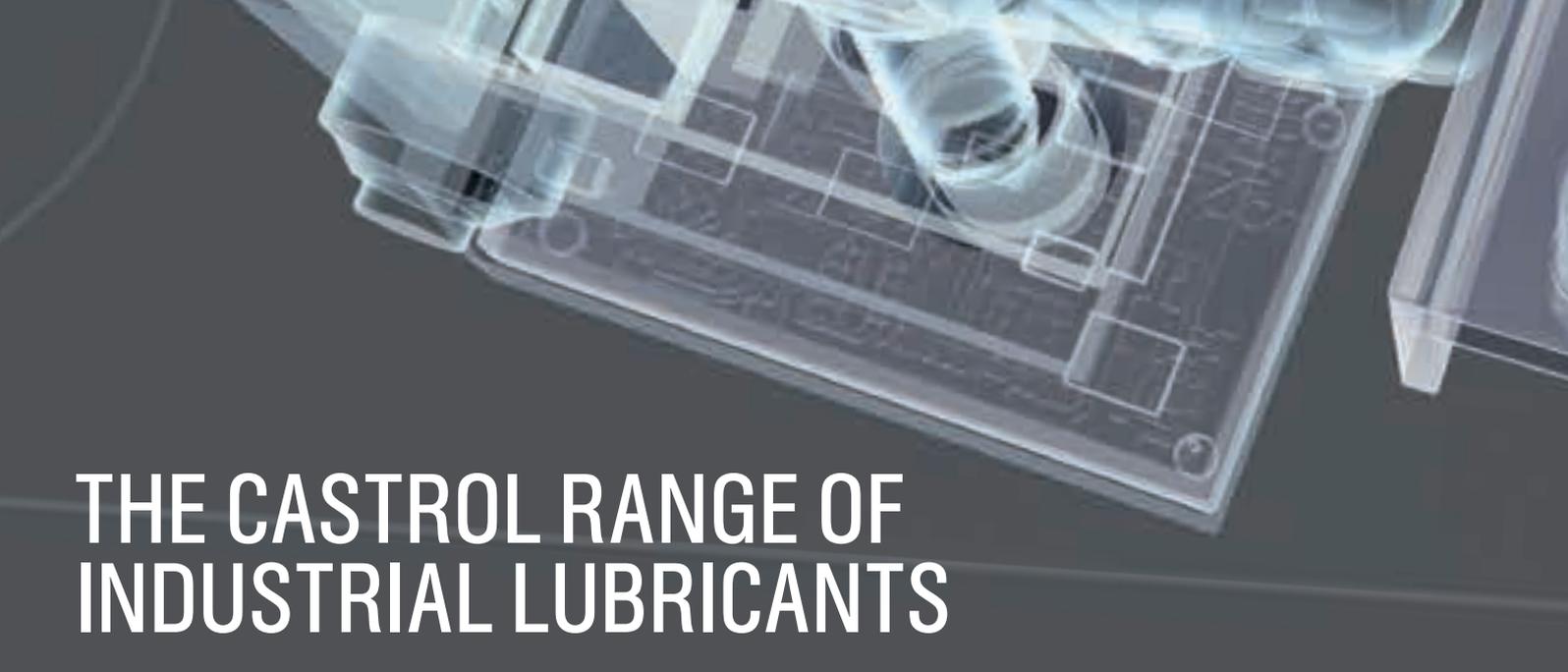
AT CASTROL INDUSTRIAL, WE KNOW THAT THE PERFORMANCE OF YOUR BUSINESS
DEPENDS ON THE PERFORMANCE OF OUR LUBRICANTS.

We believe you cannot compromise on industrial lubricants and greases – which is why you should demand **Castrol Technology Inside**.

We have the knowledge to help you select and apply the product technology that positively impacts performance, life time and productivity of your machines.

Global expertise, the latest thinking, the most advanced technologies, the highest quality ingredients...all are utilised in our leading edge products that are specifically designed to deliver what you seek.

THE TECHNOLOGY
INSIDE



THE CASTROL RANGE OF INDUSTRIAL LUBRICANTS

AT CASTROL, WE OFFER YOU A COMPREHENSIVE RANGE OF WORLD-CLASS LUBRICANTS AND GREASES WHICH DELIVER THE PERFORMANCE YOU NEED IN A FULL RANGE OF APPLICATIONS, INCLUDING THE MOST DEMANDING AND CAPITAL INTENSIVE, WHERE LEADING EDGE LUBRICATION TECHNOLOGY IS REQUIRED. WE CAN HELP MAKE SURE YOUR EQUIPMENT RUNS RELIABLY, EVEN IN DIFFICULT AND SOMETIMES HOSTILE ENVIRONMENTS, AND FOR LONG PERIODS OF TIME – GIVING YOU IMPROVED PRODUCTION EFFICIENCY.

OILS

We can supply you with a comprehensive range of lubricants fully capable of providing protection for your equipment, improving productivity while reducing overall costs. To meet the various needs of industries and applications, our lubricants are produced from mineral or synthetic base oils, combined with additives covering standard to extreme operations. The lubricants are available in various viscosities needed depending on the equipment type. Our product line enables you to choose the best product to suit your exact needs from the following categories:

GEAR OILS

We provide a broad selection of both mineral and synthetic gear oils, covering the requirements of everything from standard industrial to the most severe applications, including wind turbines. These products have been designed to operate in a wide variety of gear types.

CHAIN OILS

Our high-performance chain lubricants are designed to suit difficult environmental conditions such as high temperatures, dusty environments, wet and corrosive applications and E-coat processes or cathodic electrodeposition applications.

LubeCon brand of Castrol is the leader of high performance chain lubricants, custom application equipment, and dedicated services for industrial machinery and conveyor systems.

HYDRAULIC OILS

Large range of hydraulic oils meeting industry wide specifications and manufacturers specifications such as DIN 51524, ISO 6743, Denison, Eaton, Bosch Rexroth. Range covers wide ranging needs including biodegradability, high viscosity index, anti-wear properties and protection against rust and oxidation.

FIRE RESISTANT HYDRAULIC FLUIDS

Fire resistant hydraulic fluids range including Water Glycol (HFC) types – providing good antiwear performance demonstrated by low pump wear rates and excellent fire resistance properties. Ester (Polyol and Phosphate – HFD) for applications requiring a high degree of wear protection and good fire resistance and emulsion type (HFA) offering the highest fire protection.

SLIDEWAY LUBRICANTS

Our slideway lubricants are formulated to provide excellent lubricity, preventing stick-slip of slideways, as well as good load carrying capacity, which reduces wear of highly loaded slideways. Includes grades with demulsification and cutting fluid compatibility, these products can be used in the presence of water or water based metalworking fluids.

CIRCULATING OILS

For a variety of applications such as the lubrication of bearings, spindles and, using the heavier viscosity grades, moderately loaded gearboxes. Also includes grades designed specifically to satisfy the critical lubrication requirements of major rolling mill manufacturers and those grades used in paper manufacturing.

COMPRESSOR OILS

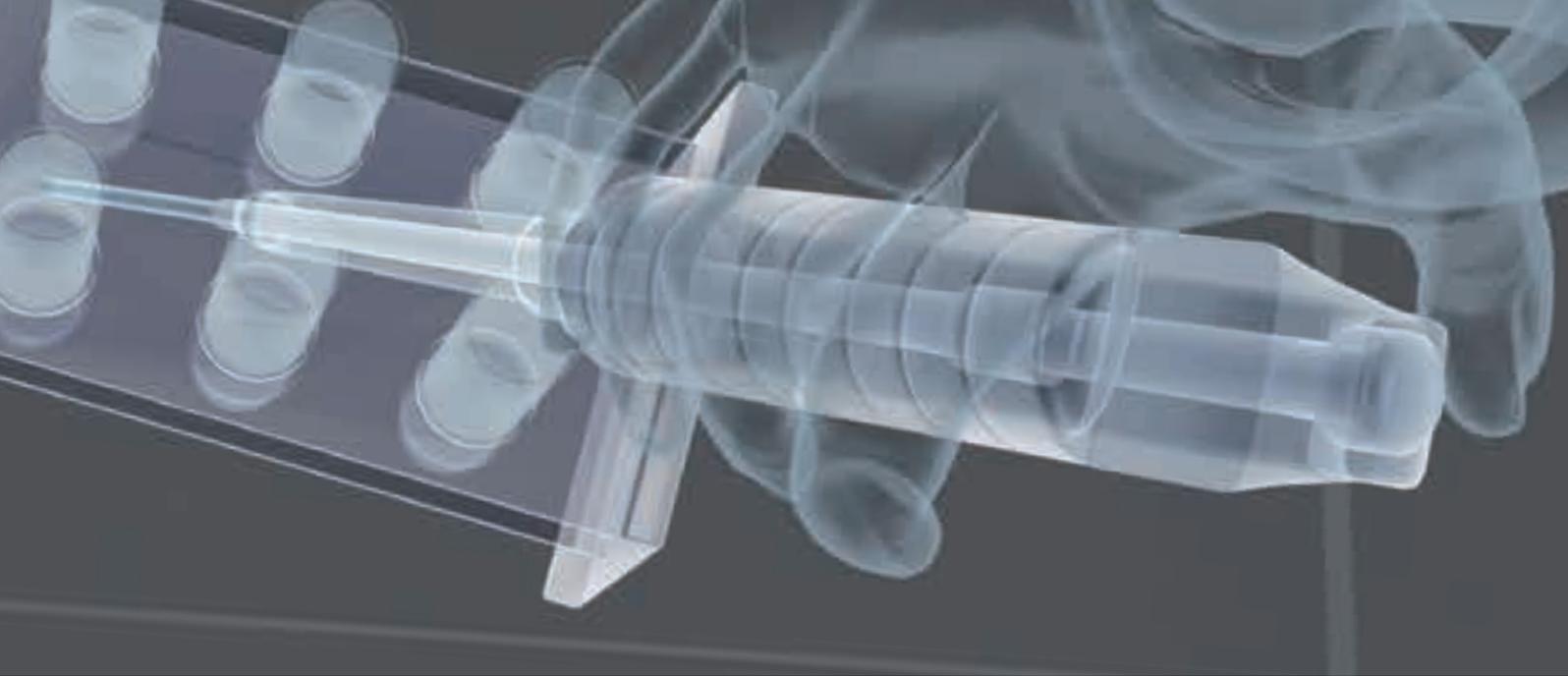
Products designed for rotary screw and reciprocating compressors, ranging from small single units to very large capacity, multi-stage configurations. Depending on the application, fluid selection can be based on mineral or synthetic fluids, and for standard or high performing criteria.

SPINDLE OILS

Our spindle oils are highly effective in lubricating spindle bearings, protecting them from tribological processes and wear that cause machine failures. The key objective is to enable the spindle to rotate with minimum vibration, deflection, wear and temperature increase.

FOOD GRADE OILS

Castrol Food Grade Lubricants are H1 Food Grade approved, do not contain natural products derived from animals or genetically modified organisms (GMO), suitable for use where vegetarian and 'nut-free' food is prepared and are approved and endorsed by a large number of OEMs. Depending on the grade they are also Halal and Kosher approved.



BIODEGRADABLE OILS

Castrol has a range of biodegradable oils based on Natural and Synthetic Esters for applications including gears, chains, hydraulics and slideways.

SPECIALITY - AVIATION/ VACUUM/SEMI-CONDUCTOR

The Castrol Aviation Speciality Product range covers an array of applications such as corrosion preventives, greases, hydraulic fluids, turbine oils and calibration fluids. Certain grades have been used in many manned and unmanned missions in earth orbit, as well as missions to the Moon and to Mars. Castrol has also developed product solutions for use in ultra-clean environments such as semiconductor, disk drive, instrumentation/electrical goods, aerospace and medical industries.

GAS ENGINE OILS

Advanced gas engine oil range designed to extend oil change intervals, exhibiting excellent oxidation and thermal resistance reducing carbon formation, varnishing and corrosion. Approved by major OEMs with many hours of running experience.

TURBINE OILS

Range of oils for steam and gas turbines conforming to industrial specifications as well applications involving Ammonia compressors.

TRANSFORMER OILS

Transformer, switchgear and circuit breaker oils which conform to the international specification IEC 60296:03.

STREAM RECIPROCATING OILS

For lubrication of steam engine cylinders, valves and cylinder lubrication in reciprocating type gas compressors.

HEAT TRANSFER OILS

Range of oils for enclosed heat transfer systems with high thermal stability, resistance to oxidation and low volatility for systems requiring mineral, synthetic or food grade based oils.

REFRIGERATION OILS

Range of refrigeration oils for systems running on R22 or Ammonia. As well as for domestic refrigerators and systems based on screw type compressors.

CONCRETE MOULD OILS

Low viscosity concrete mould release agents giving concrete a smooth, clean and nonporous surface.

ROCK DRILL OILS

Rock Drill range for mining, quarrying, constructions, roadworks, tunneling and excavations, with high film strength, reduced friction and the ability to absorb excess water when 'wet air' or wet drilling attachments are present.

WIRE ROPE OILS

Wire rope lubricant with excellent wetting and penetration to rope inner surfaces with exceptional coverage and protection to outer surfaces. Used mainly in mining on dragline hoist and drag ropes, shovel hoist and crowd ropes, winder and guide suspension cables and crane hoist ropes.

PROCESS OILS AND MISCELLANEOUS LUBRICANTS

Diverse range of oils for rubber processing, fibreglass production and calibration/storage of diesel fuel injectors. Also for various miscellaneous applications such as sugar dissolving, emulsifiable knitting oils, electrical contacts and relubrication/cleaning of PTFE greases.



THE CASTROL RANGE OF INDUSTRIAL LUBRICANTS

GREASES

We can supply you with a comprehensive range of greases fully capable of providing protection for your equipment, improving productivity while reducing overall costs. To meet the unique needs of industries and applications, our greases are made from mineral or synthetic base and combined with unique thickeners and additive packages. Our product line enables you to choose the best product to suit your exact needs. Castrol greases are available in various NLGI and viscosity grades. Our product line enables you to choose the best product to suit your exact needs from the following categories.

MULTI-PURPOSE HIGH PERFORMANCE

Multi-purpose High Performance greases have gained an excellent track record in many industries and in the most severe applications, bringing you increased security and peace of mind. These products offer a number of key advantages over conventional ones, including excellent load carrying ability, friction reduction characteristics, mechanical stability and oxidation/thermal resistance.

MULTI-PURPOSE

Multi-purpose range of greases provide reliable performance for a wide variety of applications. The MP range is designed for use in plain and rolling element bearings and exhibits good mechanical stability, adhesion, water resistance, corrosion resistance and wear protection for good all-round performance.

HIGH TEMPERATURE

High temperature greases have been designed for the most severe conditions. They are thermally stable, providing long re-lubrication intervals at maximum operational reliability. These greases have outstanding oxidation and thermal stability, corrosion protection, resistance to water washout, wear protection and mechanical stability.

LOW TEMPERATURE

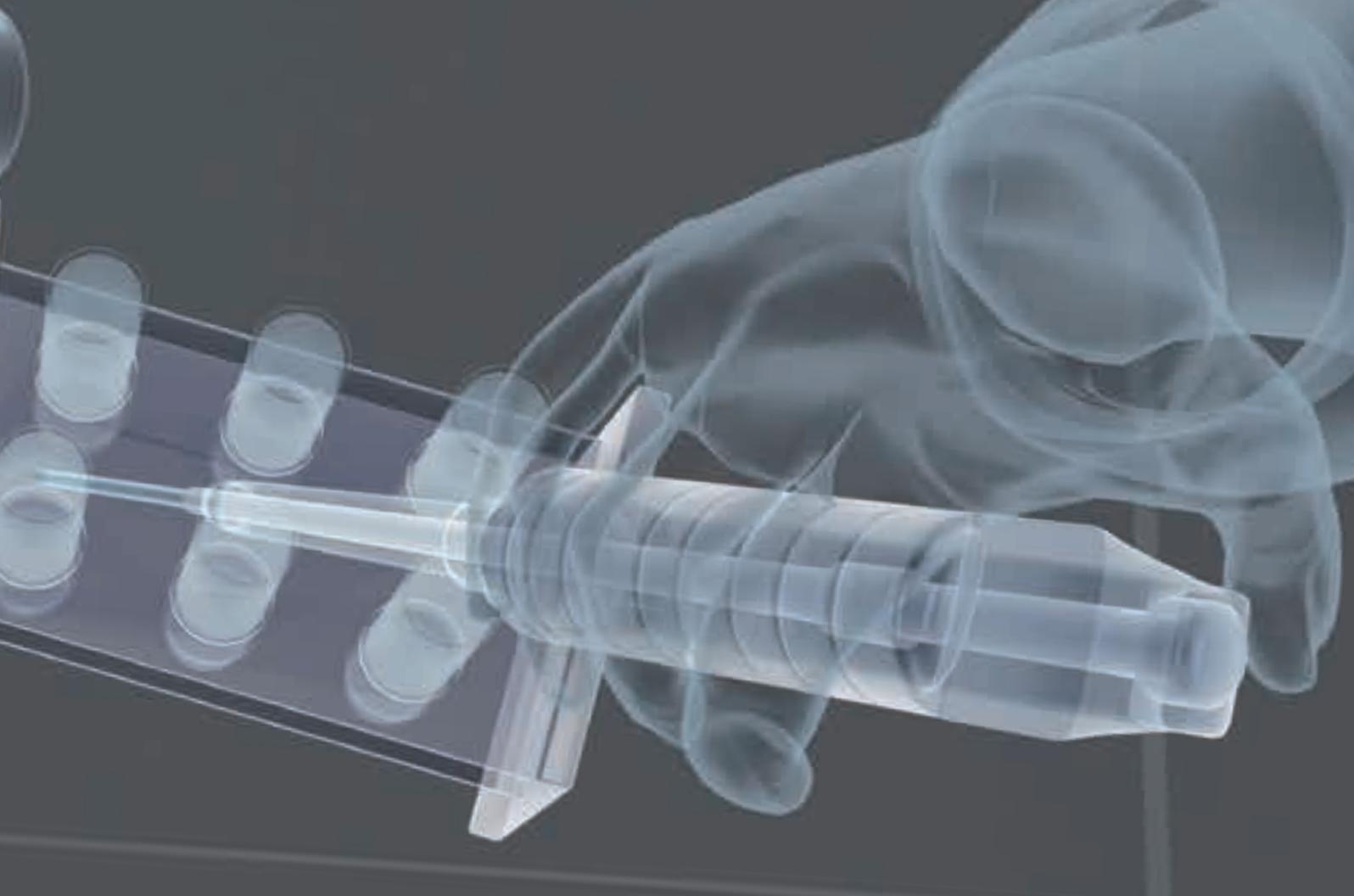
Low temperature greases include several products for subfreezing and arctic conditions which may be encountered at construction, mining sites, on oil drilling platforms and products used for On-Car lubrications.

OPEN GEAR GREASES

Castrol's open gear greases are available for lubrication of non enclosed gears. The open gear greases are designed to meet the operational conditions of the gear drives. The range utilizes technologies suited for the Type 1 (reversing) and Type 2 (non-reversing) categories of gear drives. Castrol uses both a semi-dry working film (metallic soap) technology as well as a semi-fluid gel (non-soap) technology to provide you the best protection for your capital investment.

ON-CAR AND CVJ GREASES

Castrol's lubrication expertise and extensive testing and laboratory capabilities allow us to provide high performance, high quality lubricants for on-car components manufacturing industry. Products are designed for critical sealed-for-life components like door hinges, door latches, pedal units, electronic seat adjusters and window lifters. In addition we have, in collaboration with various OEM's designed a range of greases to meet the tough requirements of constant velocity joints.



SPECIALITY - AVIATION/ VACUUM/SEMI-CONDUCTOR

Castrol perfluoro polyether (PFPE) based greases have been used in the vacuum environment for many years. Our PFPE greases have been successfully used in many manned and unmanned missions in earth orbit, as well as missions to the Moon and to Mars. Castrol has developed a line of low outgassing and low-volatility lubricants for semi-conductor customers. Castrol's PFPE greases are ideal for vacuum, cleanroom and reactive chemical (e.g. oxygen) environments and applications. Castrol brings you a comprehensive range of world-class lubricants and product support services to meet the demands of the Aviation industry. Castrol is proud to bring its reputation for high-performance to the commercial aviation, maintenance repair and overhaul (MRO) industries.

FOOD GRADES

Castrol Food Grade Greases Lubricants are H1 Food Grade approved, do not contain natural products derived from animals or genetically modified organisms (GMO), suitable for use where vegetarian and 'nut-free' food is prepared and are approved and endorsed by a large number of OEMs. Depending on the grade they are also Halal and Kosher approved.

BIODEGRADABLE GREASES

Castrol has designed greases that are biodegradable and used in bearings as well as flange and switch plate greases.

WALKING CAM, WIRE ROPE GREASES AND OTHERS

Castrol also provides products specially made for Wire Rope applications as well as greases designed specifically to lubricate the Walking Cam mechanisms in draglines. Also available are special dry film lubricants.

PASTES

Castrol has a range of lubricating pastes to meet industrial applications for assembly and equipment maintenance applications covering a wide range of temperature applications.

SPRAYS

Castrol has a wide range of products available in Aerosol spray form. These are primarily used for difficult to reach places and specific application depending upon the product contained in the Spray.

CASTROL INDUSTRIAL LUBRICANTS FROM A-Z

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CASTROL RANGE OF INDUSTRIAL LUBRICANTS – OILS

PRODUCT	DESCRIPTION	PERFORMANCE	BASE OIL	PERFORMANCE ADDITIVES	ISO VG (VISCOSITY @ 40°C)	VI (TYPICAL)	UPPER TEMPERATURE LIMIT FOR NORMAL OPERATIONS
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GEAR OILS

Alpha EP	Mineral gear oils	✓	Mineral oil	EP/AW	32 – 680	95	71°C/160°F
Alpha SP	Mineral gear oils	✓	Mineral oil	EP/AW	46 – 1000	95	71°C/160°F
Alpha BMB	Mineral gear oils	✓	Mineral oil	EP/Solid Lubricant	100 - 680, 1200	95	82°C/180°F
Alphasyn T	Synthetic gear oil	✓✓	PAO	AW/Non-EP	150 - 460	135	110°C/230°F
Alphasyn HTX	Synthetic gear oil	✓✓	PAO	EP	68, 150 - 460, 1000	140	93°C/200°F
Alphasyn EP	Synthetic EP gear oil	✓✓	PAO	EP/Anti-Scuff	68, 150 - 680	140	93°C/200°F
Alphasyn GS	Synthetic EP gear oil	✓✓	PAG	EP/Anti-Scuff	150 - 680	240	120°C/248°F
Alphasyn PG	Synthetic EP gear oil	✓✓	PAG	EP/Anti-Scuff	150 - 460	240	120°C/248°F
Molub-Alloy Gear Oils	Mineral gear oils	✓✓	Mineral oil	EP/Solid Lubricant	100, 220 - 1500	95	82°C/180°F
Optigear	Mineral gear oils with MicroFlux Trans	✓✓	Mineral oil	MFT	32 - 460	95	88°C/190°F
Optigear BM	Mineral gear oils with MicroFlux Trans	✓✓✓	Mineral oil	MFT	68 - 3000	95	88°C/190°F
Tribol 1100	Mineral gear oils with TGOA	✓✓✓	Mineral oil	TGOA	68 - 1500	95	88°C/190°F
Optigear MX	Mineral gear oils with MicroFlux Trans	✓✓✓	Mineral oil	MFT	460	95	88°C/190°F
Tribol 1710	Semi-synthetic gear oil with TGOA	✓✓✓	PAO/Mineral	TGOA	100, 220 - 460	135	93°C/200°F
Tribol 1510	Synthetic gear oil with TGOA	✓✓✓	PAO	EP/AW	320, 680	> 140	100°C/212°F
Tribol 800	Synthetic wide temperature gear oils	✓✓✓	PAG	EP/AW	100 - 2200	240	120°C/248°F
Tribol 1300	Synthetic wide temperature gear oils	✓✓✓	PAG	EP/AW	220 - 680	240	120°C/248°F
Optigear RMO	Synthetic gear oils with MicroFlux Trans	✓✓✓	PAO	MFT	150	>130	93°C/200°F
Optigear Synthetic RO	Synthetic gear oils with MicroFlux Trans	✓✓✓	PAO	MFT	32, 150, 220	>130	93°C/200°F
Optigear Synthetic A	Synthetic gear oils with MicroFlux Trans	✓✓✓	PAO	MFT	220 - 460	140	93°C/200°F
Optigear Synthetic X	Synthetic gear oils with MicroFlux Trans	✓✓✓	PAO	MFT	100 - 680	150	100°C/212°F

OPEN GEAR OILS

Alpha SMR NB	Open Gear	✓	Mineral oil	EP	550	128	82°C/180°F
Alpha SMR NB Heavy	Open Gear	✓	Mineral oil	EP	950	128	82°C/180°F
Alpha SMR Heavy X	Open Gear	✓	Mineral oil	EP	11,000 Brookfield Viscosity @40°C	93	82°C/180°F
Alpha TT	Industrial Gear Oils	✓✓	Mineral oil	EP/AW	1200	120	82°C/180°F
Alphasyn OG	Synthetic Gear Oil	✓✓	Synthetic	EP/AW	3200, 6800	180-190	93°C/200°F
Optifluid 3	High load open gears	✓✓	Synthetic	EP/AW	3000	275	82°C/180°F
Optifluid 3 H1					3000	275	82°C/180°F
Optifluid 4					16000	275	82°C/180°F
Optifluid 4 EP					13000	200	82°C/180°F

GEARS - SPECIALISED/NON-STANDARD

Sloflo	Process and Chain Oils	✓	Mineral oil	-	150, 460	>95	71°C/160°F
Alpha SP...S	Mineral gear oils	✓	Mineral oil	EP/AW + Corrosion Inhibitor	100 - 220	95	71°C/160°F
Alpha SP...SR	Mineral gear oils	✓	Mineral oil	EP/AW + Corrosion Inhibitor	100 - 150	95	71°C/160°F
Alpha CEP	Mineral gear oils	✓	Mineral oil	EP/AW	150, 85w-140	95	71°C/160°F
Alpha HFB Crusher Fluid	Crusher fluid	✓	Emulsion	AW + Emulsifiers	100	-	60°C/140°F
Alpha LCG	Mineral gear oils	✓	Mineral oil	EP/AW	150 B, 150 BX	96	71°C/160°F
Alpha WT	Emulsifiable Gear Oils	✓✓	Mineral oil	EP + Emulsifiers	100, 220 - 460	101	71°C/160°F
Molub-Alloy 950 85W-140	Heavy Duty Differential Gear Oil	✓✓	Mineral oil	EP/Solid Lubricant	460	95	82°C/180°F
Alphasyn CF	Synthetic gear oil	✓✓	PAG	EP/Anti-Scuff	150	240	120°C/248°F
OX-165	Specification Synthetic Gear Oil	✓✓	PAG	EP/AW	150	174	150°C/302°F
Molub-Alloy 969	Leak Resistant Gear Compound	✓✓✓	Mineral oil	EP + Anti leak	320	94	82°C/180°F
Optigear RI	Running-in gear oil	✓✓✓	Mineral oil	MFT + CI	68	100	88°C/190°F
Tribol 1390	Special corrosion protection oil	✓✓✓	PAG	EP/AW + CI	220, 460	>200	120°C/248°F

APPLICATION

Gear range that fulfils the requirements of DIN 51517-3 for CLP type gear oils and U.S. Steel 224 performance.

Good load carrying capacity, oxidation resistance, corrosion resistance, foam resistance, and wear protection. (VI for ISO 680 and 1000 is slightly lower than typical).

High load carrying gear oils with solid lubricant additives. They fulfill the requirements of the DIN 51517-3, and qualify as CLPF type gear oils in accordance with DIN 51502.

High-temperature, gears and bearings, requiring non-EP performance. 150, 220, and 320 grades successful in paper making central lube systems.

Application in bearings, circulating systems and gear boxes operating under wide temperature range and where medium to high EP type products are required.

Application in bearings, circulating systems and gear boxes operating under wide temperature range and where EP type products are required.

Medium to high load worm and spur gear units as well as bearing and circulating systems. Excellent worm gear lubricant. Conforms to CLP-PG gear oil as defined by DIN 51517 part 3.

Medium to high load worm and spur gear units as well as bearing and circulating systems. Excellent worm gear lubricant.

Recommended for spur, bevel, helical, herringbone, spiral bevel gear. Used specially for heavy-duty and shock loading where EP characteristics are needed. 170W/680 is compounded for Worm Gear applications.

Spur and bevel gear units, even under severe operating conditions, worm gear units, rolling and sliding bearings, gear couplings, circulating systems as drive units of rail-bound vehicles.

Spur and bevel gear units, even under severe operating conditions, worm gear units, rolling and sliding bearings, gear couplings, circulating systems.

Spur and bevel gear units, even under severe operating conditions, rolling and sliding bearings, gear couplings and circulating systems. Good demulsibility.

Industrial gears operating at wide temperature fluctuations and under high loads, sliding and rolling bearings, wind turbines, conveyor belts, crane control gears, lifts, rolling mills, etc. Has best in class surface protection and friction reduction.

Spur and bevel gear units even under severe operating conditions, rolling and sliding bearings, gear couplings and circulating systems. Good demulsibility.

Spur and bevel gear units even under severe operating conditions, rolling and sliding bearings, gear couplings and circulating systems. Good demulsibility. Mainly used for Wind.

All types of gears (especially worm gears) in severe service and circulating systems that lubricate gears, journal and bearings. For use where reservoir temperatures are unusually high.

All types of gears (especially worm gears) in severe service and circulating systems that lubricate gears, journal and bearings. For use where reservoir temperatures are unusually high.

High performance and long-term gear oil, especially developed for drive units in rail-borne traffic and machine construction in extreme climatic conditions.

High-performance gear oil used in rail traffic and mechanical engineering applications, for long-term use and in extreme climate conditions.

Industrial gears operating at wide temperature fluctuations and under high loads, sliding and rolling bearings, wind turbines, conveyor belts, crane control gears, lifts, rolling mills, etc.

Industrial gears operating at wide temperature fluctuations and under high loads, sliding and rolling bearings, wind turbines, conveyor belts, crane control gears, lifts, rolling mills, etc. Has best in class surface protection and friction reduction.

Heavy Duty open gear oil mainly used in the Sugar industry.

Heavy Duty open gear oil mainly used in the Sugar industry.

For use in the sugar processing industry for heavily loaded open gears and brass journal bearings also for mining, quarrying and rubber industries. It can also be used as a lubricant for wire ropes and heavily loaded bearings.

For use in heavy duty industrial gearbox applications such as dragline gearcases meets the requirements of Bucyrus specification RGL for Regular Type Gear Lubricant, along with DIN 51517 Part 3 (CLP).

Heavy-duty, specially high viscosity lubricants primarily intended for use in heavily loaded, low-speed gears and bearings where boundary lubrication conditions may prevail.

High load open gears especially those used in rolling at the sugar mills. Optifluid 3 H1 grade is NSF food grade approved. Opifluid 4 EP has increased load carrying.

Range of lubricants with strong adhesive characteristics. Particularly used for applications such as textile and food processing machinery, lubrication of worn machinery.

Alpha SP plus corrosion inhibitor.

Alpha SP plus corrosion inhibitor.

CEP 85W140 is multigrade mineral oil developed for hypoid gears. CEP 150 meets DIN 51 517, Part 3 - CLP, ISO 6743/6-L-C, API GL-5, Bruggen Value > 100 N/mm².

Invert emulsion, suitable for the lubrication of crushers. Used in large circulatory and hydraulic systems, conventionally lubricated by mineral oil of ISO viscosity 68 to 150.

Good load carrying capacity, oxidation resistance, corrosion resistance, foam resistance, and wear protection. Specifically used for the canning industry. The BX version is specifically designed to emulsify.

Gear oil specially designed to mix with water when contamination occurs.

Specifically formulated for use when a MIL-L-2105C, D or API GL-5 oil is specified. Because Molub-Alloy 950 gear oil contain highly effective friction modifiers, it is not recommended for use in limited-slip axles with friction elements.

Synthetic gear oil that is fully compatible with Castrol's synthetic Iloform 300, 305 and 301 metalworking water based coolants, where cross contamination can occur.

Military Specification Synthetic Gear Oil, approved to Def Stan 91-71/2.

Leak Resistant Gear Compounds are specially formulated to help control leaks in gear cases when repairs cannot be immediately performed to eliminate the cause(s) of leakage.

Running-in and corrosion protection oil for oil circulation systems, gears and plain bearings.

Universal corrosion protection oil for equipment and components and was especially developed for the protection and conservation of enclosed gear units. Also used as a running-in lubricant.

CASTROL RANGE OF INDUSTRIAL LUBRICANTS – OILS

PRODUCT	DESCRIPTION	PERFORMANCE	BASE OIL	PERFORMANCE ADDITIVES	ISO VG (VISCOSITY @ 40°C)	VI (TYPICAL)	UPPER TEMPERATURE LIMIT FOR NORMAL OPERATIONS
CHAINS							
Chain Guide	General purpose chain oil	✓	Mineral Oil	EP/AW + Tackifier	68, 100, 150	>95	82°C/180°F
Molub-Alloy Chain Oil	General purpose chain oil	✓✓	Mineral Oil	AW/Solid lubricants	22, 100	-	90°C/190°F
Optimol Non-Fluid 150	Adhesive oil	✓✓	Mineral Oil	AW + Tackifier	155	183	82°C/180°F
Molub-Alloy 892 XCL	Synthetic chain lubricants	✓✓	Ester	AW/Solid lubricants	93	200	-
Tribol 1730	Semi-synthetic chain oil	✓✓	Mineral Oil/Ester	EP/AW	100 + spray	112	120°C/248°F
Viscogen G	Synthetic glass lubricant	✓✓	Ester	EP/AW	210	137	200°C/390°F
Viscogen G 175					171		
Viscogen GDS 400	Synthetic glass lubricant	✓✓	Ester	EP/AW	400	145	200°C/390°F
Viscogen CL 22	Synthetic chain lubricants	✓✓	Ester	AW	220	115	240°C/464°F
Tribol 1430	Synthetic chain lubricants	✓✓	Ester	AW	150	124	>150°C/>302°F
Tribol 1421/150	Synthetic chain lubricants	✓✓✓	Ester	EP/AW	150	-	300°C/575°F
Tribol 1421/SG					280		
Tribol 1421/680					690		
Viscogen KL 3, 9, 15, 23, 130, 300	Synthetic chain lubricants	✓✓✓	Ester	EP/AW	32, 100, 220, 250, 1570, 4030	105-170	200°C/390°F
Viscogen KLK 25, 28	Synthetic chain lubricants	✓✓✓	Ester	AW	255, 280	160	250°C/480°F, 260°C/500°F
Tribol 1330	Chain lubricants for cathodic paint lines	✓✓✓	PAG	AW	130	220	160°C/320°F
Optifluid KTL	Chain lubricants for cathodic paint lines	✓✓✓	PAG	AW	100, 220	220	200°C/390°F
Tribol 290	Chain lubricants for cathodic paint lines	✓✓✓	PAG	AW	150, 220	220	220°C/428°F
Optimol Suspension HTGU	High temperature lubricant with solids	✓✓✓	PAG	Solid lubricants	108 in liquid form	-	650°C/1202°F. Dry lubrication
Optimol Suspension SU	High temperature lubricant with solids	✓✓✓	PAG	Solid lubricants	109 in liquid form	-	450°C/842°F. Dry lubrication

CHAINS - LUBECON							
LubeCon HTCL	High Performance Chain Oils	✓✓✓	Ester	AW/R&O	46	131	302°C/575°F
LubeCon Series 301 Lubricant	High Performance Chain Oils	✓✓✓	Solvent type	AW + Solids	5	-	204°C/400°F
LubeCon Series 525 Lubricant	High Performance Chain Oils	✓✓✓	Solvent type	AW/R&O	22	92	302°C/575°F
LubeCon Series 663 Lubricant LubeCon Series 735 Lubricant	High Performance Chain Oils	✓✓✓	PAG	EP/AW	224 22	225 185	260°C/500°F 160°C/320°F
LubeCon Series ATS Lube	High Performance Chain Oils	✓✓	Solvent type	AW+Solids	2	-	371°C/700°F
LubeCon Series I Lubricants Series I/FE Series I A Series I/M Series I/M O Series I/M-200	High Performance Chain Oils	✓✓	Solvent type	AW+Solids	3 5.5 5.5 3 6	- 135 - - -	204°C/400°F 204°C/400°F 204°C/400°F 371°C/700°F 316°F/600°F
LubeCon Series I/IN Lubricant	High Performance Chain Oils	✓✓✓	Solvent type	AW+Solids	9	135	204°C/400°F
LubeCon Series KCL 46	High Performance Chain Oils	✓✓✓	Ester	AW/R&O	46	131	302°C/575°F
LubeCon Series O Lubricant	High Performance Chain Oils	✓✓	Solvent type	AW + Friction modifiers	2	-	232°C/450°C
LubeCon Series SYN 150	High Performance Chain Oils	✓✓✓	Ester	AW + R&O	150	115	302°C/575°F
LubeCon Series VG Light Lube	High Performance Chain Oils	✓✓✓	Solvent type + Ester	AW	15	177	140°C/284°F

APPLICATION

For use in multi blade gang saws, edgers, chains, slides, sprockets, arbours and bearings.
Multi-service chain lubricants designed for use in a variety of plant-wide chain applications. ISO 22 version also available in a spray.
Adhesive type oil with antiwear additives. For use in guide and slide ways, older types of weaving machines, chains.
Designed to meet the lubrication requirements of high temperatures tentering frames in the textile and related industries.
Conveyor and drive chains, low to medium temperatures and loads.
Especially designed for hollow glass machines - for the reduction in friction and offering optimum wear protection. Does not contain solids and leaves no residues when overheated. For chains, drip feed lubricator, central lubrication, oil spraying.
Synthetic lubricant especially designed for lubrication in the hollow glass industry.
For high-temperature lubrication of chains in textile and packaging machines as well as in conveying systems.
For the lubrication of oven chains in lithographic printing plants and in the coating industry as well as in drying ovens of the automotive industry.
Lubrication of roller chains, slides, cams and general lubrication where a high temperature synthetic lubricant is needed.
Designed for high temp lubrication in severe environments where the use of mineral oils or conventional synthetic oils would result in excessive wear, carbonisation and residue formation. KL 3, 23 and 300 available in spray also.
Designed for total loss lubrication systems at high temperatures, in applications requiring exceptional wear protection under extreme loading.
For lubricating conveyor chains and open trolley wheel bearings in high temperature paint ovens found in the automotive and metal decorating industries, including cathodic paint lines.
For use as a chain lubricant for insertion chains in overhead and floor conveyors of cathodic paint lines. For chains and guide ways of conveyor systems.
For lubricating conveyor chains and open trolley wheel bearings in high temperature paint ovens found in the automotive and metal decorating industries, including cathodic paint lines.
For lubricating points subjected to high temperatures, such as chain lubrication in the glass, metal and ceramics industries, baking ovens of large bakeries, slat conveyors in annealing furnaces, for chain grates and bearings of oven carriages. Base fluid evaporates in use leaving Graphite layer.
For oil lubrication points exposed to high temperatures such as in metallurgical plants, on furnace chains, travelling grates, hinges, joints, tipping devices in drying systems, in enamelling, smelting and annealing furnaces, in baking ovens of large industrial bakeries. Base fluid evaporates in use leaving Molybdenum layer.

HTCL is a synthetic conveyor lubricant formulated for the demanding high temperature lubrication requirements found in industries such as foundries, the canning industry and aluminum processing. Exhibits extremely low volatility allowing for reduced lubricant consumption and a reduction in the deposition of residues.
Series 301 is a heavy duty lubricant containing a blend of Graphite & PTFE, designed specifically for use on conveyors, maintenance equipment or other devices.
Series 525 High Temperature Chain Oil has excellent volatility characteristics as well as physical and chemical stability at high temperatures with extremely low residue forming tendencies.
Series 735 and Series 663 are synthetic lubricants specifically formulated for use in machinery and on conveyors used in cathodic electro deposition (e-coat) processes, painting, and high temperature drying and curing.
Series ATS is a semi-synthetic lubricant blend that incorporates a solids package to provide superior wear protection to conveyors. The lubricant penetrates into friction points and is easily and precisely controlled by LubeCon lubrication systems.
Series I Lubricants are heavy-duty, anti-wear lubricants designed to clean and penetrate readily into the friction points. These unique products use a solids package to provide enhanced lubrication while not attracting dirt or dust. It is easily and precisely controlled through LubeCon's lubrication systems. For: Conveyor chains, chain pins, trolleys and roller chains.
Series III/N fluid is a heavy-duty, anti-wear lubricant designed specifically for use on conveyors and other plant maintenance equipment. Series III/N is an excellent lubricant choice for conveyor applications that are subject to high moisture. Series III/N has the capability of displacing moisture and to penetrate to the contact areas where protection against corrosion and wear is required.
Series KCL is formulated for the high temperature lubrication requirements found in the Drywall/Gypsum industry. Exhibits extremely low volatility allowing for reduced lubricant consumption and a reduction in the deposition of residues.
Series O fluid is designed to be a thin-film/dry-film lubricant that first acts as a penetrant and cleaner. The highly penetrating and creeping characteristics serve to dissolve solidified grease and accumulated carbon residue. A thin film of highly stable select additives and friction modifiers carried to the contact points offers high film strength.
Series SYN 150 is formulated for the most demanding high temperature chain applications. It provides a unique combination of extremely low volatility and low residue formation tendency, which allows for reduced lubricant consumption and improved housekeeping.
Series VG Light lubricant formulated with components listed on NSF's Non-food Compound Listing.

CASTROL RANGE OF INDUSTRIAL LUBRICANTS – OILS

PRODUCT	DESCRIPTION	PERFORMANCE	BASE OIL	PERFORMANCE ADDITIVES	ISO VG (VISCOSITY @ 40°C)	VI (TYPICAL)	UPPER TEMPERATURE LIMIT FOR NORMAL OPERATIONS
HYDRAULIC							
Hydraulic Oil	Antiwear hydraulic oils	✓	Mineral Oil	AW	32 - 68	>95	82°C/180°F
Hydraulic HLP-D	Zinc Free Detergent Hydraulic oil	✓	Mineral Oil	AW + Detergent	46	>95	82°C/180°F
Hyspin VG	Rust and Oxidation inhibiting hydraulic oils	✓	Mineral Oil	R&O	22 – 220	>95	82°C/180°F
Hyspin AWS	Antiwear hydraulic oils	✓	Mineral Oil	AW	10 – 220	>95	82°C/180°F
Hyspin HLP-D	Detergent hydraulic oil	✓	Mineral Oil	AW + Detergent	15 - 68	95	82°C/180°F
Hyspin ZZ	Zinc free hydraulic oil	✓✓	Mineral Oil	AW	10 – 220	>95	82°C/180°F
Hyspin XP	Zinc free hydraulic oil	✓✓	Mineral Oil	EP/AW	46	100	82°C/180°F
Hyspin DXP	Zinc Free Detergent Hydraulic oil	✓✓	Mineral Oil	EP/AW + Detergent	46	>95	82°C/180°F
Hyspin DF TOP	Zinc free hydraulic oil	✓✓	Mineral Oil	AW	46, 68	> 95	82°C/180°F
Hyspin DSP	Zinc Free Detergent Hydraulic oil	✓✓	Mineral Oil	AW + Detergent	15 - 68	>95	82°C/180°F
Hyspin AWH-M	High VI hydraulic and circulating oils	✓✓	Mineral Oil	AW	15, 32 - 150	>130	82°C/180°F
Hyspin HVI	Zinc free high VI hydraulic and circulating oils	✓✓	Mineral Oil	AW	15 - 150	>140	82°C/180°F
Hyspin SHF	Non-zinc, high VI hydraulic oil	✓✓	Mineral Oil	AW	32 - 46	>200	82°C/180°F
Hyspin DHV	High viscosity index zinc free detergent hydraulic oil	✓✓	Mineral Oil	AW + Detergent	46, 68	150	82°C/180°F
Vario HDX	High viscosity index zinc free detergent hydraulic oil	✓✓	Mineral Oil	AW + Detergent	46	160	82°C/180°F
Alphasyn T	Synthetic circulating and hydraulic oil	✓✓✓	PAO	AW	10 - 100	125	110°C/230°F
Tribol 943 AW	Advanced performance hydraulic oil	✓✓✓	Group II Mineral Oil	AW	22 - 100	>100	99°C/210°F

FIRE RESISTANT HYDRAULIC FLUIDS							
Anvol AE 5/95	HFA-S Fire resistant hydraulic fluid	✓	-	AW	4.7	-	60°C/140°F
Hydrosafe 620	HF-C Fire resistant hydraulic oil	✓	Water Glycol	AW	46	>200	60°C/140°F
Anvol WG	HF-C Fire resistant hydraulic oil	✓✓	Water Glycol	AW	46	>200	60°C/140°F
Anvol SWX	HF-DU Fire resistant hydraulic oil	✓✓✓	Ester	AW	46, 68	180	82°C/180°F
Anvol SWX P	HF-DU Fire resistant hydraulic oil	✓✓✓	Ester	AW	68	182	82°C/180°F
Anvol PE 46 XC	HF-DR Fire resistant hydraulic oil	✓✓✓	Ester	AW	46	-	110°C/230°F

HYDRAULIC – SPECIALISED/NON-STANDARD							
Hyspin HL-XP	Extreme pressure/antiwear hydraulic oil meeting HLP/CLP	✓	Mineral Oil	EP/AW	32	110	82°C/180°F
HL 2935 EP	Power transmission oil for hydrodynamic drives	✓	Mineral Oil	EP/AW	32	102	82°C/180°F
Hyspin 4243	Zinc Free Detergent Hydraulic oil	✓✓	Mineral Oil	AW + Detergent	46	>95	82°C/180°F
Hyspin HDH 7000	High VI hydraulic	✓✓	Mineral Oil	AW	72	> 150	82°C/180°F
CW 851 D	Hydraulic System Fluid	✓✓	Mineral Oil	EP/AW	33	>290	82°C/180°F
Hyspin SA	Non-staining hydraulic oil	✓✓	Synthetic	AW	44	-	-
H 540	Hydraulic Oil	✓✓	Mineral oil	AW	38	279	71°C/160°F

SLIDEWAY							
Magna GC, BD & CF	Machine tool slideway oils	✓	Mineral Oil	EP/AW	32, 68, 220	>95	90°C/200°F
Magna BDX & CFX	Emusifiable Slideway Oil	✓✓	Mineral Oil	EP/AW	68, 220	> 95	90°C/200°F
Magnaglide B	Machine tool slideway oils	✓✓	Mineral Oil	EP/AW	32, 68 - 220	>95	90°C/200°F
Magnaglide D	Machine tool slideway oils	✓✓	Mineral Oil	EP/AW	32, 68 - 220	>95	90°C/200°F
Magnaglide DX	Machine tool slideway oils	✓✓	Mineral Oil	EP/AW/Solid Lubriant	68, 220	>95	90°C/200°F
Molub-Alloy MWO 50 A LP	Heavy duty slideway oils	✓✓	Mineral Oil	EP/AW/organic molybdenum	400	90	90°C/200°F
Tribol MWO 20LS & 40LS	Heavy duty slideway oils	✓✓	Mineral Oil	AW	68, 220	80	90°C/200°F
Tribol 1060	High performance slide-way oil	✓✓✓	Mineral Oil	AW	68, 220	106	90°C/200°F
Tribol 1066	High performance slide-way oil	✓✓✓	Mineral Oil	EP/AW	68, 220	106	90°C/200°F

APPLICATION

Hydraulic meeting the specification requirements of DIN 51524 Part 2 and is classified as DIN 51502 classification – HLP & ISO 6743/4 – Hydraulic Oils Type HM.
Zinc free hydraulic oil containing detergent meeting the specification requirements of DIN 51524 Part 2 and ISO 6743/4 – Hydraulic Oils Type HM.
Hydraulic and lubricating oils requiring a non-AW specification. Applications such as bearings, gears, pumps, engines, turbines, cylinders, spindles and compressors.
Hydraulic oils for use in gear, vane, radial piston, and axial piston pumps where pressures and speeds require anti-wear oils and are specified by equipment manufacturers. Also available as superclean for viscosities 32 - 150.
Hydraulic systems with high operating pressures and temperatures as well as the additional requirements having cleaning and water absorption abilities. Fulfill the requirements of the DIN 51,524 part of 2, excluded the Demulsification.
Non-zinc containing Antiwear hydraulic and circulating oil. Good oxidation stability. Denison HF-0, Vickers 35VQ25, Cincinnati Lamb. Also available as superclean for viscosities 32 - 68.
Anti-wear hydraulic oil meeting the performance requirements of DIN 51 524 Part 2 'Hydraulic Oils Type HLP' and of ISO 6743/4 'Hydraulic Oils Type HM'. Bruggen > 30N/mm ² .
Zinc-free hydraulic oil with detergent/dispersant properties, type HLP-D and meets the requirements of DIN 51524-2. Developed specifically for use in wet-running clutch-brake combinations and is approved by Ortinghaus. Offering high wear protection at mixed-friction conditions and reached a load-capacity according to Bruggen of 50 N/mm ² .
Zinc-free HLP-D hydraulic oil conforming to DIN 51524-2 with superb wear and corrosion protection, excellent filterability and a very high cleanliness. The special "keep clean" properties ensure the cleanliness of the hydraulic system, long operating life and high system availability. Also reduces wear in the boundary lubrication zone and through its selected additives suppresses stick-slip effects.
Zinc free Extreme Pressure and Antiwear hydraulic oil. Fulfills the requirements of DIN 51 524, Teil 2 - HLP, DIN 51 517, Part 3-CLP, ISO 6743/4-L-HM and Müller Weingarten specification. (Bruggen-value > 45 N/mm ² and FZG-A/8.3/90, scoring load stage > 12).
Systems requiring high viscosity index fluids, cold and/or wide temperature systems. Also available as superclean for viscosities 32 - 68. ISO 46 also available dyed blue for specific application.
Systems requiring high viscosity index fluids, cold and/or wide temperature systems. Hyspin HVI oils are intended for severely stressed hydraulic systems requiring a high level of anti-wear performance and fine filtration. Hyspin HVI contains a shear stable additive system helps maintain the viscosity characteristics of the product over a wide temperature range classified as follows: DIN 51502 classification – HVLP ISO 6743/4 - Hydraulic Oils Type HV.
Very high viscosity index hydraulic oils based on a zinc free additive system. Formulated for hydraulic systems operating in extreme climatic conditions, for example forestry equipment in Arctic climates. In these cases the high VI of Hyspin SHF is essential for ease of 'start up' in low temperatures and protection at high temperatures.
High viscosity index zinc free hydraulic oil for use over a wide temperature range. Fulfills the requirements of DIN 51 524, Part 3 - HVLP-D. FZG-A/8.3/90, scoring load stage > 12.
High viscosity index zinc free extreme pressure and antiwear hydraulic oil. Fulfills the requirements of DIN 51 524, Part 3 - HVLP, DIN 51 517, Part 3-CLP, ISO 6743/4-L-HV and Müller Weingarten specification. (Bruggen-value > 45 N/mm ² and FZG-A/8.3/90, scoring load stage > 12).
Low viscosity version of the Alphasyn T gear oil range, used for circulating, spindle, hydraulics. (The ISO viscosity 15 is called Alphasyn K 15, and has a slightly different additive system).
High performance, ashless (zinc-free), multi-service oils can extend service life for uninterrupted machine availability and production. Primarily used as a Hydraulic, but can also be used as a circulating and compressor oil. Very high oxidation stability.

Concentrate for use in water hydraulic systems, typically at 95% water:5% concentrate. When diluted offers a very high degree of fire resistance with good lubrication and corrosion protection. Anvol AE 5/95 may be used in place of soluble oils in hydraulic systems.
May be used in vane, gear or piston pumps with pressures up to 3000psi. See full PDS for seal, metal and filter compatibility.
May be used in vane, gear or piston pumps with pressures up to 3000psi. See full PDS for seal, metal and filter compatibility.
Factory Mutual approved hydraulic oil. High pressure systems up to 7500psi. Fire-resistant apps: hot strip mills, coil handling, pipe mills, and continuous casters.
Factory Mutual approved and spray ignition resistant hydraulic oil. High pressure systems up to 5000psi. Fire-resistant apps: hot strip mills, coil handling, pipe mills, and continuous casters.
Phosphate ester high performance 'HF-DR' type fire resistant hydraulic fluid with excellent hydraulic performance and fire protection.

Gear oil for hydrodynamic drives with integrated reduction gears, hydraulic fluid transmissions and transducers. Approved by Deutsche Bahn, MTU and VOITH turbo. FZG A/8,3/90> 12.
Power transmission oil for hydrodynamic drives of rail-mounted vehicles. The EP additives give very good load and wear protection characteristics. The hydraulic fluid transmission oil contains oxidation and corrosion inhibitors. Approved by various transmission manufacturers.
Zinc free detergent hydraulic oil. Fulfills the requirements of DIN 51 524, Part 2 - HLP. Bruggen-value > 50 N/mm ² and FZG-A/8.3/90, scoring load stage = 11.
High viscosity index fluid for cold and/or wide temperature systems. Field tested in sugar cane harvesters subjected to the most arduous operating conditions.
Hydraulic fluid with high load and friction modifiers. For specific hydraulic applications.
For use in hydraulic systems of the non-ferrous rolling industry, especially aluminium rolling. When hydraulic leakages occur, metal staining and sheet sticking can result. Hyspin SA 46, in addition to excellent lubricity properties, exhibits non-staining and non-sticking properties.
Hydraulic Oil type HVLP and DIN 51524 part 3, and fulfills the specification TL 9150-0035 and Nato H 540.

Magna Slideway oils incorporate tackiness and lubricity additives for good stick slip and load carrying performance. BD 68 meets Cincinnati Lamb P-47 and CF 220 meets P-50.
Slideway oil range designed to emulsifying when in contact with metalworking coolants where oil separation is not practical such as in individual machines, however this may cause instability of the coolant over time.
Mineral oil based slideway with very good stick-slip and compatibility with water based metalworking fluids.
Mineral oil based slideway with excellent stick-slip and compatibility with water based metalworking fluids.
Mineral oil based slideway with excellent stick-slip and compatibility with water based metalworking fluids, with increased adhesive properties.
High performance heavy duty slide and way lubricant, with solid lubricants for extreme operating conditions. Highly resistant to the washing action of water, so can be used as a very effective chain lubricant in car wash lines or other applications exposed to water.
20LS and 40LS contain EP/AW/organic molybdenum additives. Formulated for lubrication of machine tool slides and ways. Ideal for use where solid lubricants cannot be used.
High performance demulsifying slideway oil. Resists cleansing action of surface-active coolants. 68 and 220 achieved Cincinnati Milacron P-47 and P-50 approval.
High performance demulsifying slideway oil. Resists cleansing action of surface-active coolants. 68 and 220 achieved Cincinnati Milacron P-47 and P-50 approval.

CASTROL RANGE OF INDUSTRIAL LUBRICANTS – OILS

PRODUCT	DESCRIPTION	PERFORMANCE	BASE OIL	PERFORMANCE ADDITIVES	ISO VG (VISCOSITY @ 40°C)	VI (TYPICAL)	UPPER TEMPERATURE LIMIT FOR NORMAL OPERATIONS
CIRCULATING OILS							
Magna	Mineral circulating oil	✓	Mineral Oil	-	2 - 460 220 EP	>95	71°C/160°F
Magna HB	Mineral circulating oil	✓	Mineral Oil	R&O	150 - 680	>95	82°C/180°F
Magna MGX	Mineral circulating oil	✓	Mineral Oil	AW/R&O	100 - 680 (ISO 100 called MGX 88)	95	82°C/180°F
Magna XX	Mineral circulating oil	✓✓	Mineral Oil	AW/R&O	100 - 680	97	82°C/180°F
Magna NTX	Mineral circulating oil	✓✓	Mineral Oil	AW/R&O	100	99	82°C/180°F
Magna NS	Non Staining Oil	✓✓	Synthetic	AW/R&O	460	28	82°C/180°F
Cresta PM	Paper Machine Oil	✓	Mineral Oil	AW/R&O	220	>95	82°C/180°F
Cresta ZFX	Paper Machine Oil	✓✓	Mineral Oil	AW/R&O	150, 220	>95	82°C/180°F
Cresta SPM	Synthetic Paper Machine Oil	✓✓	PAO	AW/R&O	220 - 460	140	120°C/248°F
Optisynth HT	Synthetic Paper Machine Oil	✓✓✓	PAO	AW/R&O	220, 320, 680	160	140°C/284°F
COMPRESSORS							
Aircol PD	Mineral compressor oil	✓	Mineral Oil	AW	32-150	97	Depends on compressor type
Aircol MR	Synthetic compressor oil	✓✓	Mineral Oil	AW	32 - 68	97	Depends on compressor type
Aircol SN	Synthetic compressor oil	✓✓✓	Ester	AW	68 - 150	90	Depends on compressor type
Aircol SR	Synthetic compressor oil	✓✓	PAO	AW	32 - 100	140	Depends on compressor type
Tribol 1750	Synthetic compressor oil	✓✓✓	Mixed	AW	46 - 150	115	Depends on compressor type
Tribol 890	Synthetic compressor oil	✓✓✓	Ester	AW	32, 68, 100	-	Depends on compressor type
Tribol 1555	Synthetic compressor oil	✓✓✓	PAO	AW	32 - 100	140	Depends on compressor type
COMPRESSORS – SPECIALISED/NON-STANDARD							
Aircol SA 144	Gas compressor oil	✓	Mineral Oil	-	240	90	82°C/180°F
Aircol WM 2631	Ethylene Compressor Lubricant	✓	Mixed	-	280	-	-
Aircol WM 2639	Ethylene Compressor Lubricant	✓	Mixed	-	290	-	-
Tribol ATO 100 LS ZF	Air Tool Oil	✓✓	Mineral Oil	AW	22	-	-
Aircol NG 260	Cylinder Oil	✓✓	Mineral Oil	Compounded	260	85	82°C/180°F
SPINDLE OILS							
Hyspin Spindle Oil	Spindle Oil	✓	Mineral Oil	R&O	2, 5, 10, 22	-	refer to PDS
Hyspin Spindle Oil ZZ	Spindle Oil	✓✓	Mineral Oil	Zinc free anti-wear plus R&O	2, 5	-	refer to PDS
FOOD GRADE OILS							
Optileb GT	Gear Oils	✓✓	Synthetic	EP/AW	100 - 680	150	110°C/230°F
Optileb HY	Hydraulic Oils	✓✓	Synthetic	AW	15, 32 - 68	136	110°C/230°F
Viscoleb	Chain Oils	✓✓	Synthetic	EP/AW	32, 150, 280, 1500	145	200°C/390°F
Optileb AT	Compressor	✓✓	White Oil	EP/AW	15	-	110°C/212°F
Optileb V	Compressor	✓✓	Synthetic	EP/AW	46 - 100	136	110°C/212°F
Optileb DAB 8	Medicinal White oil	✓	White Oil	-	40	-	60°C/140°F
Whitemor WOM	Medicinal White oil	✓	White Oil	-	14, 24, 68	-	60°C/140°F
Optileb TC 5	Drawing and stamping oil	✓✓	Synthetic	-	5	100	110°C/212°F
BIODEGRADABLE OILS							
Carelube GES	Biodegradable gear oil	✓✓	Ester	EP/AW	220	180	82°C/180°F
Tribol BioTop 1418	Biodegradable synthetic gear oils	✓✓✓	Ester	EP/AW	220, 320	180	82°C/180°F
Carelube Chain Oil	Biodegradable chain oil	✓✓	Vegetable Ester	-	32, 80	196	71°C/160°F
Tribol BioTop 1428	Biodegradable chain oils	✓✓✓	Ester	AW/R&O	100, 150	150	140°C/284°F
Carelube HTG	Biodegradable ester based hydraulic oils	✓✓	Ester	EP/AW	32	>200	75°C/167°F
Carelube HES	Biodegradable ester based hydraulic oils	✓✓✓	Ester	AW	15, 32 - 68	185	82°C/180°F
Carelube SES	Biodegradable ester based hydraulic oils	✓✓✓	Ester	EP/AW	22 - 68	145	82°C/180°F
Carelube HFS	Biodegradable ester based hydraulic oils	✓✓✓	Ester	AW	46	164	82°C/180°F
Carelube SL	Biodegradable slideway	✓✓✓	Ester	AW	68, 220	190	82°C/180°F

APPLICATION

Magna lubricating oils are suitable for a variety of applications such as the lubrication of bearings, spindles and, using the heavier viscosity grades, moderately loaded gearboxes.

For the lubrication of bearings produced by companies such as Morgan or Mesta. These oils meet or exceed: morgoil Lubricant Specification Rev. 1.1 (27 Jan 2005) and Association of Technicians of the Iron and Steel Industry – ATS 384-112.

For use in Morgoil back-up roll bearing systems such as those manufactured by Morgan Construction Company, Danieli, SMS Demag and others. These oils meet or exceed: Morgoil Lubricant Specification Rev. 1.1 (27 Jan 2005), Danieli Standard 0.000.001 Rev 14.

For use in Morgoil back-up roll bearing systems such as those manufactured by Morgan Construction Company, Danieli, SMS Demag and others. These high quality oils meet or exceed: Morgoil Lubricant Specification Rev. 1.1 (27 Jan 2005), Morgoil 'Super-Demulsibility' Lubricant Specification Rev. 2.4, Danieli Standard 0.000.001 Rev. 14.

Heavy duty antiwear circulating oil designed specifically to meet requirements of Morgan No-Twist™ Rod Mills. Excellent demulsability, air release, oxidation stability.

For use in the rolling industry, especially aluminium, copper and stainless steel rolling, in addition to its excellent lubricity properties, Magna NS exhibits non-staining and non-sticking properties, where leakages can occur.

For lubrication of dry sections of paper machines require high thermal and oxidative stability in the lubricant used to lubricate the rolling bearings of the driers.

For lubrication of dry sections of paper machines require high thermal and oxidative stability in the lubricant used to lubricate the rolling bearings of the driers. Zinc free for improved water tolerance.

Recommended for central lubricating system in paper machines that are operating at high temperatures. For lubricating gears, bearings and dryer cylinders operating under the arduous condition and extreme temperatures at the wet and dry ends of the paper machines.

Synthetic high-temperature oil with an extremely low evaporation rate. For circular lubrication at high temperatures of sliding and rolling bearings, gears and other machine elements such as paper, calenders, rolling mills.

For lubrication of rotors, bearings and gears in rotary compressors, especially the oil flooded screw type with lubricant drain cycles of up to 2000 hours under normal use.

For both oil flooded and oil injected rotary screw compressors operating continuously at air discharge temperatures up to 90°C. The product has been designed to meet service drain intervals of 4000 hours.

For use in all types of air compressor, especially reciprocating and rotary screw compressors operating under severe or normal conditions.

For use in rotary screw compressors operating under severe conditions, or under normal conditions where extended drain intervals are required.

For use in most makes of flooded and drip feed rotary compressors, as well as non-crosshead and drip feed reciprocating compressors.

For use in all types of air compressor, especially reciprocating and rotary screw compressors operating under severe or normal conditions.

For use in rotary screw compressors operating under severe conditions, or under normal conditions where extended drain intervals are required.

Compressor oil for large gas compressors. Because of the low sulphur concentration a good chemical compatibility is achieved between the compressor oil and the gas.

For the lubrication of the cylinders of high temperature and high pressure piston compressors which are compressing ethylene or mixtures of ethylene and vinyl derivatives.

For severe service in pneumatically operated tools producing rotary and/or reciprocating motion.

Compounded oil designed for steam cylinder and valve lubrication. Also suitable for other purposes such as industrial gear sets which are heavily loaded and slow moving.

Lubrication of high speed and precision machine tool spindle bearings. The ISO 5 grade has an additional oiliness agent for enhanced lubricity. The product name is Castrol Hyspin Spindle Oil E 5. For required viscosities higher than shown, please refer to the relevant hydraulic range.

Lubrication of textile equipment and all types of high speed spindle bearings and hydraulic systems. For required viscosities higher than shown, please refer to the relevant hydraulic range.

NSF-H1 approved gear range meeting DIN 51517 part 3 CLP.

NSF-H1 approved hydraulic range meeting DIN 51524 part 2 HLP.

NSF-H1 approved chain range for lubrication of chains used for production, filling and packaging machines.

NSF-H1 approved air tool compressor oil.

NSF-H1 approved compressor oil range.

NSF-H1 approved white oil complying with the regulations of the German Pharmacopoeias DAB 10. Also available in spray form as F+D spray.

NSF-H1 approved white oil complying with the regulations of the British and European Pharmacopoeias for Liquid Paraffin.

NSF-H1 approved oil to lubricate deep drawing machines and stamping tools in dusty environments.

Biodegradable circulating, bearing and gear oil based on synthetic esters, that fulfil the performance requirements of DIN 51517-3.

High Performance biodegradable gear oil suited for the application in spur, helical and planetary gear units, couplings, rolling and sliding bearings in farm and construction machinery, wind turbines, sewage plants, cranes etc.

Biodegradable oil, based on rape-seed-oil, for the lubrication of chainsaw chains and guides. High lubrication performance is further enhanced by a high degree of tackiness of the product.

For use where biodegradable chain oils are required for environmental reasons. Tested in accordance with CEC L-33-A-93 and are more than 80% biodegradable.

Biodegradable hydraulic fluid based on vegetable ester oil.

Synthetic (unsaturated) ester-based fluid with biodegradable properties, for use in environmentally sensitive areas. HES 15 can also be used as a spindle oil.

Highly biodegradable hydraulic fluids, based on saturated synthetic esters for use in all hydraulic systems.

Fully synthetic biodegradable hydraulic fluid based on saturated synthetic esters for use in all hydraulic systems.

Carecube SL range that can be used in place of a conventional mineral slideway and in conjunction with the CARECUT neat cutting range and where ester based soluble cutting fluids are being utilised.

CASTROL RANGE OF INDUSTRIAL LUBRICANTS – OILS

PRODUCT	DESCRIPTION	PERFORMANCE	BASE OIL	PERFORMANCE ADDITIVES	ISO VG (VISCOSITY @ 40°C)	VI (TYPICAL)	UPPER TEMPERATURE LIMIT FOR NORMAL OPERATIONS
SPECIALITY- AVIATION/VACUUM/ SEMI -CONDUCTOR							
399	Gas turbine oil	✓✓	Synthetic	Refer to PDS	12.1	139	149°C/300°F
778	Gas turbine oil	✓✓	Synthetic	Refer to PDS	29.9	128	149°C/300°F
Aero 35 Red	Landing Gear Shock Strut Fluid	✓✓	Mineral Oil	Refer to PDS	13.8	326	-
Aero 35 Yellow	Landing Gear Shock Strut Fluid	✓✓	Mineral Oil	Refer to PDS	13.8	326	-
Aero 40	Landing Gear Shock Strut Fluid	✓✓	Mineral Oil	Refer to PDS	13.8	326	-
Aero 40 Red	Landing Gear Shock Strut Fluid	✓✓	Mineral Oil	Refer to PDS	13.8	326	-
Aero HF 585B	Low viscosity, high viscosity index hydraulic oil	✓✓	Mineral Oil	AW/R&O	14	>350	-
Brayco 1624	Speciality Lubricant	✓✓✓	Perfluoroether	Refer to PDS	24	55	149°C/300°F
Brayco 1625	Speciality Lubricant	✓✓✓	Perfluoroether	Refer to PDS	100	117	204°C/400°F
Brayco 1721 Brayco 1722 Brayco 1723 Brayco 1724	Speciality Lubricant	✓✓✓	Perfluoroether	Refer to PDS	5 22 30 68	ND 60 101 114	93°C/200°F 149°C/300°F 163°C/325°F 177°C/350°F
Brayco 1721 Plus Brayco 1723 Plus Brayco 1724 Plus	Speciality Lubricant	✓✓✓	Perfluoroether	Refer to PDS	6 32 70	ND 102 116	93°C/200°F 163°C/325°F 177°C/350°F
Brayco 1726 Plus Brayco 1727 Plus	Speciality Lubricant	✓✓✓	Perfluoroether	Refer to PDS	141 224	132 135	177°C/350°F 177°C/350°F
Brayco 300	Preservative Oil	✓✓	Mineral Oil	Refer to PDS	11	-	149°C/300°F
Brayco 363	Preservative Oil	✓✓	Mineral Oil	Refer to PDS	10	-	122°C/250°F
Brayco 460	Jet Engine Lubricating Oil	✓✓	Mineral Oil	Refer to PDS	10	-	-
Brayco 589	Preservative Oil	✓✓	Mineral Oil	Refer to PDS	14	104	149°C/300°F
Brayco 599	Rust preventative concentrate	✓✓✓	Synthetic	Refer to PDS	46	109	-
Brayco 717	Transmission Power Fluid	✓✓	Mineral Oil	Refer to PDS	26	346	121°C/250°F
Brayco 785	Preservative and running in oil	✓✓	Mineral Oil	Refer to PDS	38	107	-
Brayco 795	Low viscosity hydraulic fluid	✓✓	Mineral Oil	Refer to PDS	11	305	135°C/275°F
Brayco 815 Z	Speciality Lubricant	✓✓✓	PFPE	Refer to PDS	148	350	204°C/400°F
Brayco 855	Preservative and lubricating oil	✓✓✓	Synthetic	Refer to PDS	6	-	49°C/120°F
Brayco 885	Aircraft Instrument Lubricating Oil	✓✓	Ester	Refer to PDS	9 @ 54°C	-	121°C/250°F
Brayco 922	Calibrating Fluid	✓✓	Solvent	Refer to PDS	1.18 @ 25°C	-	30°C/86°F
Brayco Micronic 745	High performance hydraulic oil	✓✓✓	Mineral Oil	Refer to PDS	19	90	149°C/300°F
Brayco Micronic 756	High performance hydraulic oil	✓✓✓	Mineral Oil	Refer to PDS	13.5	382	135°C/275°F
Brayco Micronic 776 RP	High performance hydraulic oil	✓✓✓	Mineral Oil	Refer to PDS	26	114	135°C/275°F
Brayco Micronic 781-2 Brayco Micronic 781-3	Gear Lubricants and Hydraulic Fluids	✓✓✓	Mineral Oil	Refer to PDS	111 202	236 206	-
Brayco Micronic 783	High performance hydraulic oil	✓✓✓	Mineral Oil	Refer to PDS	13.6	319	135°C/275°F
Brayco Micronic 814	Speciality Lubricant	✓✓✓	PFPE	Refer to PDS	18.5	311	149°C/300°F
Brayco Micronic 815 Z	Speciality Lubricant	✓✓✓	PFPE	Refer to PDS	148	350	204°C/400°F
Brayco Micronic 881	Fire resistant hydraulic fluid	✓✓✓	Synthetic	Refer to PDS	7.2	115	135°C/275°F
Brayco Micronic 882	Fire resistant hydraulic fluid	✓✓	Synthetic	Refer to PDS	14	125	205°C/401°F
Brayco Micronic 882 NASA	Fire resistant hydraulic fluid	✓✓	Synthetic	Refer to PDS	14	125	205°C/401°F
Brayco Micronic 883	Fire resistant hydraulic fluid	✓✓	Synthetic	Refer to PDS	16	126	204°C/400°F
Brayco Micronic 889	Heat transfer fluid	✓✓	Mineral Oil	Refer to PDS	5.1	-	135°C/275°F
Braycote 868	Speciality Lubricant	✓✓✓	Silicone	Refer to PDS	69	305	Refer to PDS
GAS ENGINE OIL							
Duratec A	Very Low Ash Gas Engine Oil	✓	Mineral Oil	AW/Deter/Disp	123	106	Depends on engine type
Duratec L	Low Ash Mineral Oil	✓	Mineral Oil	AW/Deter/Disp	124	97	Depends on engine type
Duratec M	Medium Ash Mineral Oil	✓	Mineral Oil	AW/Deter/Disp	124	97	Depends on engine type
Duratec MX	Medium Ash. Landfill/Biogas	✓	Mineral Oil	AW/Deter/Disp	124	97	Depends on engine type
Duratec HPL	Low Ash Group II	✓✓	Group II	AW/Deter/Disp	125	100	Depends on engine type
Duratec XPL	Low Ash, Full Synthetic Zn/P free	✓✓	PAO	AW/Deter/Disp	109	130	Depends on engine type

APPLICATION

3 cSt synthetic gas turbine oil approved to MIL-PRF-7808L, (Grade 3).
Gas turbine oil and hydraulic fluid approved to Solar E59-224G and GEK 32568E.
MIL-PRF-6083F based ISO Grade 15 mineral hydraulic fluid/Douglas Aircraft DPM 6177.
MIL-PRF-6083F based ISO Grade 15 mineral hydraulic fluid/Boeing Specification BMS 3-32B, Type 1.
MIL-H-5606 hydraulic fluid/Boeing Specification BMS 3-32B, Type 2.
MIL-H-5606 hydraulic fluid/Douglas Aircraft DPM 6176.
Petroleum based aircraft hydraulic fluid - dyed red.
Exhibits good thermal stability, is compatible with most commonly used propellants, fuels, and oxidizers. Excellent lubricating oil for precision bearings. This product is recommended for use as a damping fluid, flotation fluid, and an electrical contacts lubricant.
Exhibits good thermal stability, is compatible with most commonly used propellants, fuels, and oxidizers and virtually unaffected by high gamma radiation doses. Excellent lubricating oil for precision bearings. This product is recommended for use as a damping fluid, flotation fluid, and an electrical contacts lubricant.
For use as gear, pump, and lubricating oils where direct or indirect contact with aggressive chemicals, oxidants, and low temperatures are routine. Can also be used as vacuum pump oils in operations requiring vapor pressures as low as 10 ⁻⁴ torr.
As standard 1720 series with added corrosion preventative.
As standard 1720 series with added corrosion preventative.
Meets the requirements of and is qualified to MIL-PRF-32033 (formerly VV-L-800C). This product is identified by NATO Code Number O-190.
Meets the requirements of and is qualified to MIL-PRF-7870C. This fluid is identified by NATO Code Number: O-142.
Meets the requirements of and is qualified to MIL-PRF-6081D, Grade 1010. This fluid is identified by NATO Code Number: O-133. A.
Meets all the requirements of, and is qualified to MIL-PRF-8188D. This fluid is identified by NATO Code: C-638.
Used in MIL-PRF-23699 synthetic turbine oils at 10-15% by volume addition for storage. It meets the requirements of General Electric, Aircraft Engine Group Specification D50TF6-S1.
Meets the requirements of military specification MIL-DTL-17111C. This fluid is identified by NATO Code Number H-575.
Brayco 785 meets Solar Turbines E59-248-1A.
For use in aircraft clutch and brake devices where a low temperature fluid is required.
Virtually inert, compatible with rocket propellants and oxidizers, is unaffected by ultraviolet, cosmic radiation, or high vacuums. It has an exceptionally high viscosity index and low volatility, and has little tendency to form deposits. This product is highly recommended for use in applications at low temperature extremes and in high vacuum (aerospace).
Meets the requirements of and is qualified to MIL-PRF-14107D. This specification is also identified by military symbol: LAW, and NATO code: O-157.
Qualified under Specification MIL-PRF-6085D. It is specified as a P-17 preservative under packaging Specification MIL-STD-2073-1.
Meets the requirements of MIL-PRF-7024E, Type II.
Meets all the requirements of Naval Weapons Specification SSP WS 6788C.
Meets the requirements and is qualified under military specification MIL-PRF-5606H. This fluid is identified by Military Symbol: OHA and NATO Code Number: H-515.
For use in hydraulic systems that must respond with extreme accuracy such as aircraft hydraulic fluid in micro-hydraulic systems, computer programmed animation for robots, and other systems in which fire resistance, and fast precise responses are major requirements.
Designed to provide excellent service for radar units in various climates.
Meets the requirements of and is qualified to MIL-PRF-6083F. It also meets the requirements for a P-15 preservative under packaging specification MIL-P-116. This fluid is identified by Military Symbol: OHT and NATO Code Number: C-635.
Chemically inert, nonflammable, compatible with most commonly used oxidizers and is virtually unaffected by gamma radiation doses. It has an exceptionally high viscosity index, relatively low volatility and little tendency to form deposits. It exhibits excellent lubrication properties, good dielectric properties, excellent shear stability.
Virtually inert, compatible with rocket propellants and oxidizers, is unaffected by ultraviolet, cosmic radiation, or high vacuums. It has an exceptionally high viscosity index and low volatility, and has little tendency to form deposits. This product is highly recommended for use in applications at low temperature extremes and in high vacuum (aerospace).
Low temperature fire resistant hydraulic fluid qualified to MIL-PRF-87257A.
Fire resistant hydraulic fluid for aircraft and missile use. Meets all requirements and is qualified under military specification MIL-PRF-83282D, Amendment 1 and is a direct replacement for MIL-PRF-5606.
Fire resistant hydraulic fluid for aircraft and missile use. Meets all requirements and is qualified under military specification MIL-PRF-83282D, Amendment 1 and is a direct replacement for MIL-PRF-5606.
Fire resistant hydraulic fluid with superior corrosion resistance. Qualified under military specification MIL-PRF-46170D and is intended for use as a direct replacement for MIL-PRF-6083.
Qualified to and meets the requirements of MIL-PRF-87252C. This fluid is identified by NATO Code Number S-1748.
For use on slow-speed sliding surfaces operating at temperatures up to 400°C (752°F) and as an anti-seize compound on threaded parts which operate at temperatures up to 760°C (1400°F).
Mineral based SAE 40 very low ash gas engine lubricant.
Mineral based SAE 40 low ash gas engine lubricant.
Mineral based SAE 40 medium ash gas engine lubricant.
Mineral based zinc and phosphorus free SAE 40 medium ash gas engine lubricant.
Semi-synthetic, high performance SAE 40 spark ignition gas engine lubricant.
Advanced synthetic, high performance SAE 20w/40 gas engine lubricant.

CASTROL RANGE OF INDUSTRIAL LUBRICANTS – OILS

PRODUCT	DESCRIPTION	PERFORMANCE	BASE OIL	PERFORMANCE ADDITIVES	ISO VG (VISCOSITY @ 40°C)	VI (TYPICAL)	UPPER TEMPERATURE LIMIT FOR NORMAL OPERATIONS
TURBINE OILS							
Perfecto T 32 N	Mineral based Turbine Oil	✓	Mineral Oil	R&O	32	102	Refer to PDS
Perfecto T 32 V	Mineral based Turbine Oil	✓	Mineral Oil	R&O	32	104	Refer to PDS
Perfecto T	Mineral based Turbine Oil	✓	Mineral Oil	R&O	32 - 150	102	Refer to PDS
Perfecto X	Mineral based Turbine Oil	✓✓	Mineral Oil	R&O	32 - 68	112	Refer to PDS
Perfecto X-EP	Mineral based Turbine Oil + Antiwear	✓✓	Mineral Oil	AW/R&O	32 - 68	104	Refer to PDS
Perfecto SN	Synthetic Turbine Oil	✓✓✓	PAO	R&O	46	137	Refer to PDS
TRANSFORMER OILS							
Inhibited Transformer Oil	Transformer Oils	✓	Mineral Oil	O	11	-	Refer to PDS
Uninhibited Transformer Oil	Transformer Oils	✓	Mineral Oil	-	11	-	Refer to PDS
STEAM RECIPROCATING OILS							
Cresta SHS	Steam Cylinder Oil	✓	Mineral Oil	-	100	80	-
Cresta VA	Steam Reciprocating Oils	✓	Mineral Oil	Compounded	150 - 680	85	82°C/180°F
HEAT TRANSFER OILS							
Perfecto HT 5	Heat Transfer Fluid	✓	Mineral Oil	-	32	>95	In Sealed systems bulk upto 300°C/572°F
Perfecto HT 12	Heat Transfer Fluid	✓	Mineral Oil	-	100	>95	In Sealed systems bulk upto 300°C/572°F
Perfecto HTF	Heat Transfer Fluid	✓	White Oil	-	15	105	In Sealed systems bulk upto 250°C/482°F
Perfecto LT	Heat Transfer Fluid	✓	Mineral Oil	-	9.5	-	In Sealed systems bulk upto 250°C/482°F
Supertherm 550	Heat Transfer Fluid	✓	Mineral Oil	Dispersant	30	100	In Sealed systems bulk upto 300°C/572°F
Perfecto HTS 16	Synthetic Heat Transfer Fluid	✓✓	Synthetic	-	15.5	-	In Sealed systems bulk upto 350°C/662°F
Perfecto HTS 0801	Synthetic Heat Transfer Fluid	✓✓	Synthetic	-	16.5	-	In Sealed systems bulk upto 350°C/662°F
Perfecto SC 801	Detergent Heat Transfer System Cleaner	✓✓	Mineral Oil	Detergent/Dispersant	250	-	As above system
REFRIGERATION OILS							
Aircol 266	Refrigeration Lubricant	✓	Mineral Oil	-	30	-	-48 (Pour Point)
Aircol 299	Refrigeration Lubricant	✓	Mineral Oil	-	56	-	-36 (Pour Point)
Aircol HC 7P	Refrigeration Lubricant	✓	Mineral Oil	AW & O	8.2	85	-40 (Pour Point)
Aircol HC 10	Refrigeration Lubricant	✓	Mineral Oil	AW & O	9.8	30	-45 (Pour Point)
Aircol AMS 68	Refrigeration Lubricant	✓✓	Mineral Oil	-	68	110	-36 (Pour Point)
Aircol AMX 68	Refrigeration Lubricant	✓✓	Mineral Oil	O	68	102	-30 (Pour Point)
Aircol 2293	Refrigeration Lubricant	✓✓	PAO	-	32	138	<-60 (Pour Point)
Aircol 2294	Refrigeration Lubricant	✓✓	PAO	-	68	147	-60 (Pour Point)
CONCRETE MOULD OILS							
Castcon 51, 55, 59	Concrete Mould Oils	✓	Solvent type	Compounded	3, 6, 9	-	-
ROCK DRILL OILS							
Rock Drill	Rock Drill range	✓	Mineral Oil	EP/AW	46 – 460	95	71°C/160°F
WIRE ROPE OILS (ALSO SEE WIRE ROPE GREASES)							
Molub-Alloy DRL 921	Wire Rope Lubricant	✓✓	Mineral Oil	EP/AW/Solid Lubricants	Brookfield 12,000 cPs	-	-
Molub-Alloy WR 1000	Wire Rope Lubricant	✓✓	Mineral Oil	EP/AW/Solid Lubricants	1000	>95	71°C/160°F
Wire Rope Oil 1911	Wire Rope Lubricant	✓✓	Mineral Oil	EP/AW/Solid Lubricants	985	-	71°C/160°F
PROCESS OILS AND MISCELLANEOUS LUBRICANTS							
Poly-X N 40	Rubber processing oil	✓	Mineral Oil	-	10	-	-
Magna BR	Process Oil	✓	Mineral Oil	-	500	>95	71°C/160°F
Fibrecote 60	Fibreglass Process emulsion	✓	Mineral Oil	Emulsifiers	250	-	-
Calibration Oil 4113	Diesel Injector Test Fluid	✓	Mineral Oil	AW/CI	2.5	-	-
Calibration Oil C	Diesel Injector Test Fluid	✓	Mineral Oil	AW/CI	4.2	-	-
Sugar Dissolving Oil	Sugar Dissolving Oil	✓	Mineral Oil	Emulsifiers	32	95	71°C/160°F
Ultraknit BW 22	Washable Knitting Machine oil	✓✓	Mineral Oil	AW + Emulsifiers	22	>90	-
Spindle Coolant SF	Machine Tool Coolant	✓✓	Glycol	-	-	-	-15 (Pour Point)
Optimol EC Coating	Synthetic oil for electric plug connections	✓✓✓	Synthetic	R&O	400	146	120°C/248°F
Tribol 1895	Synthetic special purpose oils	✓✓✓	Synthetic	-	510	135	-
Tribol 1899	Synthetic special purpose oils	✓✓✓	Synthetic	-	-	-	-

APPLICATION

For the lubrication of steam turbines and compressors where the application involves the compressing of ammonia gas.

Group II based R&O type grade for ammonia compressor in a chemical plant.

Mineral based turbine oil conforming to Industry Norm: BS 489 / DIN 51515 Part 1.

As Perfecto T + complying with above, plus GE 107395 + GE 32568F.

As Perfecto X + additional antiwear.

Synthetic turbine oil offering enhanced product life.

Transformer, switchgear and circuit breaker oil which conforms to the international specification IEC 60296:03 (fully inhibited Oil).

Transformer, switchgear and circuit breaker oil which conforms to the international specification IEC 60296.

For lubrication of steam engine cylinders and valves.

For cylinder lubrication in reciprocating type gas compressors dealing with 'wet' petroleum gases and for lubricating the cylinders and bearings of older-type gas engines.

Heat transfer oil based upon highly refined mineral oil, selected for its high thermal stability, resistance to oxidation and low volatility.

Heat transfer fluid intended for use in the Food and Beverage industries. Formulated using non toxic FDA food grade materials, it is suitable for use where a product meeting FDA 21 CFR # 178.3570 is specified.

Heat transfer oil based upon highly refined mineral oil, selected for its high thermal stability, resistance to oxidation, low volatility and very low temperature fluidity.

Heat Transfer fluid based upon highly refined base stocks and carefully selected additive package to make it suitable as a long life thermic fluid for a wide range of temperature applications.

Synthetic heat carrier fluid recommended for use in pressureless closed heat transfer systems with high operating temperatures.

Synthetic heat carrier fluid recommended for use in pressureless closed heat transfer systems with high operating temperatures.

Detergent system cleaner soluble in mineral and synthetic hydrocarbon fluids for internal cleaning of systems using heat transfer fluids.

Systems using R22 & Ammonia.

Systems using R22 & Ammonia.

Used for domestic refrigerators.

Used for domestic refrigerators.

For systems running on Ammonia (NH3) refrigerant. It is specifically designed for systems where oil is allowed to separate from the refrigerant before the refrigerant passes the evaporator.

For systems running on Ammonia (NH3) refrigerant. It is specifically designed for systems where oil is allowed to separate from the refrigerant before the refrigerant passes the evaporator.

Designed for refrigeration systems using screw type compressors in conjunction with very low evaporation temperatures. They may also be specified for certain systems using reciprocating compressors with high compression ratios and high discharge temperatures. Low miscibility and solubility with R22.

Designed for refrigeration systems using screw type compressors in conjunction with very low evaporation temperatures. They may also be specified for certain systems using reciprocating compressors with high compression ratios and high discharge temperatures. Low miscibility and solubility with R22.

Low viscosity concrete mould release agents giving concrete a smooth, clean and nonporous surface.

Rock Drill range for mining, quarrying, constructions, road works, tunnelling and excavations, with high film strength, reduced friction and the ability to absorb excess water when 'wet air' or wet drilling attachments are present.

Developed specially to address the need for a universal dragline product. Film strength additives and solid lubricants protect against wear and fatigue damage in high tension, sharp bend conditions.

Wire rope lubricant with excellent wetting and penetration to rope inner surfaces with exceptional coverage and protection to outer surfaces. Used mainly in mining on dragline hoist and drag ropes, shovel hoist and crowd ropes, winder and guide suspension cables and crane hoist ropes.

Wire rope lubricant developed for use in open cast and underground mining operations. Suitable for the following applications:- Winder ropes, Dragline hoists, Drag ropes, Shovel hoists, Crowd ropes, Crane hoist ropes.

Napthenic type rubber process oil for the manufacture of tyres, tubes, mats, footwear, moulded and extruded rubber goods.

Paraffinic process oil mainly used for manufacturing, but can be used as a general purpose and circulatory system oil.

Fibreglass Process emulsion.

Calibration and storage oil for diesel fuel injectors, conforming fully with ISO 4113 and Lucas CAV 7-10-106 (now obsolete) specifications.

Calibration and storage oil for diesel fuel injectors, conforming fully with (now obsolete) Lucas CAV 7-10-100 specification.

Developed for the lubrication of sugar packaging machinery. It can be used as a bearing lubricant or slideways where sugar/sugar dust contamination is a problem. Also in continuous mesh filters. It can be easily washed away being readily emulsifiable.

For applications in the knitting industry to meet the increased requirements in terms of high speed and temperatures. It emulsifies quickly in water and can be washed out easily without leaving any residues during the subsequent processing of textiles.

Water based spindle coolant formulated to provide excellent corrosion protection.

Synthetic oil with a wide temperature application range. High protection against corrosion and oxidation guarantees a reliable electric contact between plug connections.

Tribol 1895 is used as a relubrication oil for Molub Alloy 2115 and Molub Alloy 9830 for special applications, where narrow space in bearings does not permit relubrication with the original products (greases). Can also be used in various applications of process industries. Tribol 1899 is used as a cleaning fluid and diluent for Molub Alloy 2115 and Molub Alloy 9830.

Tribol 1899 is used as a cleaning fluid and diluent for Molub Alloy 2115 and Molub Alloy 9830.

CASTROL RANGE OF INDUSTRIAL LUBRICANTS – GREASES

PRODUCT NAME	DESCRIPTION	GREASE PERFORMANCE	THICKENER/ SOAP BASE	BASE OIL	BASE OIL VISCOSITY @40°C
MULTI-PURPOSE HIGH PERFORMANCE					
Longtime Blanc	Multi-purpose grease for high bearing pressures and longterm lubrication	✓✓	Lithium	Mineral	190
Longtime HS 1.5	High Speed Spindle Bearing Grease	✓✓✓	Polymer	Synthetic	46
Longtime PD 0	Rolling and sliding bearing greases with MFT	✓✓✓	Lithium	Mineral	130
Longtime PD 00		✓✓✓			
Longtime PD 1		✓✓✓	Lithium	Mineral	95
Longtime PD 2		✓✓✓			
Molub-Alloy 3036/680-1NG	Lubricating Grease for High Loads	✓✓	Lithium	Mineral	880
Molub-Alloy 3136	Lubricating Grease for High Loads	✓✓	Lithium	Mineral	880
Molub-Alloy 4086/320-1	Rolling and sliding bearing greases with Moly	✓✓	Lithium Complex	Mineral	320
Molub-Alloy 4086/460-2		✓✓			460
Molub-Alloy 4086-0		✓✓	Lithium Complex	Mineral	164
Molub-Alloy 4086-1		✓✓			
Molub-Alloy 4086-2	✓✓				
Molub-Alloy 6040/150-2	Heavy duty Grease for wet environment.	✓✓✓	Calcium Sulfonate	Mineral	150
Molub-Alloy 6040/460-1.5		✓✓✓			460
Molub-Alloy 6282/460-1	Heavy duty Grease for wet environment.	✓✓	Calcium Sulfonate	Mineral	460
Molub-Alloy 6282/460-2		✓✓			
Molub-Alloy 777-1 ES	Rolling and sliding bearing greases with Moly	✓✓	Lithium	Mineral	950
Molub-Alloy 777-2 ES		✓✓			
Molub-Alloy 777 NG		✓✓			
Molub-Alloy 860/150-0 ES	Rolling and sliding bearing greases with Moly	✓✓✓	Lithium Complex	Mineral	150
Molub-Alloy 860/150-1 ES		✓✓✓			
Molub-Alloy 860/150-2 ES		✓✓✓			
Molub-Alloy 860/220-0 ES		✓✓✓			220
Molub-Alloy 860/220-1 ES		✓✓✓			
Molub-Alloy 860/220-2 ES		✓✓✓			
Molub-Alloy 860/460-1 ES		✓✓✓			460
Molub-Alloy 860/460-2 ES		✓✓✓			
Molub-Alloy 870-2		Heavy duty Grease			✓✓
Molub-Alloy 9030-1	Heavy duty Polyurea grease	✓✓	Polyurea	Mineral	486
Molub-Alloy 9141-1	High temperature heavy duty grease	✓✓	Lithium/Aluminum Complex	Mineral	680
Molub-Alloy BRB 572	Multi-service bearing grease	✓✓	Lithium	Mineral	143
Olista Longtime 1	Rolling and sliding bearing greases with MFT	✓✓	Lithium	Mineral	260
Olista Longtime 2		✓✓	Lithium	Mineral	272
Olista Longtime 3		✓✓	Lithium	Mineral	285
Olista Longtime 3 EP		✓✓	Lithium	Mineral	387
Olit 00	Semi-fluid grease for centralized lubricating systems	✓✓	Lithium	Mineral	145
Olit 2 EP	Extreme Pressure Multipurpose grease	✓✓	Lithium	Mineral	100
Olit CLS	Water-resistant grease	✓✓	Lithium/Calcium	Mineral	100
Olit CLS 0	Water-resistant semi-fluid greases	✓✓			
Olit CLS 00	Water-resistant semi-fluid greases	✓✓			
Olit CLS 000	Water-resistant semi-fluid greases	✓✓			
Optipit	Rolling and sliding bearing greases with MFT	✓✓✓	Lithium	Mineral	1350
Optitemp SW 1	High performance grease for Wind turbine.	✓✓✓	Lithium Complex	PAO	460
Optitool EL 0	High performance grease with MFT	✓✓	Polyurea	Mineral	140

NLGI GRADE	Drop Point °C	TEMPERATURE APPLICATION RANGE °C	ADDITIVES	APPLICATION
2	190	-25 +130 -13 +266	EP/AW	Designed to be used in the food and beverage industries especially in wet applications, conveyor tracks, canning and bottling plants, labelling machines, highly loaded joints and lubrication of tubular tracks.
1.5	>155	-40 +120	EP/AW	Designed with a novel thickener-technology. It has excellent mechanical and shear stability and extraordinary resistance against water and humidity as well as metalworking fluid emulsions. Designed to be used in extreme fast running roller and slide bearings (spindle-bearings) under hostile environments.
0	NA	-40 +140	MFT	Designed for long-term/life-time lubrication, even under the most difficult operating conditions, of highly loaded rolling and sliding bearings. Also suitable for spreader rolls, steel mill roll neck bearing, and for bearings with changing rotational directions or slewing movements. Can be used as a semi-fluid grease lubricant in gears such as flange, drum-type and worm gears.
00	NA	-40 +140		
1	190	-35 +140	MFT	Designed for long-term/life-time lubrication, even under the most difficult operating conditions, of highly loaded rolling and sliding bearings. Also suitable for spreader rolls, steel mill roll neck bearing, and for bearings with changing rotational directions or slewing movements.
2	200	-35 +140		
1	>180	-20 +120	EP/AW	Designed for high loads under unfavourable ambient conditions. Used in rolling and sliding bearings joint couplings, running gears, cams as well as general grease lubricating points especially where loads are high and speeds low.
1	>180	-20 +120	EP/AW	Designed for high loads under unfavourable ambient conditions. Used in rolling and sliding bearings joint couplings, running gears, cams as well as general grease lubricating points especially where loads are high and speeds low.
1	>260	-20 +150	Solids	Designed for industries with applications most commonly requiring the heavy-duty, all-weather capabilities of this range including steel, mining, logging, chemical and construction. It is particularly useful where conditions require sealing against outside contaminants such as dust and water.
2		0 +150		
0	NA	-30 +150	Solids	Multipurpose greases commonly used as plant wide grease. Used effectively in plain, journal and antifriction bearings.
1	>260	20 +150		
2		-10 +150		
2	>260	-10 +150	EP/AW	Used in either journal or antifriction bearings in the most demanding industrial applications under extreme environmental conditions. Typical applications are bearings that are under heavy water contamination as encountered in steel rolling mills and continuous casters.
1.5				
1	>260	-10 +150	EP/AW	Used in either journal or antifriction bearings in the most demanding industrial applications under extreme environmental conditions. Typical applications are bearings that are under heavy water contamination as encountered in steel rolling mills and continuous casters. Also used as a coupling grease.
2				
1	>180	-30 +120	Solids	High performance grease designed to operate in plain, journals, and anti-friction bearings under low and medium speeds and heavy loads. For use in industries such as metals, mining, logging, chemical and construction. Typical applications include ball and roller bearings, bushings, slides, screws, and general lubrication where loads may be heavy and speeds low. Molub-Alloy 777 ES 1 is Bucyrus certified grease.
2				
1.2	>190	-30 +120	Solids	High performance grease designed to operate in plain, journals, and anti-friction bearings under low and medium speeds and heavy loads. For use in industries such as metals, mining, logging, chemical and construction. Typical applications include ball and roller bearings, bushings, slides, screws, and general lubrication where loads may be heavy and speeds low.
0	>260	-30 +150	Solids	High performance grease designed for use in heavy duty industrial applications. These include bearings near hot ingots, soaking pits, and reheat furnaces to lubricate pit cover carriages, mill stand screws, slipper couplings, roll bearings, manipulators and guide rolls for continuous casters, mill rolls and couplings.
1		-20 +150		
2		-10 +150		
0		-30 +150		
1		-10 +150		
2		-10 +150		
1		-10 +150		
2		0 +150		
2	182	-10 +120	Solids	Developed for large, slow moving, and heavily loaded rolling element bearings. Initially designed for rolling element bearings with outer diameter 600 to 1000 mm and running at 5 rpm, like used in cane sugar rollers.
1	284	-10 +150	Solids	Excellent for long-term lubrication in hot and wet environments such as steel mills.
1	>200	-20 +140	Solids	For applications in steel and heavy industries, specially in hot rolling mills and continuous caster bearing lubrication. Typical applications are sliding and rolling bearings of low to moderate speed in the steel industry.
2	>180	-30 +100	EP/AW	A bearing grease, applicable for normal and elevated temperature. It's used in all types of bearings (rolling, ball, roller bearings), including precision built. It is also used in general application, including journal bearings.
1	>180	-30 +140	MFT	For long-term lubrication and for heavy mechanical loads such as extremely high pressures, vibrations and shock loads. Extremely adherent grease. Typical applications: highly loaded sliding and rolling bearings, open gearwheels and worm gears at low speeds.
2	>180	-30 +140	MFT	
3	>185	-25 +140	MFT	For long-term lubrication and for heavy mechanical loads such as extremely high pressures, vibrations and shock loads. Extremely adherent grease. Typical applications: highly loaded sliding and rolling bearings, open gearwheels and worm gears at low speeds. OLISTA LONGTIME 3 is ideal for wheel bearings (tapered roller bearings).
3	>185	-25 +140	MFT	
00	181	-35 +100	EP/AW	Suited for applications subjected to extreme conditions such as open air, humidity, dust and vibrations. Typical applications: highly loaded sliding and rolling bearings, joints, tie rod joints, flexible shafts.
2	195	-35 +130	EP/AW	Typical applications: all types of highly loaded rolling and sliding bearings, joints and steering tie rod joints, guides of lifting devices, sliding and bed ways, flexible shafts, water pumps, low-maintenance lubrication of wheel bearings in cranes, high-lift trucks.
2	>140	-30 +120	EP/AW	Applications under difficult operating conditions, i.e. lubricating points exposed to weather, humidity, dust and high loads. As underwater grease for dredgers, lifting devices etc. in gravel plants and sewage treatment plants. For bearing lubrication in the beverage and sugar industries. In progressive centralized lubricating systems even under high working pressures above 350 bar.
0				
00		-40 +100	EP/AW	For use in central lubrication systems suited for semi-fluid greases. In gear units and gear motors lubricated with semi-fluid greases. Applications under unfavorable conditions (high humidity, in the presence of water).
000				
2.5	>250	-10 +140	MFT	Developed for lubrication of anti-friction and plain bearings requiring a high oil viscosity and operating in wet and dusty atmospheres. For use in industries/applications such as mining, metals, tube mills and equipment exposed to sea water e.g. in harbours, ships and drilling platforms.
1.5	>260	-40 +180	EP/AW	Recommended for tough industrial applications especially lubrication of yaw bearings, main bearing and pitch adjustment in Wind Turbines. Also recommended for use in steel and paper mills.
0	209	-35 +150	EP/AW/MFT	Long-term and lifetime lubrication under difficult mechanical conditions such as vibrations and shock loads. Typical applications: small gears of electric tools, adjustable mechanisms, gears of hedge clippers and small gear motors.

CASTROL RANGE OF INDUSTRIAL LUBRICANTS – GREASES

PRODUCT NAME	DESCRIPTION	GREASE PERFORMANCE	THICKENER/ SOAP BASE	BASE OIL	BASE OIL VISCOSITY @40°C
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MULTI-PURPOSE HIGH PERFORMANCE (CONT.)

Tribol 3020/1000-0 Tribol 3020/1000-00 Tribol 3020/1000-000 Tribol 3020/1000-1 Tribol 3020/1000-2	Multi-purpose high performance grease with high Viscosity base oil and TGOA	✓✓✓ ✓✓✓ ✓✓✓ ✓✓✓ ✓✓✓	Lithium	Mineral	1000
Tribol 3030/100-2	Multi-purpose high performance grease	✓✓	Lithium	Mineral	100
Tribol 3785/220-1.5	Multi-purpose high performance grease	✓✓✓	Lithium	Mineral/PAO	220
Tribol 4020/220-1 Tribol 4020/220-2 Tribol 4020/460-1 Tribol 4020/460-2	Multi-purpose high performance grease	✓✓✓ ✓✓✓ ✓✓✓ ✓✓✓	Lithium Complex	Mineral	220 460
Tribol 4022	High-performance grease for pellet presses	✓✓	Lithium Complex	Mineral	460
Molub-Alloy BG 47/1600-1.5	Sugar lubricant	✓✓	Lithium Complex	PAO	1500 cSt

MULTI-PURPOSE

Spheerol AP	General purpose grease	✓	Lithium	Mineral	100
Spheerol CL 1	General Purpose Water Resistant Grease	✓	Calcium	Mineral	300
Spheerol CLX 2	High Performance Water Resistant Grease	✓	Calcium Complex	Mineral	110
Spheerol EPL	MultiPurpose EP Grease	✓	Lithium	Mineral	150 - 200
Spheerol EPL 00	Semi-Fluid Multi-Purpose EP Grease	✓	Lithium	Mineral	150 - 220
Spheerol EPL 3	Multi-Purpose EP Grease	✓	Lithium	Mineral	150 - 220
Spheerol EPLX	General purpose extreme pressure grease	✓	Lithium Complex	Mineral	460
Spheerol EPLX 200-1	General purpose extreme pressure grease	✓	Lithium Complex	Mineral	200
Spheerol EPLX 200-2	General purpose extreme pressure grease	✓	Lithium Complex	Mineral	200
Spheerol EPLX-M 2	Special purpose grease	✓	Lithium Complex	Mineral	320
Spheerol FG 00 EP	Semi-Fluid EP Grease	✓✓	Polymer	Mineral	900
Spheerol HTB	Multi-Purpose Bearing Grease	✓✓	Inorganic	Mineral	460
Spheerol LC 2	Multi-Purpose High Temperature Grease	✓	Lithium Complex	Mineral	220
Spheerol LCT 321	Heavy Duty High Temperature Grease	✓✓	Lithium Complex	Mineral	390
Spheerol LCT 682	Heavy Duty High Temperature Grease	✓✓	Lithium Complex	Mineral	735
Spheerol LCX 222	Multi-Purpose High Temperature Grease with Water Resistant Polymer	✓✓	Lithium Complex	Mineral	220
Spheerol LCX 6002	Heavy Duty High Temperature Grease with Hydroactivated Technology	✓✓	Lithium Complex	Mineral	220
Spheerol LMM	Multi-Purpose Moly Grease	✓	Lithium	Mineral	150
Spheerol SY 1002	Synthetic, High Temperature Grease	✓✓✓	Lithium Complex	Synthetic	100
Spheerol SY 1501	Synthetic, High Temperature Grease	✓✓✓	Lithium Complex	Synthetic	150
Spheerol SY 2202	Synthetic, Multi-Purpose, High Temperature Grease	✓✓✓	Lithium Complex	Synthetic	220
Spheerol SY 4600	Semi-Fluid, Synthetic High Temperature Grease	✓✓✓	Lithium Complex	Synthetic	480
Spheerol SY 4601	Synthetic, High Temperature Grease	✓✓✓	Lithium Complex	Synthetic	460
Spheerol SY-PM	Synthetic Heavy Duty Grease	✓✓✓	Lithium Complex	Synthetic	460
Spheerol 4807	Special purpose grease	✓✓	Calcium Complex	Mineral	50-70
Ultratak Grease 2	Heavy Duty Grease	✓✓✓	Lithium Complex	Mineral	500
BTX Grease 2	Heavy Duty, High Temperature Grease	✓✓	Lithium Complex	Mineral	500
CP Grease	Semi-Fluid Spindle Lubricant for Cotton and Corn Pickers	✓✓	Lithium	-	-
LYT Grease 1	Heavy Duty Drill Rod & Thread Lubricant	✓✓✓	Inorganic	Mineral	-
Langzeitfett	Special purpose grease	✓✓	Lithium	Mineral	100
MGX Grease	Heavy Duty Mining Grease	✓✓	Lithium	Mineral	680
SBX Grease 1 SBX Grease 2	Heavy Duty Mining Grease	✓✓ ✓✓	Lithium Complex	Mineral	1000

NLGI GRADE	Drop Point °C	TEMPERATURE APPLICATION RANGE °C	ADDITIVES	APPLICATION
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0	>160	-40 +120	TGOA	Designed for very heavy-duty service in adverse environments commonly found in the processing of primary metals as well as in cement, construction, and mining industries. Typical applications: ball and roller bearings, bushings, slides, couplings (with the exception of high precision couplings), and general lubrications, especially where loads may be quite high and speeds low.
00	NA			
000	NA			
1	>180			
2	>180	-30 +120	TGOA	Designed for normal service and can be used as multipurpose grease, especially for fast moving bearings. Excellent multiservice grease for all types of antifriction bearings.
1.5	>180	-40 +140	EP/AW	Applicable in antifriction and plain bearings, as well as general lubricating points, especially in those cases where a high resistance against process water or dust is required. Mainly applied in the paper and the food and beverage industry, as well as in the automotive, steel and mining industry.
1	>240	-30 +140	TGOA	Multi-service grease for heavy duty applications of plain and anti-friction bearings. Commonly used as a plant wide lubricant in the automotive industry as well as industries where the preference is for a high performance non-dark grease.
2				
1		-20 +140		
2				
1	>240	-30 +150	TGOA	High-performance grease for antifriction bearings. Ideal for roller bearings in wood pellet presses.
1.5	250	-20 +140	EP/AW	Specifically designed for sugar mill brasses, its characteristics mean that it is also suitable for any other slowly rotating heavily loaded journal bearings.

2, 3	>180	-20 +120	R & O	General purpose plain and rolling element bearing grease for use in both Automotive and Industrial applications. Suitable for use in high speed bearing such as those used in electric motors, fans or alternators where operating temperatures don't exceed the range stipulated.
1, 2, 3	>90	-25 +60	R & O	Primarily recommended for chassis lubrication with a higher base oil viscosity enabling greater resistance to water in swivels and shackle where temperatures do not exceed 60°C.
2	>260	-20 to + 140	EP/AW	High performance water resistant grease suitable for use in a variety of applications where a combination of high temperatures and moisture are prevalent.
0, 1, 2	>160	-20 +120	EP/AW	General purpose greases designed for plant-wide lubrication.
00	NA	-30 +100	EP/AW	A multi-purpose semi-fluid EP grease suitable for use in Centralised Lubrication systems and enclosed gearboxes.
3	>180	-20 +120	EP/AW	Multi-Purpose EP Grease suitable for a wide variety of applications across all market sectors requiring an NLGI 3 EP product.
1, 2	>260	-20 +150	EP/AW	Greases designed for plant-wide lubrication with high film strength and wide operating range.
1	>260	-30 +150	EP/AW	High performance lithium complex grease with excellent thermal and mechanical stability suitable for use in a wide range of both Auto and Industrial applications including plain and rolling element bearings.
2	>260	-30 +150	EP/AW	High performance lithium complex grease with excellent thermal and mechanical stability suitable for use in a wide range of both Auto and Industrial applications including plain and rolling element bearings e.g. wheel bearings.
2	>260	-30 +175	EP/AW + MoS2	Lithium complex, extreme pressure grease intended for a wide range of applications. Recommended for moderate speed paper/steel mill bearings and construction and mining equipment.
00/000	N/A	-10 +100	R & O, EP/AW	Developed for use in enclosed industrial spur, bevel, helical and worm gear applications.
1, 2	NA	upto 140	R & O	Suitable for the lubrication of a wide range of plain and rolling element bearings, especially in heavy duty applications operating for extended periods at high temperatures.
2	>260	-30 + 140	EP/AW	Lubricating highly stressed anti-friction bearings and heavy duty rollers running at slow or medium rotation speeds, under high loads and with occasional impact-type loads.
0.5	>260	-20 + 140	EP/AW	Developed for use in heavy industry where excellent water resistance and high load carrying without the use of solid lubricants are a particular requirement.
2	>260	-10 +140	EP/AW	Developed for use in heavy industry where excellent water resistance and high load carrying without the use of solid lubricants are a particular requirement.
2	>260	-15 +140	EP/AW	Suitable for use in a wide range of applications across both Auto and Industrial markets including environments involving heavier loads, vibration and exposure to water.
2	>260	-10 +140	EP/AW	Offers superior levels of performance for both on and off-highway commercial vehicles, construction vehicles and associated equipment that have the potential to operate in arduous, wet conditions. It is suitable for slow speed, highly loaded plain and rolling element bearings and applications exposed to high levels of vibration, sliding and reciprocating motion such as bucket pins, bushes, joints and hinges.
2	>180	-20 + 120	EP/AW/Solids	For use in automotive bearing and chassis components including slow to medium speed bearings and those applications involving reciprocation and/or sliding motion including flexible joints, pivot pins and splined shafts where a grease fortified with molybdenum disulphide is required.
2	>260	-40 +140	EP/AW	Synthetic, high temperature grease developed for use in rolling element/anti-friction bearings where operating speeds are high and loads relatively low.
1	>260	-40 +140	EP/AW	Primarily developed for Automotive and Industrial applications operating at very slow speeds, high loads and high temperatures.
2	>260	-40 +150	EP/AW	Synthetic, multi-purpose EP grease recommended for a wide range of heavy duty Automotive and Industrial applications where a combination of excellent oxidation stability and low temperature mobility are equally relevant.
00	>260	-40 +100	EP/AW	Synthetic, semi-fluid EP grease primarily recommended for use in grease filled gear boxes where operating conditions exceed the capability of more conventional, mineral based semi-fluid greases.
1.5	>260	-40 +140	EP/AW	Synthetic EP grease, recommended for arduous Industrial applications involving low to medium operating speeds, high loads and a wide operating temperature range.
1.2	>260	-40 +140	EP/AW	Particularly suited for applications where temperatures and load are high and there is a need for excellent protection against corrosion.
1.5	>200	-20 +60	EP	Meets the requirements of TL B 1400.1,2 as an annular springbuffer grease. This special grease is for the lubrication and corrosion protection of friction spring type annular springs, which are primarily used by the railway industry in plunger buffers.
1.5	>200	-	EP/AW	Unique synthetic polymer combines with lithium complex thickener to provide an extremely water resistant Grease for slow speed, highly loaded applications such as plain & rolling element bearings, ball joints & bucket pins.
2	>260	-35 +175	EP/AW, Polymer	Developed for use in a wide variety of heavy duty industrial and mining application including plain and rolling element bearings, chassis point, joints and bucket pins where operating conditions may also involve vibration and water ingress.
00	N/A	-25 +100	-	Developed for use on the spindles of cotton picker and corn picker machinery.
1	>260	-	EP/AW/Solids	Heavily loaded with solid lubricant, provides excellent anti-seize properties making it suitable for thread lubrication. Also suitable as a drill rod grease. Other mining applications include slide ways and the lubrication of bits and couplings.
1	>180	-10 +90	R & O, EP/AW	Applications include curved teeth couplings.
2	>180	-	EP/AW /Solids	Developed for slow moving applications in the mining and excavation industries including heavily loaded pins on wheel loaders, scrapers, excavators and shovels.
1	>230	-	EP/AW/Solids	A multi-purpose, high temperature extreme duty grease. This product has been developed primarily for off-highway construction & mining equipment where excessive loads and as a consequence, elevated temperatures may regularly be experienced.
2		-		

CASTROL RANGE OF INDUSTRIAL LUBRICANTS – GREASES

PRODUCT NAME	DESCRIPTION	GREASE PERFORMANCE	THICKENER/ SOAP BASE	BASE OIL	BASE OIL VISCOSITY @40°C
HIGH TEMPERATURE					
Firetemp XT 2	Rolling and sliding bearing grease for increased temperatures	✓✓✓	Polyurea	PAO	270
Inertox Heavy	Rolling and sliding bearing grease for extremely high temperatures	✓✓✓	PTFE	PFPE	150
Inertox Light	Rolling and sliding bearing grease for extremely high temperatures	✓✓✓			440
Inertox LTB 2	Rolling and sliding bearing grease for extremely high temperatures	✓✓✓	PTFE/Bentonite		341
Inertox Medium	Rolling and sliding bearing grease for extremely high temperatures	✓✓✓	PTFE	PFPE	500
Inertox Medium 150	Rolling and sliding bearing grease for extremely high temperatures	✓✓✓			160
Molub-Alloy 1000	Rolling and sliding bearing grease for high temperatures	✓✓✓	Organic sodium	Synthetic	540
Molub-Alloy 2115-0	Rolling and sliding bearing grease for extremely high temperatures	✓✓✓	PTFE	PFPE	510
Molub-Alloy 2115-2	Rolling and sliding bearing grease for extremely high temperatures	✓✓✓	PTFE	PFPE	500
Molub-Alloy 9990 HT	High temperature grease	✓✓✓	Polyurea	Synthetic	250
Optitemp HT 2	Rolling and sliding bearing grease for increased temperatures	✓✓✓	Inorganic	Mineral	460-680
Optitemp HT 2 EP	Rolling and sliding bearing grease for increased temperatures	✓✓✓			
Optitemp PS 1	High temperature grease	✓✓	Polyurea	Mineral	460
Optitemp PS 2	High temperature grease	✓✓	Polyurea	Mineral	460
Thermogrease 2	Synthetic High temperature grease	✓✓✓	Organic	Synthetic	125
Thermogrease F	Synthetic High temperature grease	✓✓✓			127
Tribol 4747/220-2	High temperature grease	✓✓✓	Lithium Complex	PAO/Ester	220
Tribol 4541	Wide temperature grease	✓✓✓	Lithium Complex	PAO	150
Viscotemp 2	Synthetic High temperature grease	✓✓	Organic	PAO/Ester	120
Spheerol BNS 2	Non-Melting, Multi-Purpose Bearing Grease	✓✓	Inorganic	Mineral	150 - 220
Spheerol HTM 1	Multi-Purpose High Temperature Grease	✓✓	Inorganic	Mineral	460
Spheerol SY-HT 2	Synthetic, Multi-Purpose, Grease	✓✓✓	Inorganic	Synthetic	100
LOW TEMPERATURE					
Molub-Alloy 243 Arctic	Plain and anti-friction bearings operating in freezing environment	✓✓✓	Calcium	Mineral/Synthetic	13
Molub-Alloy 6780	Wide temperature bearing grease	✓✓✓	Lithium	Mineral/PAO	130
Optitemp TT 1	Extreme pressure low temperature grease	✓✓✓	Lithium/Inorganic	Synthetic	15/22
Optitemp TT 1 EP	Extreme pressure low temperature grease	✓✓✓			
Spheerol SLC 2	Low temperature and high speed grease	✓✓	Lithium/Calcium	Synthetic	32
Spheerol TN	Speciality Low Temperature Grease	✓✓	Anhydrous Calcium	Synthetic	50

NLGI GRADE	Drop Point °C	TEMPERATURE APPLICATION RANGE °C	ADDITIVES	APPLICATION
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2	280	-25 +180	EP/AW	Designed for rolling and sliding bearings at normal to medium peripheral speeds and high operating temperatures in applications such as heated bearings of dry calenders and dry cylinders, fan bearings, conveyor systems in paint lines, autoclaves, baking ovens and continuous-flow drying ovens.
2	-	-25 +260	Solids	Designed for universal long-term application in anti-friction and plain bearings under hostile ambient conditions, and is inert to most corrosive and/or other aggressive media. Designed for high temperature anti-friction and plain bearings requiring extended re-lubrication intervals in hostile conditions such as in paint drying lines, film stretching machines, textile tenter frames and ceramic industry oven carriages. Also for high vacuum chamber seals and friction points.
0-1	-			
2	-	-25 +260	Solids	See Inertox Heavy. Also Inertox Medium is approved for application in oxygen fittings and gas devices.
2	-			
2	-	-25 +260	Solids	See Inertox Heavy. Also Inertox Medium is approved for application in oxygen fittings and gas devices.
2	-			
1	> 260	-40 +230	Solids	Developed for elevated temperature bearings experiencing heavy and shock loading, such as in paint oven conveyor bearings, slides and bushings. Also for cement rotary kilns as a gas-seal lubricant to minimise hot gas leakage.
0		-20 +250	EP/AW	Developed for extended service in oven conveyor bearings. Applications include paint drying ovens, textile tenting frames, and similar service where minimum re-application and drip-free performance is required.
2		-20 +250	EP/AW	Developed for extended service in oven conveyor bearings. Applications include paint drying ovens, textile tenting frames, and similar service where minimum re-application and drip-free performance is required.
2	> 260	-20 +200	EP/AW	A synthetic roller bearing grease designed for the lubrication of bearings in conveyor lines at very high temperatures. It is particularly suitable for applications in enamel drying stoves, textile stretchers or similar applications where low lubricant consumption and non-dripping lubrication is essential.
2	>300	-20 +160	EP/AW	High performance grease for long-term lubrication of rolling and sliding bearings at high operating temperatures as well as at normal or medium bearing pressures. Typical applications: thermally loaded rolling and sliding bearings such as fan bearings in the textile, wood, plastics and food industries as well as in stove furnaces of the automotive industry, steam-heated calender or drying cylinder bearings, as sealing grease for labyrinth seals at high temperatures and application in slightly acidic or alkaline atmospheres.
			EP/AW/MOS2	
1	> 240	-25 +160	EP/AW	Application in sterilizers in the food and beverage industries, eccentric presses, forging presses, continuous casting plants calender bearings and bearings in conti presses in the wood industry.
2	> 270	-25 +161	EP/AW	Application in sterilizers in the food and beverage industries, eccentric presses, forging presses, continuous casting plants calender bearings and bearings in conti presses in the wood industry.
2	> 300	-15 +200	Solids	A black, fully synthetic high-temperature grease for the lubrication of rolling and sliding bearings. Typical applications: rolling and sliding bearings subjected to high pressures and temperatures, fan bearings of textile machines, bearings of heated calenders and drying cylinders, bearings of baking ovens and kilns, grease lubrication of flat and bottle glass machines.
00				A black, fully synthetic high-temperature grease for the lubrication of rolling and sliding bearings. Typical applications: especially for the relubrication of bearings which were initially filled with CASTROLTHERMOGREASE 2 to remove existing solid deposits.
2	> 250	-20 +160	TGOA	Designed as a multi-service lubricant for heavy-duty applications of rolling and sliding bearings for temperatures up to 160°C (peak temperatures up to 180°C). Should be used when loads are moderate to heavy and speeds are slow to moderate.
1	> 260	-40 +150	EP/AW	A wide temperature grease designed to extend the service life of bearings when loads are moderate to heavy, temperatures are elevated and speeds are low to moderate. This grease matches the rugged service requirements associated with mills and plants producing engineered woods, primary metals, castings, cement, glass and paper.
2	> 300	-20 +220	EP/AW	Fully synthetic high temperature grease for lubrication points constantly exposed to extremely high temperatures. Typical applications: rolling and sliding bearings as well as grease-lubricated sliding surfaces in the high temperature range, fan bearings in hot air streams, calender bearings, baking plants and continuous-flow driers, overhead conveyors of painting lines subjected to chemicals.
2	>300	-20 +140	R & O, Mild EP/AW	Suitable for the lubrication of a wide variety of plain and rolling element bearings operating at high temperatures such as those on carriages used in drying or hardening tunnel ovens, cranes in foundries and hot air blowers.
1	NA	-10 +140	R & O/MoS2	The lubrication of plain and rolling element bearings in applications such as oven conveyor or kiln bearings (product contains MoS2) operating at low speeds and high temperatures or under cyclic conditions from ambient to high.
2	>300	-20 + 150	EP/AW	Synthetic grease for the lubrication of plain and rolling element bearings in industrial applications where extended periods of operation at high temperatures is likely to be frequent.

1-2	140	-54 +80	Solids	Intended for use in plain and anti-friction bearings operating in freezing environments down to -65°F (-54°C). It is designed to meet the performance requirements of MIL-G-10924C specification.
1	> 120	-40 +120	Solids	Used for bushings and bearings of draglines, shovels, drills, mobile equipment, and various mill applications. It is certified to Bucyrus International SD 4711 multi-purpose bearing grease specification.
1	> 300	-60 +120	MFT	A high performance greases for applications with wide temperature ranges. Especially suited for rolling and sliding bearings with medium bearing pressures. Typical applications: rolling and sliding bearings, clutch bearings and wheel hubs, high speed bearings. Also available in spray cans.
	243		MFT/MOS2	
2	>190	-	EP/AW	Designed for lubrication of rolling and sliding bearings, small gears, high rpm applications.
2	>140	-40 +100	R & O	Low temperature calcium grease developed for the lubrication of small, on-car Automotive components e.g. door locks, windscreen wipers, window winders as well as joints and bearings operating below 100°C. Approved by Renault & Peugeot.

CASTROL RANGE OF INDUSTRIAL LUBRICANTS – GREASES

PRODUCT NAME	DESCRIPTION	GREASE PERFORMANCE	THICKENER/ SOAP BASE	BASE OIL	BASE OIL VISCOSITY @40°C
OPEN GEAR					
Molub-Alloy 3710-0/00	Open Gear Lubricant	✓✓✓	Lithium	Mineral/Synthetic	2100
Molub-Alloy 8031/1500	Heavily loaded open gear grease	✓✓✓	Inorganic	Mineral	1600
Molub-Alloy 8031/1500-00		✓✓✓			1500
Molub-Alloy 8031/2200		✓✓✓			2200
Molub-Alloy 8031/3000		✓✓✓			3000
Molub-Alloy 8031/3000-00		✓✓✓			
Molub-Alloy 8031/3000-1		✓✓✓			
Molub-Alloy 8031/6000		✓✓✓			6000
Molub-Alloy 882 EP Heavy	Heavy duty open gear grease	✓✓	Inorganic	Mineral	285
Molub-Alloy 9002 Heavy	Open gear grease	✓✓	Lithium	Mineral	718
Molub-Alloy 936 SF Arctic	Open gear grease	✓✓✓	Lithium	Mineral	226
Molub-Alloy 936 SF Heavy	Open gear grease	✓✓✓			2030
Molub-Alloy 936 SF Heavy A	Open gear grease	✓✓✓			1890
Molub-Alloy 936 SF Light	Open gear grease	✓✓✓			687
Molub-Alloy 936 SF Medium	Open gear grease	✓✓✓			906
Molub-Alloy 936 SF NG	Open gear grease	✓✓✓			2200
Molub-Alloy 936 WT 680	Wide temperature open gear grease	✓✓✓			Lithium
Molub-Alloy 958 SF	Open gear grease	✓✓✓	Lithium	Mineral/Synthetic	600
Molub-Alloy 968 SF Heavy	Open gear grease	✓✓✓	Lithium	Mineral	978
Molub-Alloy 968 SF Medium	Open gear grease	✓✓✓	Lithium	Mineral	647
Molub-Alloy 9790/2500-0	Open gear grease	✓✓✓	Inorganic	Mineral	2500
Molub-Alloy 9790/2500-1	Open gear grease	✓✓✓	Inorganic	Mineral	2500
Molub-Alloy OG-RI Compound	Open Gear Running- in compound	✓✓✓	Inorganic	Mineral	1000
Optitemp OG 0	Open gear grease	✓✓	Aluminum Complex	Mineral	420
Tribol 5000	Open gear grease	✓✓✓	Aluminum Complex	Mineral	490
Viscogen 0	Open gear grease with MFT	✓✓	Aluminum Complex	Mineral	150
Viscogen 4	Open gear grease with MFT	✓✓	Lithium	Mineral	320

NLGI GRADE	Drop Point °C	TEMPERATURE APPLICATION RANGE °C	ADDITIVES	APPLICATION
0-00	NA	-30 +100	EP/AW	A heavy-duty lubricant formulated for open gear mill applications. It may be used in both raw and finish mill operations such as those found in coal, cement, copper and phosphate mills as well as in ball or rod mills.
0	NA	-20 +100	EP/AW	Recommended for use in open gear applications in cement, mining and any other industries requiring anti-scuff and anti-wear protection and where no product build-up is desired. For open gears, screw type actuators and low to moderate velocity bushings and bearings equipped with centralised or sump type lubrication systems.
00	NA		EP/AW	
00	NA		EP/AW	
0	NA	0 +120	EP/AW	
00	NA			
1	NA			
00	NA			
1.5	> 260	-20 +150	Solids	Typical applications include machine ways and guides, transfer slides, acme threads, gear racks and open gear drives.
0-1	NA	-10 +80	Solids	Designed to give maximum protection to open gears and slides on large draglines and shovels while minimising potential pollutants to the environment. Mining applications include lubrication of shovels and draglines, on all types of open gears, rails and rollers, bushings, racks and pinions, dipper sticks and other slides.
00	NA	-35 +50	Solids	Open gear lubricant specifically formulated for extreme cold operating conditions and for use on heavy duty equipment in mining. Mining applications include all types of open gears, rails and rollers, racks and pinions, dipper sticks and other slides on shovels and draglines.
0-1	NA	0 +80		Molub-Alloy 936 SF are suitable for use on all types of open gears, rails and rollers, racks and pinions, dipper sticks and other slides on shovels and draglines. It is certified to Bucyrus International SD 4713 specification for open gear lubricants.
0-1	NA	-10 +80		
0	NA	-20 +80		
0	NA	-10 +80		
0	NA	-5 +80		Molub-Alloy 936 SF are suitable for use on all types of open gears, rails and rollers, racks and pinions, dipper sticks and other slides on shovels and draglines.
0.5	NA	-40 +60	Solids	Formulated for extreme cold operating conditions and for use on heavy duty equipment in mining and industrial service. Mining applications include all types of open gears, rails and rollers, racks and pinions, dipper sticks and other slides on shovels and draglines. It is certified to Bucyrus International SD 4713 open gear specification.
1	> 190	-15 +90	Solids	For applications on large draglines, shovels, drills, and mill applications both raw and finish mill operations, such as those found in cement, copper, and phosphate mills, and in either ball or rod mills.
1	> 180	-10 +90	Solids	Typical applications: open gears, racks and pinions, rails and rollers, seawater gate spindles, screw conveyor bearings, salt dredging applications, Shipyard applications, Large Journal and Antifriction Bearings, Low Velocity Semi-Enclosed Gears, Offshore applications (drill heads) - Jacks (Drills).
0	NA	-20 +90	Solids	As a multiservice lubricant on shovels, walking draglines, drills and haul trucks on applications such as open gearing, racks and pinions, rails and rollers, large Journal and Antifriction Bearings, Low Velocity Semi-Enclosed Gears.
0	NA	-20 +90	EP/AW	For use on large draglines, shovels, drills and mill applications. Typical applications: Mill & kiln open gears, racks & pinion, dipper sticks, rails & rollers, large journal bearings, large slow-speed rolling bearings.
1	> 190	-20 +90	EP/AW	For use on large draglines, shovels, drills and mill applications. Typical applications: Mill & kiln open gears, racks & pinion, dipper sticks, rails & rollers, large journal bearings, large slow-speed rolling bearings.
00	NA	-10 +80	Solids	Designed to facilitate the dressing and running-in of open gearing and other machinery operating in heavy-duty service requiring profiling.
0	> 135	-30 +120	Solids	Applied as spray lubricant for open gears - especially in rotary tubular kilns and tube mills, crown gears of construction vehicles and other heavy-duty machines.
0	NA	-20 +120	TGOA	High-performance open gear grease. Developed for application in cement, mining and other heavy industries. Typical applications: open gears, wire ropes and similar applications.
0	NA	-20 +125	MFT	Typical applications: open gearings of overburden dredgers, gears and live rings of cranes and excavators, gear rims on winches and crushers, transmission gear wheels and threaded spindles of heavy crank presses, highly loaded racks and worm gears, open drive gears of cement rotary kilns.
2-3	193	-15 +130	MFT	

CASTROL RANGE OF INDUSTRIAL LUBRICANTS – GREASES

PRODUCT NAME	DESCRIPTION	GREASE PERFORMANCE	THICKENER/ SOAP BASE	BASE OIL	BASE OIL VISCOSITY @40°C
ON CAR & CVJ					
Olistamoly 2	Extreme pressure grease containing MoS2	✓✓	Lithium	Mineral	270
Olistamoly 2 LN 584 LO	Extreme pressure grease	✓✓	Lithium	Mineral	100
Olistamoly LEM	High performance grease	✓✓	Lithium	Mineral	373
Optidrive PU15 Black	Automotive lubricating grease	✓✓	Polyurea	Mineral	120
Optisil FLF 1	Grease for starter motors	✓✓✓	Silica	Synthetic	75
Optisil TD 1	Synthetic grease for vibration dampers	✓✓✓	Lithium	Synthetic	1600
Optitemp 636	Low temperature grease	✓✓	Lithium	Synthetic	120
Optitemp 6590	CV Joint grease	✓✓✓	Calcium Sulfonate	Synthetic	120
Optitemp BJ 2	Ball Joint grease	✓✓✓	Lithium/PTFE	Synthetic	
Optitemp BT 1LF	CV Joint grease	✓✓	Polyurea	Mineral	125
Optitemp DH 00 T	CV Joint grease	✓✓	Polyurea	Synthetic	260
Optitemp HT 1 LF	CV Joint grease	✓✓✓	Polyurea	Synthetic	300
Optitemp HT 1LF NG	CV Joint grease	✓✓✓	Polyurea	Synthetic	300
Optitemp LG 0	Plastic compatible universal low temperature grease	✓✓✓	Lithium	Synthetic	46
Optitemp LG 2	Plastic compatible universal low temperature grease	✓✓✓	Lithium	Synthetic	46
Optitemp LG 2 UV	Plastic compatible universal low temperature grease	✓✓✓	Lithium	Synthetic	46
Optitemp LP 1.5	High performance on-car grease	✓✓✓	Lithium	Synthetic	18
Optitemp MS 1 LF	CV Joint grease	✓✓	Polyurea	Mineral/Synthetic	125
Optitemp MT	High-pressure grease for rolling and sliding bearings	✓✓✓	Inorganic	Mineral	320
Optitemp PG 1.5	High performance on-car grease	✓✓✓	Lithium Complex	Synthetic	220
Optitemp PL 3	Special pre-lubrication grease	✓✓	Lithium	Mineral	100
Optitemp PU 035/4	High temperature CVJ grease	✓✓	Polyurea	Mineral/Synthetic	100
Optitemp RB 1	Grease for cables	✓✓✓	Lithium	Synthetic	48
Optitemp XBT1LF	CV Joint grease	✓✓✓	Polyurea	Synthetic	260
Rheomic SG 2	Special lubricating grease for sliding points	✓✓	Polyurea	Mineral	92
K 764 Grease	Elastomer Compatible Assembly Grease	✓✓✓	Silica	Synthetic	169
Lucas Grease TS2-33-19	Multi-Purpose High Temperature Grease	✓✓	Lithium Complex	Mineral	200
Molub-Alloy 9890-2	Special purpose grease	✓✓✓	PTFE	PFPE	22

NLGI GRADE	Drop Point °C	TEMPERATURE APPLICATION RANGE °C	ADDITIVES	APPLICATION
2	248	-25 +130	Solids	High performance grease with MoS ₂ for universal applications suited for long-term lubrication of rolling and sliding bearings and even open gears. For Tie rod joints and universal joints, brake cams and spline shafts.
2	200	-40 +110	Solids	For homokinetic ball joints. Applications can be found in industry as well as in the automotive sector. Designed for use in constant velocity ("CV") joints and universal joints.
2-3	> 180	-20 +130	Solids	High performance grease with MoS ₂ for universal applications. Due to its high load carrying capacity, this grease is suited for long-term lubrication of rolling and sliding bearings, open gears.
1.5	240	-40 +150	EP/AW	An excellent lubricant for steering component gears and constant velocity joints.
1	> 250	-40 +120	EP/AW	Developed for use over a wide temperature range, with good antiwear properties and high resistance to oxidation and moisture. Typical applications: over-running clutch in starter motors. It meets the Bosch Norm N28 FT1161-001 (May 2008).
1.5	> 210	-35 +150	EP/AW	A fully synthetic grease for damper springs, which was developed especially for lifetime fills at temperatures of up to maximum 150°C. It is used to lubricate friction partner combinations such as plastic on plastic or metal on plastic.
2	> 180	-50 +120	EP/AW	Fully synthetic grease for longterm and lifetime lubrication. It has a good compatibility with plastics and elastomers. Especially suitable for lubrication of slide bearings, sliding contacts in the field of operating the shiftgear lever in vehicles. For sliding contact surfaces: metal/plastic and plastic/plastic.
2	> 260	-40 +150	EP/AW	Application in homokinetic ball and tripod joints (free from MoS ₂), suited for joints in side shafts and high-speed joints in propeller shafts.
2	>185	-40 +120	EP/AW	Ball joint grease.
1	> 200	-35 +160	EP/AW	Designed for extreme loads in all types of constant velocity joints. Application in homokinetic ball and tripod joints (free from MoS ₂).
00-000	N/A	-40 +120	EP/AW	High performance grease designed specifically for applications in automotive components. Typical applications: rolling and plain bearings and door hinges.
1	> 230	-45 +180	EP/AW	Designed for the most extreme loads in constant velocity ball joints. Application in homokinetic ball joints.
1	> 230	-45 +180	EP/AW	Designed for the most extreme loads in constant velocity ball joints. Application in homokinetic ball joints.
0	N/A	-50 +120	EP/AW	Typical applications: door lock cylinders and door locks in vehicle construction, rolling and sliding bearings, clutch bearings and wheel hubs for long-term and lifetime lubrication at low temperatures, bearings running at high speeds.
2	>220	-50 +120	EP/AW	Typical applications: door lock cylinders and door locks in vehicle construction, rolling and sliding bearings, clutch bearings and wheel hubs for long-term and lifetime lubrication at low temperatures, bearings running at high speeds.
2	>180	-50 +120	EP/AW	Typical applications: door lock cylinders and door locks in vehicle construction, rolling and sliding bearings, clutch bearings and wheel hubs for long-term and lifetime lubrication at low temperatures, bearings running at high speeds.
1-2	> 180	-50 +120	EP/AW	A fully synthetic grease with excellent low temperature properties and longer service life in the lubrication of power windows and door locking systems, wiring.
1	> 225	-40 +160	EP/AW/MOS ₂	Designed for extreme loads in ball constant velocity joints. The product is formulated on a mineral/synthetic base and is an economical alternative to fully synthetic lubricants.
2-3	> 300	-25 +160	EP/AW	Typical applications: long-term lubrication of rolling and sliding bearings under difficult operating conditions, threaded spindles and guides, vehicles and devices, cranes, high-lift trucks and hoists.
1-2	> 220	-40 +140	EP/AW	A fully synthetic grease based on a polyglycol base oil for long-term and lifetime lubrication of plastics and elastomers. Specifically designed for long term/permanent lubrication of metal/plastic or Plastic/plastic pairings. It is used as a general assembly lubricant in automotive applications and in particular to lubricate sliding surfaces in the dashboard area.
2.5	> 190	-35 +140	EP/AW	Specifically formulated for compatibility with automotive axle-transmission fluids. Optitemp PL 3 is approved for use as a first fill grease of bearings mounted in oil lubricated automotive axle-transmissions from AUDI, to ensure proper lubrication during start-up, eliminating premature failures.
1.5	> 260	-35 +160	EP//MOS ₂	Special grease for ball CV joints for lateral and longitudinal shaft applications, subjected to extreme thermal and mechanical loads. Universal application in different types of joints.
2	>190	-30 +130	EP/AW	For lubrication of cables as on robots, metalworking machinery and cranes. Typical applications: lifetime lubrication of the cable, rails and walls, sliding surfaces of plastic.
1-2	> 220	-40 +180	EP/AW	Designed for extreme loads in all types of constant velocity joints. The product further reduces the temperature in the joint and improves the noise and vibration behavior (NVH). Typical applications: homokinetic ball and tripod joints, joints inside shafts and high-speed joints in propeller shafts.
2	268	-35 +160	EP/AW	High-temperature lubricating grease for long-term and lifetime lubrication of all types of sliding points. Also suited for lubricating points exposed to extreme thermal and mechanical loads, e.g. for shift linkages in passenger cars.
2.5	>260	-40 +150	R & O	Synthetic grease suitable for applications where contact with natural or synthetic rubbers is likely to occur. Commonly used within the Automotive industry for lubricating mechanical brake servo components.
2/3	>250	-30 to +140	R & O, EP/AW	Universal High Temperature Grease for use in both Automotive & Industrial plain and rolling element bearing applications.
2	NA	-45 +100	EP/AW	Recommended for the lubrication of plastic parts where minimum applications are required. Typical applications: lubrication of thermoplasts and duroplasts.

CASTROL RANGE OF INDUSTRIAL LUBRICANTS – GREASES

PRODUCT NAME	DESCRIPTION	GREASE PERFORMANCE	THICKENER/ SOAP BASE	BASE OIL	BASE OIL VISCOSITY @40°C
SPECIALITY- AVIATION/VACUUM/SEMI -CONDUCTOR					
Aeroplex 444	Extended life grease for Aircraft airframe equipment	✓✓✓	Lithium complex / Synthetic	Hybrid synthetic Fluid	3.4 @ 100C
Aeroplex AI	Aircraft and Instrument Grease	✓✓✓	Inorganic	Ester	10.5
Aeroplex GP33	Multipurpose Wide-temperature Full-synthetic Aircraft Grease	✓✓✓	Lithium Complex	PAO	16
Braycote 1632	Low volatility PFPE grease	✓✓✓	PTFE	PFPE	450 @ 20C
Braycote 1728	Wide temperature, oxidizer compatible, chemically inert grease	✓✓✓	PTFE	PFPE	68
Braycote 1729		✓✓✓			
Braycote 194	Aviation Corrosion Preventive Grease	✓✓✓	MIL Specification Corrosion Preventive		
Braycote 236	Aviation Corrosion Preventive Grease	✓✓✓	Corrosion Preventive		
Braycote 248	Aviation Corrosion Preventive Grease	✓✓✓	MIL Specification Corrosion Preventive		
Braycote 3214	Multipurpose High-temperature Full-synthetic Aircraft Grease	✓✓✓	Lithium	PAO	140
Braycote 631 RP	Aviation Corrosion Preventive Grease	✓✓✓	Inorganic	PFPE	125
Braycote 600 EF	Rocket propellant compatible, low temperature grease	✓✓✓	PTFE	PFPE	148
Braycote 601 EF	Rocket propellant compatible, low temperature grease with rust preventive	✓✓✓			
Braycote 602 EF	Rocket propellant compatible, low temperature grease with molybdenum disulfide	✓✓✓			
Braycote 610	Automotive and artillery grease	✓✓✓	Lithium Complex	Ester	28
Braycote 803 RP	PFPE, rust inhibited, wide temprature low volatility grease	✓✓✓	PTFE	PFPE	187
Braycote 806	Aircraft and instrument, fuel and oxidizer resistant grease	✓✓✓	PTFE	PFPE	97
Braycote 806 RP	Rust inhibited, fuel and oxidizer resistant aircraft and instrument grease	✓✓✓			
Braycote Micronic 1613	Low volatility wide temperature sub-micronic grease	✓✓✓	PTFE	PFPE	140
Braycote Micronic 600 EF	Rocket propellant compatible, low temperature grease with extra filtration	✓✓✓	PTFE	PFPE	148
Braycote Micronic 601 EF	Rocket propellant compatible, low temperature grease with extra filtration	✓✓✓	PTFE	PFPE	148
Braycote Micronic 700	Rocket propellant compatible, low temperature grease with extra filtration	✓✓✓	PTFE	PFPE	148
Braycote Micronic 803	Wide temperature low volatility PFPE grease with extra filtration	✓✓✓	PTFE	PFPE	187
Endurex 1000	"Under-the-hood" automotive sealed-for life grease	✓✓✓	PTFE	PTFE	66
Endurex 4000 Plus	"Under-the-hood" automotive sealed-for life grease	✓✓✓			85
Endurex 4400	"Under-the-hood" automotive sealed-for life grease	✓✓✓			260
Microcote 096	Extreme low volatility anti-wear, anti-corrosion sub-micronic grease	✓✓✓	PTFE	PFPE	305
Microcote 196		✓✓✓			
Microcote 296		✓✓✓			
Optitool 214-1	Cleanroom Grade Grease	✓✓✓	Polyurea	PAO	32
Optitool 215-2		✓✓✓			150
Braycote 804	Aircraft and Instrument, fuel and oxidizer resistant grease	✓✓✓	Inorganic	PFPE	25
Braycote 622	General purpose wide temperature grease	✓✓✓	Inorganic	PAO	30
Braycote 631A	Wide temperature oxygen compatible grease	✓✓✓	PTFE	PFPE	125
Braycote 640 AC	PFPE propellant and oxidizer compatible grease	✓✓✓	PTFE	PFPE	270
Braycote 640 ACMS	Heavy duty LOX compatible grease	✓✓✓	PTFE	PFPE	270
Braycote 803	Wide temperature low volatility PFPE grease	✓✓✓	PTFE	PFPE	187
Braycote 803 EP	Wide temperature, hard vacuum, high load carrying grease	✓✓✓	PTFE	PFPE	187

NLGI GRADE	Drop Point °C	TEMPERATURE APPLICATION RANGE °C	ADDITIVES	APPLICATION
2	-	-73 +121	EP/AW	Designed for use in aircraft airframe equipment, typically in roller bearings, actuator screws. Product meets Boeing BMS 3-34 spec. It offers excellent low temperature properties. Meets Boeing BMS2-34A specifications.
1.5	254	-73 +121	EP/AW	Intended for general use in ball, roller and needle bearings, gears and on sliding and rolling surfaces of equipment, such as instruments, cameras, electronic gear, and aircraft control systems. Meets MIL-PRF-23827C specifications.
2	215	-73 +121	EP/AW	Designed specifically to lubricate a wide range of applications on commercial aircraft. It is approved for Airbus Specification 09-06-002 and currently under approval for Boeing's BMS 3-33 specification.
2	185	-40 +232	EP/AW	Designed for use in static and dynamic lubrication of ball and roller bearings, gears, actuator and lead screw drive assemblies.
2	174	-40 +177	EP/AW	Used in static and dynamic lubrication of ball and roller bearings operated under chemically aggressive environments.
3	178			
MIL Specification Corrosion Preventive				Designed to protect unpainted metal surfaces from the effects of indoor or shed exposure for periods up to one year. It is non-corrosive and readily wets the surfaces of commonly used metals, leaving a continuous film after evaporation of the solvent. It meets the requirements of and is qualified to MIL-PRF-16173E, Class I, Grade 4.
Corrosion Preventive				Braycote 236 is intended for use as a light grade of lubricating grease, but is not recommended for use in heavily loaded or hot running bearings. It may be used as a constituent in petrolatum base rust preventive compounds.
MIL Specification Corrosion Preventive				Designed to protect machined, unpainted metal surfaces from the effects of indoor or shed exposure for periods of six months or more. It is especially suitable for the preservation of anti-friction bearings in storage or shipment. Meets the requirements of specification and is qualified to MIL-C-11796C, Class 3. This product is identified by NATO Code: C-627.
2	260	-54 +175	EP/AW	Designed for use in aircraft applications. Used in a variety of aircraft applications including landing gear assemblies and bearings, flight controls, flap/slat systems and gear applications where water resistance and corrosion protection are required. Approved and qualified to MIL-PRF-32014.
2	183	-54 +204	EP/AW/RI	Designed for static or dynamic service in the presence of fuels and oxidizers. It has been used in gears, ball and roller bearings, electrical contacts, and as a thread and elastomer sealant. It is particularly useful as a lubricant in corrosive or oxygen (LOX/GOX) service and as a plug valve lubricant.
2	209	-80 +204	EP/AW	Applications where temperature extremes and/or low vacuums are routine, such as cryogenic coolers, FLIR, laser optical systems, or hostile chemical environments. Designed to operate in the presence of fuels, oxidizers, and in applications of deep space vacuum. It is used in gears, ball and roller bearings, electrical contacts, and "O" rings.
	213		EP/AW/RP	Designed to operate in the presence of rocket fuels and oxidizers and high vacuum. Frequently used in space applications including the Space Shuttle and satellites. It should also be considered in any application where a hostile chemical or extreme environmental conditions would preclude the use of an ordinary grease. Typical applications include ball and roller bearings, gears, and as an assembly lubricant for "O" rings and elastomers.
	238		EP/AW/MOS2	Designed to operate in the presence of fuels, oxidizers, and deep space vacuums. Typical applications include ball and roller bearings, gears, electrical contacts, and as an assembly lubricant for Orings and elastomers. This grease contains molybdenum disulfide. This grease is highly recommended in applications where temperature extremes and/or low vacuums are routine.
2	243	-54 +121	EP/AW	Intended for use as a long-life, general-purpose lubricant and to provide surface corrosion protection of all ground vehicles and equipment. It is also an excellent lubricant for automotive and industrial applications where a wide temperature range or where infrequent re-greasing is preferred. Meets MIL-PRF-10924G Specifications.
2	177	-62 +260	EP/AW	It was developed for use in applications in which long-term exposure to high temperature or hard vacuum is expected. Contains a rust and corrosion inhibitor for ferric component protection.
-	-	-30 +204	EP/AW	Designed for static and dynamic lubrication of taper plug valves, gaskets and bearings in fuel systems of aircraft and ground support equipment.
			EP/AW/Rust Inhibitor	Designed for static and dynamic lubrication of taper plug valves, gaskets and bearings in fuel systems of aircraft and ground support equipment. Meets MIL-PRF-27617 specification. This product contains an additional rust inhibitor additive for those applications requiring ferrous metal protection.
2	-	-72 +204	EP/AW	Based on micronically filtered perfluorinated polyether base. Designed to lubricate gyros, gears, ball and roller bearings, in the presence of fuels, oxidizers and deep space vacuums and for use as an assembly lubricant for "O" rings and elastomers. This product is recommended for use in applications where temperature extremes and high vacuums are routine.
2	209	-80 +204	EP/AW	Based on micronically filtered perfluorinated polyether base oil. Designed to operate in the presence of fuels, oxidizers, and in applications of deep space vacuum. It is used in gears, ball and roller bearings, electrical contacts, and "O" rings. Applications where temperature extremes and/or low vacuums are routine, such as cryogenic coolers, FLIR, laser optical systems, or hostile chemical environments.
2	213	-80 +204	EP/AW	Based on micronically filtered perfluorinated polyether base oil. Designed to operate in the presence of rocket fuels, oxidizers and high vacuum. It is frequently used in space applications including the Space Shuttle and satellites. Application where a hostile chemical or extreme environmental conditions would preclude the use of an ordinary grease. Typical applications include ball and roller bearings, gears, and as an assembly lubricant for "O" rings and elastomers.
2	240	-80 +204	EP/AW	Based on micronically filtered perfluorinated polyether base oil. Designed to operate in the presence of fuels, oxidizers, and in applications of deep space vacuum at low temperatures. It is used in gears, ball and roller bearings, electrical contacts, and "O" rings.
2	216	-62 +260	EP/AW	Based on micronically filtered perfluorinated polyether base oil. Developed for use in applications where long term exposure to high temperature or high vacuum is expected.
2	-	-40 +204	EP/AW	Designed for "under-the-hood" automotive applications which require "Sealed-for-Life" capabilities and a wide operating temperature range. Can be used to lubricate pistons in hydraulic clutch systems, anti-lock braking systems, and ball and roller bearing components, in static or dynamic conditions, which come in direct contact with fuel, brake fluid, and/or extreme temperatures.
	193			Designed for "under-the-hood" automotive applications which require "Sealed-for-Life" capabilities and a wide operating temperature range. Can be used to lubricate pistons in hydraulic clutch systems, anti-lock braking systems, and ball and roller bearing components, in static or dynamic conditions, which come in direct contact with fuel, brake fluid, and/or extreme temperatures. The superior low temperature performance provides improved response on winter days while maintaining high temperature performance.
	265			For critical "under-the-hood" applications which require Sealed-For-Life capabilities and a wide operating temperature range. Endurex 4400 has been specifically designed to meet demanding OEM requirements for the proper lubrication of needle bearings and ball screw assemblies in ABS brake systems.
0	N/A	-50 +204	Solids	Specially formulated to provide wear protection in most load and speed conditions under high or extreme vacuum conditions. Typical applications include robotics used for semi-conductor production and other electronic applications. Also used applications, which also require torque minimization and/or resistance to drag forces. Microcote 296 can be used to lubricate bearings, gyros, gears, and also as an assembly lubricant for "O" rings and elastomers.
1	224			
2	256			
1	280	-40 +150	EP/AW	This product was specifically designed for use in micro-electronic and clean room applications, which are sensitive to metallic elements and other contaminants. Intended for use on ball, roller, and needle bearings, linear motion components, carriages, lead screws, gears, sliding and roller surfaces, instruments and precision equipment.
2	292			
1	-	-54 +149	EP/AW	Designed for static and dynamic lubrication of taper plug valves, gaskets and bearings in fuel systems of aircraft and ground support equipment. It is also suitable for use in the presence of oxygen (LOX/GOX) and other highly oxidative materials as a lubricant for valves, threads, and bearings in aerospace vehicles and supporting equipment.
2	275	-54 +177	EP/AW	Particularly suited for aircraft applications such as wheel bearings, helicopter rotor bearings, control systems, applications including conveyor bearings, small alternator bearings operating at temperatures near 350°F (177°C), high speed miniature ball bearings, and bearing situations where oscillation, vibration, and fretting create problems. Meets MIL-PRF-81322G-Grade2, DOD-G-24508A and 4 specifications.
2	182	-30 +204	EP/AW	Designed for static or dynamic service in the presence of fuels and oxidizers. It has been used in gears, ball and roller bearings, electrical contacts, and as a thread and elastomer sealant.
2	-	-36 +204	EP/AW	Designed as an oxidizer and propellant compatible grease suitable for use in aerospace vehicles, spacecraft, rocket and aircraft engines and associated ground support equipment, oxygen equipment, and transport equipment. Typically used in the lubrication of threaded fasteners, connectors, valves, gaskets, elastomers and bearings.
3.5	-	-36 +204	EP/AW	Designed for use as a LOX compatible heavy duty grease for high load bearings and sliding surface applications. It can also be utilized as an anti-seize and sealing compound for thread applications. It is suitable for use with fuels and oxidizers such as oxygen.
2	216	-62 +260	EP/AW	Applications where long term exposure to high temperature or high vacuum is expected. This product is fully compatible for use in both direct and indirect contact with liquid and gaseous oxygen (LOX/GOX). Braycote 803 is stable with exposure to strong acids and oxidizers.
2	177	-54 +260	EP/AW	Developed for those applications in which long-term exposure to high temperature and hard vacuum are expected and high load carrying capabilities are required.

CASTROL RANGE OF INDUSTRIAL LUBRICANTS – GREASES

PRODUCT NAME	DESCRIPTION	GREASE PERFORMANCE	THICKENER/ SOAP BASE	BASE OIL	BASE OIL VISCOSITY @40°C
FOOD GRADES					
Molub-Alloy Foodproof 823-0 FM Molub-Alloy Foodproof 823-1 FM Molub-Alloy Foodproof 823-2 FM	Food Grade Grease	✓✓	Aluminum Complex	Mineral	192
Molub-Alloy Foodproof 9830	High temperature grease for food industry	✓✓	PTFE	PFPE	510
Obeen FS 2	Multi-purpose food grade grease	✓✓	Aluminum Complex	Synthetic	53
Obeen PL 2	Multi-purpose food grade grease	✓✓	Aluminum Complex	Synthetic	400
Obeen Tap 2	Food grade grease for fittings	✓✓	Inorganic	Synthetic	450
Obeen UF 0	Multi-purpose food grade grease	✓✓	Aluminum Complex	Synthetic	515
Obeen UF 00		✓✓			435
Obeen UF 000		✓✓			670
Obeen UF 1		✓✓			580
Obeen UF 2		✓✓			544
Obeen UF 3		✓✓			477
Optisil LEB 2	Physiologically safe silicone grease	✓✓✓	Silica	Synthetic	1200
BIODEGRADABLE					
Molub-Alloy 8899 LV	Mill Grease	✓✓	Silica	Vegetable	1700
Molub-Alloy BioTop 9418	Biodegradable Wheel flange and switch plate grease	✓✓	Inorganic	Ester	20
Molub-Alloy BioTop 9488	Biodegradable multiservice grease	✓✓	Inorganic	Ester	500
Molub-Alloy BioTop 9498	Biodegradable switch plate grease	✓✓	Calcium	Ester	68
WALKING CAM, WIRE ROPE AND OTHER					
Molub-Alloy 2204 SF Heavy	Walking Cam Lubricants (Solvent Free)	✓✓✓	Inorganic	Mineral	420
Molub-Alloy 2204 SF Light	Walking Cam Lubricants (Solvent Free)	✓✓✓	Inorganic	Mineral	140
Molub-Alloy 880 LF Heavy	Heavy duty walking cam lubricant	✓✓✓	Inorganic	Mineral	620 (@100°C)
Molub-Alloy 880 SF Medium	Heavy duty walking cam lubricant	✓✓✓	Inorganic	Mineral	193 (@100°C)
Molub-Alloy 902 SF Light	Wire rope lubricant	✓✓	NA	Mineral	870
Molub-Alloy 908 SF Super Heavy	Walking Cam & Slide grease	✓✓✓	Inorganic	Mineral	1300
Molub-Alloy DRL 921	Wire rope lubricant	✓✓	Lithium	Synthetic/Mineral	11600
Molub-Alloy WR 1000	Wire rope lubricant	✓✓	Thckened Fluid	Mineral	1000
Molub-Alloy WRL 119	Wire rope dressing lubricant	✓✓	Thckened Fluid	Mineral	1000
Molub-Alloy 491 C	Special lubricant	✓✓✓	NA	NA	NA

NLGI GRADE	Drop Point °C	TEMPERATURE APPLICATION RANGE °C	ADDITIVES	APPLICATION
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0	N/A	-30 +120	Solids	General lubrication of food machinery. They have been approved as "physiologically safe" by the Landesgewerbe-Anstalt LGA Bayern and by the U.S. Department of Agriculture (NSF) as "H1" lubricants which can be used in the food and beverage industry even if incidental contact with food products is possible. Typical applications: sleeve and rolling bearings in overhead conveyors and other material handling equipment in the food machinery.
1	> 230			
2				
2	-	-40 +250	EP/AW	Developed for the lubrication of rolling and sliding bearings. Applications in baking and drying ovens in the food and canning industries.
2	> 230	-30 +140	EP/AW	As Obeen UF but for higher speed applications.
2	> 230	-35 +160	EP/AW	For lubricating highly stressed koller bearing in pelleting presses, friction and roller bearings in screw drying conveyors and lubricating cellular wheel sluice.
2-3	> 230	-15 +140	EP/AW	For the lubrication of fittings in the beverage industry ensuring smooth operation of taps in pubs and breweries and for the lubrication of racker arms and seals, as a bearing grease for the lubrication of rolling and sliding bearings in filler closing machines.
0	215	-40 +140	Solids	UF 00 and 0 forgrease-lubricated gears and gear motorscentral lubrication systems such as in filling plants, packaging stations and cardboard folding machines. UF 000 for central lubrication systems filling plants of yoghurt, instant food and cheese processing machines (e.g. turning machines). UF 1, 2 and 3 as tap, sealing and bearing grease, for long-term lubrication of rolling and sliding bearings, for fillers, bottle washing machines, labelling machines, closing machines, filling machines, conches, cyclones.
00	195	-40 +140		
000	170	-40 +140		
1	225	-40 +140		
2	230	-30 +140		
3	235	-30 +140		
2	244	-35 +140	EP/AW	OPTISIL LEB 2 is a physiologically safe grease based on silicone (in conformity with NSFH1). Due to its base material this grease is especially suited for the lubrication of EPDM materials (ethylene-propylene-diene rubber) in applications in the food and pharmaceutical industries where an incidental contact between the lubricant and the product might occur.

0-00	NA	-5 +80	Solids	Designed for use in heavily loaded, slow turning bearings in rolling and grinding mills. As lubricating grease in Mill Windows and Chocks of 4-Hi Mills, gears of Sugar Cane Grinding Mills.
000	NA	-30 +60	Solids	Application as a wheel flange and switch plate grease and is readily biodegradable according to CEC L-33-A-93 (> 85 %).
1	> 300	-20 +140	EP/AW	A multi-service grease for sliding and rolling bearings. The high-performance grease is more than 60% biodegradable according to OECD 301B. It is suited for sliding bearings which have to be protected against extreme pressures and shock loads.
000	NA	-50 +80	EP/AW	Developed to lubricate switch plates over a broad temperature range.

1	-	0 +120	Solids	Developed specifically to lubricate the Monighan Walking Cam Mechanism that relocates large draglines manufactured by Bucyrus International.
0/00	NA	0 +120	Solids	Developed specifically to lubricate the Monighan Walking Cam Mechanism that relocates large draglines manufactured by Bucyrus International.
0	NA	-5 +150	Solids	Developed specifically for use on Monighan Walking Cam mechanisms of large surface mining equipment.
0	NA	-15 +150	Solids	
NA	NA	-12 +80	EP/AW	Used for lubrication of wire ropes. Best applied automatically with at least 2 nozzles on opposing sides of wire rope.
00	NA	-10 +80	Solids	Molub-Alloy 908 SF Super Heavy Slide Lubricant is designed to lubricate the walking mechanism slides of Bucyrus International draglines. The lubricant has been formulated to meet Bucyrus specification X-2326, Suffix B.
NA	NA	-30 +100	EP/AW, Solids	Developed specially to address the need for a universal dragline wire rope product.
NA	NA	NA	EP/AW/Solids	Premium quality wire rope lubricant in open cut and underground mining operations where maximum rope life must be achieved despite harsh operating conditions.
2	80	NA	EP/AW	A wire rope dressing lubricant developed as an internal deep penetrating lubricant for use during manufacture of wire ropes.
NA	NA	0 +450	Solids	Molub-Alloy 491-C Dry Film Lubricant is a unique hydrothermal lubricant, especially formulated for heavy industrial applications where high temperatures prohibit the use of normal lubricants, or (dry film) lubricants having a flammable base. Typical applications are found in aluminum die casting and extrusion industries, glass bottle moulds, rubber tire moulds, cement kilns.

CASTROL RANGE OF INDUSTRIAL LUBRICANTS – PASTES

PRODUCT NAME	DESCRIPTION	GREASE PERFORMANCE	THICKENER/ SOAP BASE	BASE OIL	BASE OIL VISCOSITY @40°C
PASTE					
Molub-Alloy TopFit 3284	White paste	✓✓✓	Lithium	Mineral/Synthetic	172
Molub-Alloy TopFit 3844	Anti-sieze compound	✓✓✓	Lithium	Ester	162
Molypaste VP 317	Assembly paste with moly	✓✓✓	Lithium/Silica	Mineral	28
Obeen Paste NH1	Physiologically safe lubricating and separating paste	✓✓✓	Aluminum Complex	Synthetic	275
Optimol Paste HT	Gold-colored separating paste for high temperatures	✓✓✓	Inorganic	Ester	1240
Optimol Paste MF	Black assembly paste with MoS2	✓✓✓	Lithium	Ester	162
Optimol Paste MP 0	White assembly pastes	✓✓✓	Silica	Synthetic	400
Optimol Paste MP 3	White assembly pastes	✓✓✓			
Optimol Paste MP 3 Anthrazit	Anthracite colored assembly paste	✓✓✓	Silica/PTFE		
Optimol Paste PL	Black assembly paste with MoS2	✓✓✓	Inorganic	Mineral	94
Optimol Paste PU	Black high temperature paste with MOS2	✓✓✓	Silica	PAG	64
Optimol Paste TA	Silver-coloured high temperature paste for screw connections	✓✓✓	Silica	Mineral	165
Optimol Paste White RV	Assembly paste against fretting corrosion	✓✓✓	Lithium	Synthetic	260
Optimol Paste White T		✓✓✓	Lithium	Mineral/Synthetic	172
Spezialpaste AU LN 598	White assembly pastes	✓✓✓	Lithium/Bentonite	Mineral	42

NLGI GRADE	Drop Point °C	TEMPERATURE APPLICATION RANGE °C	ADDITIVES	APPLICATION
1	NA	-25 +250	Soilds	For application as assembly paste for fittings, mounting and dismantling of bolt connections, and as a paste for almost all machine elements and applications such as joints, gliding elements, hinges, chucks of machine tools and armature connections.
1	NA	-10 +1100	Soilds	Developed as anti-seize compound especially for the assembly of screw connections in the high temperature range. It avoids seizing, cold welding and wear up to a temperature of +1100°C.
1	NA	-40 +450	Soilds	Typical applications: press and snug fits, sliding bearings, bushes and gearings, slideways, piston rods, guides and joints, separating and lubricating agent for metal shaping.
2	NA	-40 +1200	Soilds	Assembly paste for components in high and low temperature ranges as well as specifically in the food industry for eccentric, radial cams, screwed connections and as a lubricant and separator in heat shaping.
1	NA	-80 +450	Soilds	Especially suited for lubrication of tight-fitting components. Its dry sprayable film is ideal for hard-to-reach lubricating points. Typical applications: lubrication and wear reduction at sliding surfaces, gear teeth, spindles, slideways and iron or non-ferrous metal guides (not for white metals). For width adjusting spindles of tenter frames (dust and lint will not accumulate).
1	NA	-10 +1100	Soilds	Suited for the assembly of screw connections in the high temperature range up to + 1100°C. For components subjected to corrosion, extreme temperatures and ambient conditions, such as - screw connections at high temperatures - spark plug threads - Lambda probe threads.
0	NA	-50 +180	Soilds	Typical applications: lubricating points exposed to aggressive ambient conditions, plants and machinery in the chemical industry, automotive industry e.g. in door retainers of vehicles.
3	NA	-35 +180		
3	NA			
2	NA	-30 +450	Soilds	Paste PL is especially suited for highly loaded sliding surfaces as well as for base and thin-film lubrication at high pressures and temperatures, for hot transport chains.
2	NA	-30 +400	Soilds	Multiple applications in the high-temperature range in brickworks, bakeries, iron and steel works and the ceramic industry used in ovens, kilns and furnace carriages and rollers.
1-2	NA	-40 +1100	Soilds	Paste TA for screw connections up to + 1100°C. It is used as assembly paste and prevents seizing, welding or scaling. Available as spray also.
1	NA	-40 +250	Soilds	Suited for all assembly work as well as for base or thin-film lubrication. The paste prevents fretting corrosion and facilitates assembly and disassembly.
1	NA	-40 +250	Soilds	Suited for all assembly work as well as for base or thin-film lubrication. The paste prevents fretting corrosion and facilitates assembly and disassembly.
2	NA	-30 +250	Soilds	Suited for clean assembly work as well as for base and thin-film lubrication. It specifically counteracts fretting corrosion. The fitting pieces can be easily released even after years. Typical applications: universal application as assembly paste, fitting pieces subjected to vibrations, machinery with friction vibrations, hydraulic cylinders and open lubricating points, sliding points in vehicle and gear construction.

CASTROL RANGE OF INDUSTRIAL LUBRICANTS – SPRAYS

PRODUCT NAME	DESCRIPTION	PERFORMANCE	PROPELLANT	APPLICATION
SPRAY				
Molub-Alloy Chain Oil 22 Spray	Chain oil spray	✓✓	Propane/Butane	Multi-service chain lubricant.
Molub-Alloy 936 SF Heavy spray	Open Gear grease spray	✓✓✓	Propane/Butane	Open gears, gearings, sliding surfaces.
Obeen UF 3 Spray	Food grade grease spray	✓✓✓	Butane	Machines and plants in the food and beverage industry e.g. sliding points, bearings, chains, resistant to water, steam, fruit acids.
Opticoating TF Spray	Black MoS2 powder spray	✓✓✓	Propane/Butane	Dry lubricating film on MoS2 basis for spindles, guideways, sliding bearings, from -180 °C to +450 °C.
Optileb TC 5 Spray	Deep drawing/stamping tool spray	✓✓✓	Propane/Butane	Deep-drawing machines, stamping tools in dusty environments.
Optimol F&D Fluid Spray	Food grade spray (spray version of Optileb DAB 8)	✓✓✓	Propane/Butane	Machinery and plants in the food and beverage industry.
Optimol Paste PL Spray	High-temperature assembly and separating paste	✓✓✓	Propane/Butane	Assembly aid for components subjected to temperature and ambient conditions e.g. screws, flanges, seals.
Optimol Paste TA Spray	Silver-coloured high-temperature assembly paste	✓✓✓	Propane/Butane	High-temperature separating paste for screws and flanges.
Optimol Paste White T Spray	White assembly paste	✓✓✓	CO2	Assembly paste against fretting corrosion.
Optimol SHF Spray	Chain oil spray	✓✓✓	Propane/Butane	Suited for the lubrication and protection of chains, wire ropes, guides, slideways and in wet sections and underwater applications.
Optisil OI Spray	Lubricating and separating agent spray	✓✓✓	Propane/Butane + Solvent	Synthetic spray oil excellent lubricating and separating properties with non-metallic materials.
Optisil WX Spray	Lubricating and separating agent spray	✓✓✓	Propane/Butane + Solvent	Silicone wax spray for use on plastics and rubber, the metal-working on industry, in the apparatus engineering, in fine mechanics, the wood and textile industry.
Optitemp LG 2 Spray	Plastic compatible universal low temperature grease spray	✓✓✓	Propane/Butane + Solvent	Typical applications: door lock cylinders and door locks in vehicle construction, rolling and sliding bearings, clutch bearings and wheel hubs for long-term and lifetime lubrication at low temperatures, bearings running at high speeds.
Optitemp TT1 Spray	Low temperature grease spray	✓✓✓	Propane/Butane + Solvent	A high performance grease for applications with wide temperature ranges. Especially suited for rolling and sliding bearings with medium bearing pressures. Typical applications: rolling and sliding bearings, clutch bearings and wheel hubs, high speed bearings.
Tribol 1430 Spray	Chain oil spray	✓✓✓	Propane/Butane	For the lubrication of oven chains in lithographic printing plants and in the coating industry as well as in drying ovens of the automotive industry.
Tribol 1730/100 Spray	Chain oil spray	✓✓✓	Propane/Butane	Conveyor and drive chains, low to medium temperatures and loads.
Tribol 5000 Spray	Open Gear grease spray	✓✓✓	Propane/Butane + Solvent	Sprayable , high-performance open gear grease. Developed for application in cement, mining and other heavy industries. Typical applications: open gears, wire ropes and similar applications.
Viscogen KL 3, 23, 300 Sprays	Chain oil spray	✓✓✓	Propane/Butane	For high temperature chain lubrication in severe environments where the use of mineral oils or conventional synthetic oils would result in excessive wear, carbonisation and residue formation.
Viscobleb 32, 280 or 1500 Spray	Chain oil spray	✓✓✓	Propane/Butane	Fully synthetic chain sprays for the normal and high-temperature range.

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