MAGNA LUBRICANTS

LIQUID TECHNOLOGY AT WORK

PRODUCT GUIDE

"Excel-A-Rate" the Magna way....

MAGNA
LUBRICANTS

General Industrial

Marine

Food Processing

Metalworking

Trucking and Offroad

"Excel-A-Rate"
the Magna way....

Timber Processing

Passenger Car

Rail

ABOUT US & OUR PASSION

Magna Lubricants - The name that resonates with HIGH-PERFORMANCE lubricants. Our brand was conceptualized and born 25 years ago. The birth of the brand was driven by a passion to create a lubricant that could withstand the most severe and extreme conditions that an equipment can endure. Our team which comprises of experienced professionals with a deep understanding of the lubrication industry took up the challenging task to create a truly world class branded lubricant product which incorporates not only the latest industry standards but also provide the cutting-edge liquid fluid technology down to ATOMIC LEVELS to truly give a **" Liquid Technology at Work "** performance lubricants which can withstand not only the most demanding extremities of the weather outside but also meet the grinding demands of the metals insides.

Our company's approach has always been rooted in using the finest of the base oil's stocks which when blended with selective additives at a precise temperature enables us to create a product that stands out from the crowd. The result is a range of lubricants that prevent oxidation, reduce wear, control corrosion, and reduce fuel consumption, all while extending the life of engines and extending drain intervals, etc., etc. Our slogan "Liquid Technology at Work" encapsulates the essence of our brand - We use ONLY the latest technology and cutting-edge processes to create a lubricant that works seamlessly with your equipment, providing superior performance and protection that is unmatched by any.

At Magna Lubricants, we are committed to creating a product that exceeds expectations, delivers results, and builds trust. Our relentless pursuit of excellence has earned us a reputation for being a brand that our customers can depend on. Our lubricant can adhere to both old and new equipment's irrespective of the OEM'S make or brands. We are constantly developing our products to meet the challenging requirements of the ever-changing technology and the demands of the future.

Join us in our journey as we continue to push the boundaries of lubrication technology and provide you with the best products in the market. With Magna Lubricants Co, you can be confident that you are getting a product that is backed by years of experience and a commitment to quality.

PROFILE

VISION STATEMENT

MAGNA LUBRICATION was set up to fulfill the customers' universal demands for quality products that meets and exceeds client requirements, is economical without compromising on environmental and safety standards. Company has a vision of being bench mark in the field of lubrication, aspire to meet and exceed the customers expectations, keep and bring about the technical innovations which are abreast and ahead of demands in order to be the globally leading recognized lubricants, greases and specialties manufacturing company with human-oriented management philosophy system, where we grow as human technology enterprise in which company, customer and everyone related can benefit together.

INTRODUCTION

MAGNA LUBRICATION specializes in manufacturing and marketing of the entire range of automotive, industrial specialties lubricants and greases which are blended in the state of art blending plant incorporating the latest technology which meets and exceeds the requirement requirement of leading automobile manufacturers and industrial specifications.
MAGNA LUBRICATION entire range of products are manufactured as per MERICAN/EUROPEAN and JAPANESE specifications and specifically recommended for use in Middle East, West Asia, South-East Asia and Africa where temperature and climatic conditions are in extreme.

PRODUCTS

MAGNA LUBRICATIONS are blended from specially selected quality base stocks and superior advanced additives system sourced from Saudi Arabia and Europe/America and are packed in state of art sealing unit controlled by a computer without human contamination or touch which give the products a highest reliability rating in the whole Middle East.

The entire range of MAGNA LUBRICATION products are marketed in various convenient packing of 208 liters Virgin plastic and steel drums.25, 20, 15 and 10 liters plastic/metallic pails. 5, 4, 3, 1, 0.5 and 0.250 liters of plastic and metallic tins/cans.

SERVICES

MAGNA LUBRICATION has incorporated the latest technology for its product and has its own modern well equipped & sophisticated laboratory to ensure high quality consistency and to monitor the technical specifications profile of both raw materials and finished products. We also have an excellent in-house R & D department which gives/keeps us ahead and abreast of all new technical innovations in the field of automobiles, industrial lubricants, and specialties.

MAGNA LUBRICATION as a dedicated service to the customer also offers a "CUSTOMER CARE PROGRAM" where a complete technical support system is incorporated for the customer in terms of

- Condition monitoring of used lubricants.
- Metal wear analysis.
- Probable trouble shooting area.
- Specialized blending for a specific customer to meet its special needs and requirements.
- Assistance in choosing the right lubrication solution for the equipment.

SALES SUPPORT TEAM

AT MAGNA LUBRICATION, we believe that our employees are our most valued assets. Hence, we have a built well dedicated and disciplined work force in all the areas of our operation supported by our in house HRD department, which enables our highly trained and qualified team of marketing and technical staff to continuously strive to meet and satisfy our customers needs and demands with highest standards of service, quality, sales and proven after-sales support.

Our sales staff has been individually trained and motivated to continuously aspire to be at the service of the customers and meet and exceed his needs and demands in all proven aspects of customer servicing.

LOGISITIC SUPPORT

MAGNA LUBRICATION has a strong network of dedicated distributors and sole agents with a excellent back office support to provide timely supplies, excellent technical support and efficient sales and after-sales service to customers to aggressively market our products to achieve total customers satisfaction of a complete "seamless service delivery".

WHAT IS LUBRICATING OIL?

Lubricating oil is produced by vacuum distillation of the heavy residue from the primary distillation.

It is separated into a number of fractions which we can call light, medium and heavy. These fractions are the base oil or feed stocks, for the production of finished lubricating oils.

Base oils in certain cases can be used as lubricants without further treatment. If required for special applications, they should need further treatment to improve their properties. As may be blended together to give lubricating oils of different viscosities.

With the advent of more complicated machinery, the need for specialized and more improved lubrication became apparent, and with the growth of petroleum technology, its fulfilment fulfilmentbec ame possible through crude selection, treatment, and the use of chemical additives. These additives when added to base oil either enhance an existing property of the oil or confer additional properties not to be found in the original base oil.

FUNCTION OF LUBRICATING OIL:

1. Reducing friction and wear
2. Cooling of system
3. Cleaning
4. Protect the system against corrosion
5. Sealing the clearance between moving parts

ADDITIVES REQUIRED TO IMPROVE BASE OIL PERFORMANCE

(1) VISCOSITY INDEX IMPROVERS:

The “Viscosity Index” of a lubricant is a measure of its viscosity change with change in temperature. Viscosity index improvers are a type of polymer which have the ability to improve the rate of viscosity change. They have comparatively little thickening effect at low temperatures, but a significant thickening at high temperature. This extends the temperature range over which the lubricant can be used throughout all seasons, without drain.

(2) DETERGENTS:

The primary detergents are metallic salts of some organic compounds. The metal ion is usually Calcium, Magnesium, or barium. Detergents serve two principal functions:

- They chemically combine with solid combustion debris, and thereby prevent this debris from accumulation on engine parts as deposits.
- They are also strong acid neutralizers, changing combustions and oxidation acids into harmless neutralized salts. The measure of a detergent’s capacity to perform this function is its capital number T.B.N [total base number]. The higher the T.B.N the more acid a detergent can neutralize.

(3) DISPERSANTS:

Dispersants are similar to detergents in that they too are cleanliness agents. However, they are quite different from detergents chemically. Dispersants are “ashless” [nonmetallic] [nonmetallic] compound, while detergents are metallic salts.
Dispersants function like repelling magneto and keep particulate contamination in the oil from agglomerating into larger lumps that settle out as sludge or varnish.

(4) ANTI-WEAR AGENTS

Detergents are essentially cleanliness agents, but their alkaline character gives them a multifunction behavior as anti-wear agents by reducing wear due to acid corrosion. Certain anti-wear agents like Zinc Di-thiophosphate function differently by essentially absorbing or plating onto metal surfaces and sacrificially providing chemical to chemical contact rather than metal to metal contact under high load functions.

(5) ANTI-OXIDANTS:

Anti-oxidants are used to keep Oxygen in the atmosphere from chemically reacting with the oil under conditions of high temperature and agitation. Oxidation led to oil thickening thickening and formation of organic acids.

(6) RUST-INHIBITORS:

Engine rusting is a more serious problem. It can cause frozen hydraulic valve lifters, stuck open oil pressure relief valves. And other malfunctions that can destroy engines. Transmissions and even final drive gears and bearing.

(7) ANTI-FOAM AGENTS:

The function of anti-foam agent is to decrease the surface tension of the lubricant, that is the tendency of the neighboring molecules at the surface to stick together as a film. ANTI-FOAM AGENTS not only kept the lubricants from overflowing the sump, but also inhibit oil oxidation and prevent engine wear.

(8) EXTREME-PRESSURE AGENTS:

Extreme pressure agents E.P are a type of wear inhibitors used for situations where extremely high loads exist. They function like anti-wear inhibitors by forming adherent films on metal surfaces which essentially act as a solid lubricant to prevent metal to metal contact under extremes of load and temperature.

(9) POUR-POINT DEPRESSANT:

Pour-point Depressants are used to control wax crystal formation in oil at low temperatures. These prevent the oil from solidifying and cease to flow in the lubrication system.

LUBRICANTS FOR GASOLINE ENGINES

Gasoline engine lubricant must lubricate all moving parts and prevent metal to metal contact. Its viscosity must be so suitable to seal the clearance between piston and cylinder wall and around piston rings and in the same time lubricate these parts easily without failure. It must act as a coolant and transfer heat from the pistons and piston rings and other moving parts.

Gasoline engine lubricant must be able to keep lacquer-forming materials in solution and to prevent agglomeration and deposition of insoluble impurities such as particles of soot and carbonaceous material by holding them in suspension in a finely divided state in which they can do no harm, until the oil is drained from the crankcase.

For cylinder lubrication the oil must be fluid enough to reach the cylinder walls without delay on starting up from cold, and to spread over the surfaces rapidly. Unsuitable thick oils may fail in this respect, moreover they have tendency to form carbon.

The major properties of a lubricant to meet these requirement are:- it should be of the correct viscosity

Should not deteriorate rapidly when exposed to the most severe engine conditions.

Should protect the engine under all operating conditions.

LUBRICANTS FOR DIESEL ENGINES

Due to the heavy duty and severe conditions on which diesel engines are running the need for highly refined lubricant containing additives that impart detergent, Dispersant, anti-oxidant, anti-wear and alkaline properties has increased.

The severe conditions which lubricants are subjected to in diesel engines are:

High sulfur content in diesel fuel which when burning in the combustion chamber produces highly corrosive sulfuric acid.

The higher loading capacity.

Formation of high and low temperature deposits (carbonaceous deposits and lacquer sludges and jelled oil).

The high temperature operating conditions.

GASOLINE ENGINE LUBRICANTS

"Excel-A-Rate" the Magna way

MAGNA ™ SYNERGY F-1

MAGNA ™ SYNERGY F-1 - is a premium 100% PAO & ESTER- full synthetic automotive engine oil designed to provide excellent engine protection for both turbocharged gasoline direct injection, conventional gasoline-fueled and flex fueled passenger cars and light trucks under all operating conditions. It is particularly recommended for vehicles operating at extreme temperatures or under severe driving conditions, such as towing heavy loads.

APPLICATIONS

MAGNA SYNERGY F-1 is formulated with 100% PAO synthetic base stocks and an exclusive performance additive package. The full-synthetic formulation, compared with conventional engine oils, provides improved protection against viscosity breakdown and deposit formation at high temperatures; lower volatility for reduced oil consumption; and faster oil circulation at low temperatures for easier starting and better protection during cold starts. Our additive package provides increased engine protection by providing increased engine cleanliness and reduced wear. Reduced friction also helps improve fuel economy performance beyond ILSAC GF-6 requirements.

MAGNA SYNERGY F-1 exceeds new car warranty requirements as defined by ILSAC GF-6. It is uniquely formulated to help combat low speed pre-ignition (LSPI) in turbocharged gasoline direct injection engines. MAGNA SYNERGY F-1 Motor Oil meets or exceeds “Resource Conserving” requirements for fuel economy improvement, emission system and turbocharger protection, and protection of engines operating on ethanol-containing fuels up to E85. It is backward serviceable for use where API SN or earlier “S” category engine oils are recommended.

Features & Benefits

- Helps protect against low-speed pre-ignition (LSPI) in turbocharged gasoline direct injections (TGDI) engines.
- Exceeds ILSAC GF-6 requirements for new cars under warranty
- Enhanced performance benefits at extreme temperatures compared with conventional engine oils
- Outstanding resistance to viscosity and thermal breakdown at high temperatures
- Protects against sludge and varnish formation
- Protects against rust and bearing corrosion
- Low volatility for reduced oil consumption
- Excellent low temperature pumpability for protection during cold starts
- Highly resistant to foaming
- Formulated to protect turbochargers and emission control system catalysts
- Formulated for use in vehicles operating on ethanol-containing fu els up to E85
- Innovative Shear Free Formulation and exceptional Anti-wear additives makes it an ideal product Equally for Auto car racing enthusiasts and fuel conserving owners.

Specifications: Meets
API SP, SN PLUS, SN

- Turbocharged gasoline direct-injection, conventional gasoline-fueled and flex-fuel passenger cars, light trucks, and sport utility vehicles, including. gasoline-electric hybrids, especially when operating under severe conditions.
- Four-stroke cycle gasoline engines in other mobile or stationary equipment
- ILSAC GF-6A, 0W-20, 5W-20, 5W-30, 10W-30
- ILSAC GF-6B, 0W-16
- API Service SP, SN PLUS with Resource Conserving MAGNA SYNERGY F-1 meets or exceeds the requirements of:
- Chrysler MS-6395 (except 0W-16)
- Ford WSS-M2C960-A1 (SAE 5W-20)
- Ford WSS-M2C961-A1 (SAE 5W-30)
- Ford WSS-M2C962-A1 (SAE 0W-20)
- GM6094M (obsolete specification) (does not include 0W-16)

Typical Characteristics

SAE Grade	0W-16	0W-20	5W-20	5W-30	10W-30
Specific Gravity @ 60°F	0.846	0.845	0.848	0.85	0.853
Density, lbs/gal @ 60°F	7.05	7.05	7.06	7.1	7.11
Color, ASTM D1500	3	3	3	3	3
Flash Point (COC), °C (°F)	229 (444)	226 (439)	229 (444)	226 (439)	232 (450)
Pour Point, °C (°F)	-43 (-45)	-45 (-49)	-41 (-42)	-40 (-40)	-39 (-38)
Viscosity, Kinematic					
cSt @ 40°C	37.3	42	45.4	61	69.7
cSt @ 100°C	7.3	8	8.7	10.3	11.8
Viscosity Index	163	169	165	169	166
Cold Cranking Viscosity, cP	5000	5700	3650	5900	4000
@ (°C)	(-35)	(-35)	(-30)	(-30)	(-25)
High Temp/High Shear Viscosity, cP @ 150°C	2.3	2.6	2.6	3	3.4
Sulfated Ash, ASTM D874, wt %	0.8	0.8	0.8	0.8	0.8
Total Base Number (TBN), ASTM D2896	7	7.9	7	8.6	7
Phosphorus, wt %	0.077	0.068	0.077	0.068	0.077
Zinc, wt %	0.085	0.074	0.085	0.074	0.085

MAGNA ™ SYNERGY-X

MAGNA ™ SYNERGY-X – is a next generation advance performance ULTIMATE full synthetic engine oil with PAO and Group III base stocks blended with full SAPS additives designed exclusively for the highest level of performance in all passenger cars equipped with gasoline, diesel engines and turbo charged units operating in very extreme conditions.

Applications

MAGNA SYNERGY-X is a high performance multi grade engine oil formulated from SHC & hydro crack synthetic base stocks blended with the most advanced Full SAPS additives technology providing an astounding unmatched performance in extreme usage conditions.
MAGNA SYNERGY-X oil offers the ultimate in performance for exceeding the latest performance standards of leading motor manufacturers and the demands of next generation technology engine incorporating reduced fuel consumption, lowers smoke and sound pollution/emissions.
Gives the most complete/ultimate protection of engines even under the most extreme operating temperature and conditions.

Features & Benefits

- Excellent low temp. pumpability preventing dry run at cold starts and at high temperatures provides stable protective oil film to reduce metal to metal contact.
- Extra ingredients to reduce friction for max power output & help extend drain intervals.
- Reduced emissions and fuel consumption.
- Extremely high resistance to viscosity and thermal breakdown at high temperatures
- Protects against sludge and varnish formation along with excellent high resistance to foaming.
- Excellent wear protection against rust & corrosion.
- Low volatility for reduced oil consumption

Specifications: Meets

API SN

- ACEA A3/B3/B4-12
- BMW LL-01
- MB 229.5
- VW 502.00 / 505.00
- ILSAC GF-5
- Porsche A-40 (5W40)
- Renault RN0700-RN0710 (5W40)

Typical Characteristics

SYNERGY-X SAE	5W-30	5W-40
API Grades	SN	SN
Density @ 15°C Kg/m³	853	855
Kinematic viscosity, 40°C cSt	80	92.1
Kinematic viscosity, 100°C cSt	12.2	14.3
Viscosity Index	158	168
Flash point, COC, °C	224	230
Pour point,°C, Max	-39	-36
Density, lbs/gal @ 60	7.1	7.14
Color, ASTM D1500	3	3
Cold Cranking Viscosity, cP	5600	5700
@ (°C)	(-30)	(-31)
High-Temp/HighShear Viscosity, cP @ 150°C	3.6	3.7
Sulfated Ash, ASTMD874, wt %	1.1	1.1
Total Base Number (TBN), ASTM D2896	7.5	9
Phosphorus, wt %	0.0958	0.0958
Zinc, wt %	0.1051	0.1051

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ SYNERGY – S

PREMIUM SYENTHETIC BLEND LUBRICANTS

MAGNA ™ SYNERGY - S – Is a next generation advance performance synthetic blend engine oil designed for the highest level of performance in all passenger cars equipped with gasoline, diesel engines and turbo charged units.

Applications

MAGNA SYNERGY-S High performance multi grade engine oil formulated from hydro crack synthetic base stocks, premium quality HVI mineral oil and the most advanced additives technology.
SYNERGY-S Engine oil offers the ultimate in performance for exceeding the latest performance standards of leading motor manufacturers and demands of next generation technology engines incorporating reduced fuel consumption, lower smoke, and sound pollution/emissions**. SYNERGY-S** Gives the most complete ultimate protection of engines even under the most extreme operating temperatures and conditions.

Features & Benefits

- Ultimate possible engine protection by stable protective film even beyond extreme operating temperature.
- Provides improved protection for cold starts and high temperatures minimizes sludge and other deposits.
- Extra ingredients to reduce friction for max power output.
- Extended drain intervals.
- Reduce emissions and fuel consumption.
- Excellent resistance to oxidation and corrosion.

Specifications: Meets

API – SN

- **ACEA A3/B3**
- **MB 229.1**
- **VW 500.00, 505.00**
- **GM -LL-B-025**
- **BMW LONG LIFE APPROVAL**

Typical Characteristics

SYNERGY-S SAE	10W 40
API Grades	SN
Specific Gravity @ 60°F	0.869
Density @ 15°C Kg/m³	880
Color, ASTM D1500	3
Kinematic viscosity, 40°C cSt	112
Kinematic viscosity, 100°C cSt	16
Viscosity Index	153
Flash point, COC, °C	230
Pour point,°C, Max	-36
Cold Cranking Viscosity, cP	6100
@ (°C)	(-25)
High-Temp/HighShear Viscosity, cP @ 150°C	4.1
Phosphorus, wt %	0.077
TBN – mgKOH/g	8.8
Sulphated Ash, %wt	1.02
Zinc, wt %	0.085

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ SYNERGY PREMIUM - XTRA

MAGNA ™ SYNERGY PREMIUM-XTRA – is a high-quality, conventional automotive engine oil designed for use in gasoline-fueled passenger cars and light trucks that do not require an ILSAC GF-6 oil for warranty coverage. The SAE 20W-50 and SAE 10W40 viscosity grades are especially recommended for use in high-performance street engines and competition engines, including both gasoline- and alcohol-fueled racing vehicles and crew/passenger carrying vehicles.

Applications

MAGNA SYNERGY PREMIUM-XTRA is Gasoline-fueled passenger cars, light trucks and sport utility vehicles that do not require an ILSAC GF-6 oil for warranty coverage. Older vehicles where the engine manufacturer specifies monograde engine oil. Competition engines and high-performance street engines

MAGNA SYNERGY PREMIUM-XTRA is formulated to provide excellent wear protection, to minimize sludge and varnish formation, and to resist viscosity and thermal breakdown, even in severe service. It also protects against rust and bearing corrosion and is highly resistant to foaming.

MAGNA SYNERGY PREMIUM-XTRA SAE 20W-50 AND 10W40 also contains a boosted level of zinc dialkyldithiophosphate (ZDDP) additive to provide additional wear protection and enhanced oxidation resistance in the most demanding applications. It is particularly recommended for use in turbocharged engines and in high-performance engines with flat-tappet camshafts, especially during the critical break-in period.

Specifications API – SN

Features & Benefits

- Formulated for engines equipped with turbochargers or superchargers.
- Excellent resistance to viscosity and thermal breakdown at high temperatures
- Protects against sludge and varnish formation.
- Protects against rust and bearing corrosion.
- Highly resistant to foaming.
- High ZDDP content for additional wear protection for engines with flat-tappet camshafts.
- Racetrack and stop/go traffic conditions proven performance.

Typical Characteristics

MAGNA SYNERGY PREMIUM -XTRA SAE	20W-50	10W40
API grade	SN	SN
Specific Gravity @ 60°F	0.883	0.869
Density, lbs/gal @ 60°F	7.35	7.24
Color, ASTM D1500	3.5	3
Flash Point (COC), °C (°F)	230 (446)	230
Pour Point, °C (°F)	-30	-36
Viscosity, Kinematic		
cSt @ 40°C	160	112
cSt @ 100°C	19.4	16
Viscosity Index	125	123
Cold Cranking Viscosity, cP	6300	6100
@ (°C)	(-15)	(-25)
High Temp/High Shear Viscosity, cP @ 150°C	4.9	4.1
Sulfated Ash, ASTM D874, wt %	0.99	1.02
Total Base Number (TBN), ASTM D2896	8	10
Phosphorus, wt %	0.109	0.107
Zinc, wt %	0.12	0.12

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ SYNERGY PREMIUM

MAGNA ™ SYNERGY PREMIUM– High performance engine oil designed for use in all passenger cars equipped with gasoline, diesel engines and turbo charged units.

Applications

MAGNA SYNERGY PREMIUM is blended and manufactured from highly refined base stock incorporating advanced additives which gives unsurpassed conventional protection to automobiles equipped with gasoline, diesel engine and turbo charged units of all major manufacturer.

Specification

API- SL

- ACEA A3/B3
- MB 229.1
- VW 501.01,500.00
- ILSAC GF-4
- Recommended for all Jap, Korean & Chinese OEM

Features & Benefits

- Excellent oil film strength and high oxidation and thermal stability.
- Excellent protection for all driving conditions.
- Premium additives to prevent wear.
- Prevents piston deposits and the formation of black sludge.

Typical Characteristics

SYNERGY PREMIUM SAE	20W50
API Grades	SL
Density @ 15°C Kg/m³	891
Kinematic viscosity, 40°C cSt	178
Kinematic viscosity, 100°C cSt	19.4
Viscosity Index	127
Flash point, COC, °C	230
Pour point,°C, Max	-30
TBN – mgKOH/g	9.5

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ SYNERGY SUPREME

MAGNA ™ SYNERGY SUPREME– High quality advance mineral lubricants for all modern passenger car engine.

Applications

Blended and manufactured from highly refined base stock together with selective advanced special additives to give an excellent level of protection for all passenger cars of all major car manufacturers.

Specification: Meets

API SJ

- ACEA A3/B3
- MB 229.1
- VW 501.01.505.00
- BMW LONG LIFE

Features & Benefits

- Excellent protection against cylinder and cam wear.
- Provides excellent protection at cold start and at high temperatures.
- Extends drainage intervals and reduces maintenance costs.
- Excellent sludge and deposit formation control.
- Prohibits corrosion and protects against rust.

Typical Characteristics

SYNERGY SUPREME -SAE	15W50	20W50
API Grades	SJ	SJ
Density @ 15°C Kg/m³	889	891
Kinematic viscosity, 40 C°cSt	145	173
Kinematic viscosity, 100°C cSt	19	19.4
Viscosity Index	145	127
Flash point, COC, °C	230	220
Pour point,°C, Max	-30	-27
TBN – mgKOH/g	9.2	9.2
Sulphated Ash, %wt	1.2	-

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ SYNERGY SUPER-2000

MAGNA ™ SYNERGY SUPER-2000– High quality monograde engine oil suitable for use in all major passenger cars.

Applications

MAGNA SYNERGY SUPER-2000 Premium quality monograde motor oil manufactured from high quality base stock and high-quality additives which offers very good oxidation stability, antiwar performance and protection against engine deposits, rust, and corrosion.

Specifications: Meets

API SG

- MIL-L-46152 D
- FORD ESE M2C153-E
- GM 6094M

Features & Benefits

- Economy grade for moderate operating conditions.
- Provide good lubrication.
- Keeps engine clean by special additives.
- Excellent protection against oxidation and thermal breakdown.
- Low maintenance cost through better oil performance.

Typical Characteristics

SYNERGY SUPER – 2000 SAE	10W	30	40	50
API Grades	SG	SG	SG	SG
Density @ 15°C Kg/m³	876	888	889	901
Kinematic viscosity, 40°C cSt	43.7	103	155	223
Kinematic viscosity, 100°C cSt	7.3	11.6	14.9	19
Viscosity Index	119	105	105	97
Flash point, COC, °C	210	214	218	230
Pour point,°C, Max	-28	-21	-18	-12
TBN – mgKOH/g	8	8	8	8

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ SYNERGY 4T

MAGNA ™ SYNERGY 4T – is a premium quality, synthetic engine oil designed primarily for use in 4-stroke cycle motorcycles, scooters, and all terrain vehicles (ATVs). It also may be used as transmission oil in motorcycles and ATVs where the manufacturer specifies the use of motor oil in the transmission. 4T Synthetic MA is formulated to provide excellent wear protection, to minimize the formation of sludge and varnish, and to resist viscosity and thermal breakdown at high temperatures. It also protects against rust and bearing corrosion and is resistant to excessive foam buildup and air entrainment. The synthetic formulation provides additional thermal stability at high temperatures. 4T Synthetic MA meets the performance requirements of major motorcycle manufacturers and API Service SL. It meets JASO MA friction test requirements for use in motorcycle engines with integrated clutch and transmission.

Applications

4-stroke cycle motorcycles, scooters, and ATVs
- 4-stroke cycle gasoline engines in other mobile or stationary equipment where an API Service SL quality oil is specified 4T Synthetic MA meets or exceeds the requirements of and is approved for:
- JASO T 903:2011 Performance Classification MA

Features & Benefits

- Enhanced resistance to viscosity and thermal breakdown at high temperatures
- Protects against sludge and varnish formation
- Protects against scuffing and wear
- High shear stability
- Protects against rust and bearing corrosion
- Good resistance to foaming and air entrainment
- Proper frictional properties to avoid clutch slippage

Specifications: Meets

API SL

- **JASO MA**
- **JASO MA2**

Typical Characteristics

MAGNA SYNERGY 4T	10W-40	10W-50
API Grade	SL	SL
Specific Gravity @ 60°F	0.857	0.868
Density, lbs/gal @ 60°F	7.14	7.56
Color, ASTM D1500	2.5	2.5
Flash Point (COC), °C (°F)	234 (453)	234 (453)
Pour Point, °C (°F)	-46 (-51)	-46 (-51)
Viscosity, Kinematic		
cSt @ 40°C	102	138.1
cSt @ 100°C	15	19.5
Viscosity Index	154	156
Cold Cranking Viscosity, cP	6184	6300
@ (°C)	(-25)	(-20)
High Temp/High Shear Viscosity, cP @ 150°C	4.2	5
Sulfated Ash, ASTM D874, wt %	0.98	0.98
Total Base Number (TBN), ASTM D2896	7.7	7.8
Phosphorus, wt %	0.114	0.114
Zinc, wt %	0.125	0.125

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ POWER 2T

MAGNA ™ POWER 2T– Specially developed to cater to the stringent environmental exhaust and lubrication needs of modern two stroke engines.

Applications

MAGNA POWER -2T Contains high tech additives in a polymer reinforced mineral base oil, which prevents spark plug fouling and carbon deposits under the most severe operating conditions considerably lowers the exhaust emissions.

Specifications: Meets

API TC

- JASO FC

Features & Benefits

- Low smoke emissions rating.
- Exceptionally high engine and spark plug cleanliness.
- Controls combustion chamber deposits.
- Prolong engine life.
- Excellent miscibility with the fuel.

Typical Characteristics

MAGNA POWER 2T	TC/FC
API Grades	
Density @ 15°C Kg/m³	891
Kinematic viscosity, 40 °C cSt	
Kinematic viscosity, 100°C cSt	14.4
Viscosity Index	121
Flash point, COC, °C	85
Pour point,°C, Max	-15
TBN – mgKOH/g	1.19
Sulphated Ash, %wt	0.05

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ SYNERGY POWER

MAGNA ™ SYNERGY POWER– Is economical all round performance monograde engine lubricants suitable for all passenger cars.

Applications

MAGNA SYNERGY POWER Used as all round engine lubricant in passenger cars and some light duty vans operating in moderate conditions.

Features & Benefits

API SF

- MIL-L-46152 B

Features & Benefits

- Good control over corrosion and rust.
- Protects engine against wear and tear.
- All round performance.
- Standard oil drain capabilities.
- Good detergent and dispersant qualities.

Typical Characteristics

MAGNA SYNERGY POWER -SAE	10W	30	40
API Grades	SF	SF	SF
Density @ 15°C Kg/m³	876	888	892
Kinematic viscosity, 40°C cSt	44.3	102	154
Kinematic viscosity, 100°C cSt	7.2	11.4	14.5
Viscosity Index	120	104	105
Flash point, COC, °C	202	210	216
Pour point,°C, Max	-30	-22	-14
TBN – mgKOH/g	6.5	6.5	6.5

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ SYNERGY OUTBOARD MOTOR OIL

MAGNA ™ SYNERGY OUTBOARD MOTOR OIL– High performance two stroke outboard motor oil for use in high power water and air cooled engines.

Applications

MAGNA SYNERGY OUTBOARD MOTOR OIL Blended from high quality base oils and special additives which keeps spark plugs, pistons clean of carbon deposits. It can be mixed with leaded and unleaded gasoline in self-mixing or oil injections systems.

Special note: Always follow manufacturer recommended oil-fuel ratio for better performance.

Specifications: Meets

- NMMA TC-W3
- SAE J 1536/ FLUIDITY GRADE 3

Features & Benefits

- Excellent protection against corrosion and wear.
- Gives excellent protection against deposits.
- Protection against spark plug fouling and pre-ignition.
- Miscible with all gasoline around the year.
- Reduce exhaust emissions.

Typical Characteristics

MAGNA ™ SYNERGY OUTBOARD MOTOR OIL	
Density @ 15°C Kg/m³	866
Kinematic viscosity, 40°C cSt	42
Kinematic viscosity, 100°C cSt	7.1
Viscosity Index	121
Flash point, COC, °C	83
Pour point,°C, Max	-38
TBN – mgKOH/g	4.5
Sulphated Ash, %wt	<0.02

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

DIESEL ENGINE LUBRICANTS

Haul it up the Magna way

MAGNA ™ GLOBEUS SUPREME D-X3 SYN

MAGNA ™ GLOBEUS SUPREME D-X3 SYN– D X3 (Exhaust Advantage) Diesel Engine Oil with Liquid Titanium protection additive is a premium quality, part-synthetic API CK-4 engine oil developed for use in four-stroke cycle diesel engines designed to meet 2007 and later EPA on-highway exhaust emissions standards. It is specially formulated for compatibility with exhaust after-treatmentsystems using diesel particulate filters (DPF), diesel oxidation catalysts (DOC) and/or selective catalytic reduction (SCR). It is back serviceable for use in pre-2007 diesel engines.

Applications

On-highway diesel trucks equipped with EGR and exhaust aftertreatment systems to meet2007/2010 emissions standards. Older diesel equipment with conventional, non-EGR engines or ACERT engines Off-highway construction, earth moving and mining equipment.

Features & Benefits

- Excellent protection for newer low-emission diesel engines and older diesel engines
- Specially formulated to protect exhaust after-treatment systems.
- Exclusive Liquid Titanium protection additive provides enhanced oxidation resistance and protection against engine wear.
- Outstanding soot control for protection against abrasive wear and soot-induced oil thickening
- Outstanding resistance to viscosity and thermal breakdown at high temperatures
- Protects against sludge and varnish formation.
- Protects against rust and bears corrosion.
- Excellent low-temperature pumpability with soot-laden oil
- High shear stability
- Good resistance to foaming and aeration.

Specification: Meets

API CK-4

- API Service CK-4, CJ-4, CI-4 PLUS
- Cummins CES 20086
- Detroit Diesel DFS 93K222
- Mack EOS-4.5
- Mercedes-Benz Sheet 228.31 (SAE 15W-40)
- MTU MTL 5044 Type 2.1 (SAE 15W-40)
- Renault VI RLD-4
- Volvo VDS-4.5
- Ford WSS-M2C171-F1
- ACEA E9
- Caterpillar ECF-3, ECF-2, ECF-1-
- Chrysler MS-10902 (SAE 15W-40)
- JASO DH-2 (SAE 15W-40)
- Diesel engines manufactured by OEMs not listed above, where the OEM specifies API CK-4 engine oil

Typical Characteristics

MAGNA GLOBEUS SUPREME D-X3 SYN	SAE	15W-40
Specific Gravity @ 60°F		0.875
Density, lbs/gal @ 60°F		7.29
Color, ASTM D1500		4
Flash Point (COC), °C (°F)		240 (464)
Pour Point, °C (°F)		-40 (-40)
Viscosity, Kinematic		
cSt @ 40°C		119
cSt @ 100°C		15.4
Viscosity Index		135
Cold Cranking Viscosity, cP @(°C)		6400 (-20)
High-Temp/High-Shear Viscosity, cP @ 150°C		4.4
Sulfated Ash, ASTM D874, wt %		1
Total Base Number (TBN), ASTM D2896		10.5
Titanium, wt %		0.01
Zinc, wt %		0.122
Phosphorus, wt %		0.11

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notificati on.

MAGNA ™ GLOBEUS PREMIUM - XHD

MAGNA ™ GLOBEUS PREMIUM XHD– is premium HDEO formulated exclusively from **GROUP II** Base stocks and high-quality additives with a **HIGH TBN** value to provide advance superior lubricant performance with excellent soot thickening control, enhanced shear stability, improved seal compatibility increased wear protection at low temperature. It delivers exceptional performance by superior pumpability at cold start up and delivers exceptional performance at extreme temperatures. It also gives excellent piston cleanliness, protection from bearing corrosion, bore polish control, cylinder liner wear protection and better oxidation stability at higher oil temperatures.

Applications

MAGNA GLOBEUS PREMIUM-XHD Premium quality heavy duty diesel engine oil formulated from highly refined base stock with special POLYMER additives and fluorescent signature which meets the latest stringent performance require DHD-1, CUMMINS, CES-20078, VOLVO VDS-3 and is highly recommended for use in medium, heavy duty diesel engines with EGR. Off road construction machinery, mining industry, farming, marine, and long on highway applications. It is a highly versatile engine oil designed to meet mix fleet operation to save costs.

Features & Benefits

- Provides excellent cold start lubrication to minimize wear.
- High detergent & dispersant properties to minimize carbon deposits.
- Provides extended oil drain intervals and reduces maintenance costs.
- Excellent protection against bore polishing and cam wear.
- Provides strong film for severe operation under severe conditions.
- Helps in low oil consumption.
- Prohibits corrosion and protect against rust.
- Recommended for engines incorporating exhaust gas recirculation system (EGR)
- Exceptional anti-corrosive properties due to **'' HIGH TBN ''**formulations.
- Greater Oxidation and chemical stability due to high quality hydrocracked **GROUP II** base stocks

Specification: Meets

API CI-4 PLUS

- API Service CI-4 with CI-4 PLUS, CI-4, CH-4, SL
- Cummins CES 20078
- Detroit Diesel DFS 93K214
- Mack EO-N Premium Plus 03
- Mercedes-Benz Sheet 228.3
- Renault VI RLD-2
- Volvo VDS-3
- ACEA E7-04, E5-02, E3-96
- Caterpillar ECF-2, ECF-1-a

Typical Characteristics

GLOBEUS PREMIUM XHD SAE	15W40	10W30
API Grades	CI-4 PLUS	CI-4 PLUS
Density @ 15°C Kg/m³	887	871
Kinematic viscosity, 40℃ cSt	115	81
Kinematic viscosity, 100°C cSt	15.1	12
Color, ASTM D1500	L 4.0	L 4.0
Cold Cranking Viscosity, cP @0°C	6400	6300
High-Temp/HighShear Viscosity, cP @ 150°C	4.3	3.6
Zinc, wt %	0.128	0.122
Viscosity Index	141	144
Flash point, COC, °C	238	226
Pour point,°C, Max	-20	-40
TBN – mgKOH/g	11.8	10.5
Sulphated Ash, % wt	1.5	1

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ GLOBEUS RX-ULTRA

MAGNA ™ GLOBEUS RX-ULTRA– Designed to provide advance lubricant performance in modern low emission diesel engines operating under a wide variety of service conditions.
Manufactured from premium quality group II base stock and a unique dispersive polymer technology which provides excellent soot control, cold start, valve train wear protection and soot control.

Applications

Highly recommended for use in medium, heavy duty diesel engines with EGR, off highway construction machineries, mining industry, farming, marine, and long on highway applications. It is a highly versatile engine oil designed to meet mix fleet operations to save the costs.

Specifications: Meets

API CH-4

- ACEA E5-99/E3-9/E2-96
- CUMMINS CES 20071, CES 20076
- MB 228.3, 228.1, 229.1
- VOLVO VDS-2
- MAN 3275, 271
- MACK EOL, EO-M, EO-M+
- MTU TYPE 2
- DDC 2000/4000 TYPE 2

Features & Benefits

- Provides excellent cold start lubrication to minimize wear.
- High detergent properties to minimize carbon deposits.
- Prolongs oil drain intervals and reduces maintenance costs.
- Excellent protection against bore polishing and cam wear.
- Provides strong film for severe operation under severe conditions.
- Helps in low oil consumption.
- Prohibits corrosion and protect against rust.

Typical Characteristics

GLOBEUS RX-ULTRA SAE	10W40	15W40	20W50
API Grades	CH-4	CH-4	CH-4
Density @ 15°C Kg/m³	860	887	889
Kinematic viscosity, 40°C cSt	99.3	180	190
Kinematic viscosity, 100°C cSt	14.2	15.3	20
Viscosity Index	152	138	129
Flash point, COC, °C	233	228	242
Pour point,°C, Max	-36	-20	-17
TBN – mgKOH/g	9.8	10.6	10.5
Sulphated Ash, %wt	0.86	1.5	1.4

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ GLOBEUS TURBO-5000

MAGNA ™ GLOBEUS TURBO-5000– Premium quality heavy duty engine oil formulated from highly refined base stock and specially selected chemical additives with fluorescent signature which exceeds the latest stringent performance requirements of CF-4 classifications, and engines equipped with exhaust gas recirculation (EGR).

Applications

MAGNA GLOBEUS TURBO-5000 Formulated for superior performance with excellent soot thickening control. Enhanced shear stability, improved seal compatibility increased wear protection at low temperature starts up. It delivers exceptional performance by sustaining engine durability and improved oil life by extending drain intervals. It also gives excellent piston cleanliness, protection from bearing corrosion, bore polish controls, cylinder liner wear protection and better oxidation stability at higher temperatures.

Specifications: Meets

API CG-4, CF-4

- ACEA E-3/B-3/A-3
- CUMMINS NTC 400
- MB 228.3,228.1
- VOLVO VDS-2
- ALLISON C-3, C-4
- MAN 3275,271
- MACK EO- M+, EO-K2
- CAT ECF-1 SPECS, TO-2
- VW 505.00

Features & Benefits

- Provides excellent cold start lubrication to minimize wear.
- High detergent properties to minimize carbon deposits.
- Prolongs oil drain intervals and reduces maintenance costs.
- Excellent protection against bore polishing and cam wear.
- Provides strong film for severe operation under severe conditions.
- Helps in low oil consumption.
- Prohibits corrosion and protects against rust.
- Recommended for engines incorporating exhaust gas recirculation system (EGR).

Typical Characteristics

GLOBEUS TURBO - 5000 SAE	15W40
API Grades	
Density @ 15°C Kg/m³	887
Kinematic viscosity, 40°C cSt	109
Kinematic viscosity, 100°C cSt	14.3
Viscosity Index	140
Flash point, COC, °C	233
Pour point,°C, Max	-27
TBN – mgKOH/g	10.6
Sulphated Ash, %wt	1.2

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ GLOBEUS XHD-XTRA

MAGNA ™ GLOBEUS XHD-XTRA– Premium quality versatile monograde diesel engine oil manufactured from high quality base oil and advanced chemical additives for use in mixed fleet operations.

Applications

MAGNA GLOBEUS XHD XTRA Used as engine oil in turbo-charged and naturally aspirated diesel and gasoline engines. They also meet the transmission oil requirement for some off-road, construction and military equipment. Specially formulated to protect engines from extreme wear, deposit and sludge formations.

Specifications: Meets

API CF

- ACEA E1-96
- MB 227.0
- ALLISON C-3
- CATERPILLAR TO-2
- MAN 270

Features & Benefits

- Excellent high thermal stability and resistance to oxidation.
- Controls low temperature sludge formation.
- Ensures engine and cam cleanliness.
- Excellent resistance to corrosion and rust.
- Limits engine and transmission wear.

Typical Characteristics

GLOBEUS XHD - XTRA SAE	10W	30	40	50
API Grades	CF	CF	CF	CF
Density @ 15°C Kg/m³	878	895	900	905
Kinematic viscosity, 40°C cSt	46	106	158	238
Kinematic viscosity, 100°C cSt	7.2	12.3	15.5	19.1
Viscosity Index	115	104	106	102
Flash point, COC, °C	210	214	220	238
Pour point,°C, Max	-33	-21	-15	-11
TBN – mgKOH/g	10	10	10	10
Sulphated Ash, %wt	1.3	1.3	1.3	1.3

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification .

MAGNA ™ GLOBEUS HD PRIMA

MAGNA ™ GLOBEUS HD PRIMA– High performance diesel engine oil blended from high quality base stock and quality chemical additives for use in mic fleet operations.

Applications

MAGNA GLOBEUS HD PRIMA High quality versatile engine oils designed for use in mix fleet operations. They are specially formulated using high quality base oils and advanced chemicals additive system to provide a high level of engine protection even in severe conditions for use in naturally aspirated diesel, mildly turbo charged and gasoline engines.

Specifications: Meets

API CD

- MIL-L-2104 D,46152C
- CAT TO-2
- MB 227.0/227.1
- GM 6048-M

Features & Benefits

- Excellent choice for mixed fleet.
- High TBN lubricants protect the engine against corrosion and wear.
- Excellent thermal shear stability.
- Protects high temperature deposits and bore polish.
- Exceptional detergency/dispersancy properties.

Typical Characteristics

GLOBEUS HD PRIMA SAE	10W	30	40	50
API Grades				
Density @ 15°C Kg/m³	876	882	896	903
Kinematic viscosity, 40°C cSt	45	103	160	225
Kinematic viscosity, 100°C cSt	6.8	12.2	15.3	19.1
Viscosity Index	102	103	99	98
Flash point, COC, °C	220	225	230	240
Pour point,°C, Max	-13	-12	-11	-11
TBN – mgKOH/g	10	10	10	10
Sulphated Ash, %wt	1.4	1.4	1.4	1.4

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ GLOBEUS - XTREME

MAGNA ™ GLOBEUS - XTREME– Heavy duty diesel engine oil to meet the requirements of vehicle running on high Sulphur fuel.

Applications

MAGNA GLOBEUS EXTREME Specially formulated with high quality base stock and special chemical additives for use in all naturally aspirated and turbo charged diesel engines running on high Sulphur diesel fuels.

Specifications: Meets

API CD

- MIL-L-2104D
- DEF-2101 D
- CAT-SERIES 3

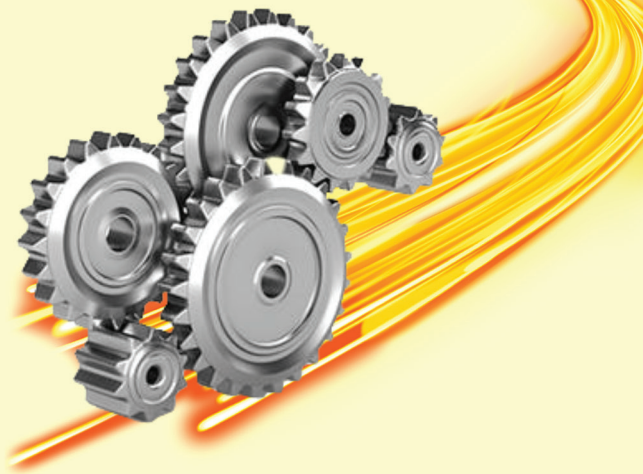
Features & Benefits

- High TBN lubricants protect the engine against corrosion and wear when using 1.0% and above mass Sulphur diesel fuel.
- Provides excellent engine cleanliness.
- Reduces engine wear.
- Provides good thermal stability.
- Protects against oxidation, rust and corrosion.

Typical Characteristics

GLOBEUS XTREME SAE	30	40
API Grades	CD	CD
Density @ 15°C Kg/m³	895	900
Kinematic viscosity, 40°C cSt	106	156
Kinematic viscosity, 100°C cSt	12.3	15.2
Viscosity Index	107	106
Flash point, COC, °C	218	225
Pour point,°C, Max	-18	-13
TBN – mgKOH/g	20	20
Sulphated Ash, %wt	2	2

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.



TRANSMISSION FLUIDS AND ANCILLARIES

Transmit Power the Magna way

MAGNA ™ TRACTOR TRANSMISSION FLUID

MAGNA ™ TRACTOR TRANSMISSON FLUID– Multi-viscosity fluid blended from high quality base stock and premium additives system. It is designed to function as a common sump fluid for use as single lubricant for hydraulics systems, transmission, final drive, wet brakes and PTO clutches.

Applications

MAGNA TRACTOR TRANSMISSION FLUID Provides outstanding wear protection for gear and hydraulic pumps. It gives exceptional friction control properties for operation in wet brakes and clutches. Additionally, it provides excellent rust, anti-foaming, and corrosion protection for the complete system.

Specifications: Meets

- MASSEY-FERGUSON M-1141/ 1129A
- FORD NEW HOLLAND FNHA-2-C-201.00
- NEW HOLLAND M2C134-B/C/D
- JOHN DEERE J20C, J20A, J14B
- ALLISON ATD C-4, C-3
- CATERPILLAR TO-2
- DENISON HF-0, HF-1
- SPERRY VICKERS M-2950-S, 1-286-S

Features & Benefits

- Excellent anti-corrosion and anti-rust properties.
- Good thermal/oxidation stability and high level of shear stability.
- Excellent wear protection.
- Excellent friction control for wet brakes and PTO clutches.

Typical Characteristics

TRACTOR TRANSMISSION FLUID SAE	10W30
API GRADE	GL-4
Density @ 15°C Kg/m³	882
Kinematic viscosity, 40°C cSt	69.6
Kinematic viscosity, 100°C cSt	10.2
Viscosity Index	145
Flash point, COC, °C	220
Pour point,°C, Max	-34
TBN – mgKOH/g	9
Sulphated Ash, %wt	1.1

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ HYPOID EP

MAGNA ™ HYPOID EP– High performance extreme pressure transmission fluids meeting the API GL-5 performance.

Applications

MAGNA HYPOID EP Designed for use in hypoid, bevel and spiral gear units, axles and final drives operating under severe operating conditions. They provide superior thermal stability and minimize oxidative sludge and varnish formation. Additionally, they also offer excellent protection against scuffing and wear with good load carrying capacity.

Specifications: Meets

API GL-5

- MIL-L-2105D, 2105B
- MAN 341,342
- VOLVO 235.5,235.6

Features & Benefits

- Excellent fluidity even at low ambient temperatures.
- Good resistance to corrosion and foaming.
- Compatible with all seal material.
- Good gear protection even under shock load conditions.
- Chatter free operations.

Typical Characteristics

HYPOID EP SAE	90	140	80W 90	85W-140
API Grades	GL-5	GL-5	GL-5	GL-5
Density @ 15°C Kg/m³	900	907	742	909
Kinematic viscosity, 40°C cSt	181	470	140	460
Kinematic viscosity, 100°C cSt	16.5	30	14.5	29.5
Viscosity Index	95	97	102	98
Flash point, COC, °C	225	236	212	210
Pour point, °C, Max	-24	-14	-22	-15
Phosphorus	0.11	0.11	0.11	0.11

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ HYPRESS EP

MAGNA ™ HYPRESS EP – Multipurpose Sulphur-phosphorous based extreme pressure superior quality heavy transmission oil recommended for use in passenger cars, commercial vehicles, farming, mining, and other off-road equipment.

Applications

MAGNA HYPRESS EP Specially formulated to meet severe duty operation in heavily loaded gear systems, such as spur, bevel, helical synchronized manual gear boxes, transmissions, and axles where active GL-4 are required.

Specifications: Meets

API GL-4

- MIL-L-2105D
- MAN 341
- MERC BENZ 235.1

Features & Benefits

- Good gear protection even under shock load operations.
- Excellent fluidity even at low ambient temperatures.
- Compatible with all seal material and metals.
- Good resistance to corrosion and foaming.
- Good thermal and oxidative stability.
- Chatter free operations.

Typical Characteristics

MAGNA HYPRESS EP SAE	80W	90	140	80W 90	85W140
API Grades	GL-4	GL-	GL-4	GL-4	GL-4
Density @ 15°C Kg/m³	891	904	920	880	898
Kinematic viscosity, 40°C cSt	92	210	468	146	336
Kinematic viscosity, 100°C cSt	10.3	16.8	31.6	14.5	25
Viscosity Index	102	95	96	97	98
Flash point, COC, °C	218	238	242	220	225
Pour point, °C, Max	-27	-17	-9	-30	-12
Phosphorus	0.07	0.07	0.07	0.08	0.08

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ AUTO GEAR HP

MAGNA ™ AUTO GEAR HP – Light duty non additive type gear lubricants for use in passenger cars, commercial vehicles, and off-road equipment's.

Applications

MAGNA AUTO GEAR HP Designed for use in automotive transmissions, spiral, bevel, and worm gear axles of passenger cars, delivery vans, commercial vehicles and off-road equipment operating under mid load and sliding conditions.

Specifications: Meets
API GL-1

Features & Benefits

- Good resistance to oxidation and high temperature.
- Degradation.
- Good anti-foam properties.
- compatible with all seals and metals.
- Good thermal stability.

Typical Characteristics

MAGNA AUTO GEAR HP SAE	90	140
API Grades	GL-1	GL-1
Density @ 15°C Kg/m³	887	901
Kinematic viscosity, 40°C cSt	192	510
Kinematic viscosity, 100°C cSt	17.3	33
Viscosity Index	96	96
Flash point, COC, °C	260	270
Pour point,°C, Max	-12	-10

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ TRANSMISSION FLUID F

MAGNA ™ TRANSMISSION FLUID F – **ATF** Blended from specially selected base stocks and selective additives system which gives excellent anticipation, defoaming, antiwear and frictional control characteristics which confirms with GENERAL MOTORS TYPE-A suffix A specification.

Applications

MAGNA TRANSMISSION FLUID F Designed for use in modern automatic gearbox where GM type A suffix A or Dexron I are required. It can also be used in many power shift transmissions, industrial torque converters and manual transmissions where a low viscosity fluid is recommended.

Specifications: Meets

- GM ATF TYPE A SUFFIX A
- ALLISON C-3
- MB 236.2
- MAN 339 TYPE A

Features & Benefits

- Compatible with all seals and metal.
- Excellent frictional control for chatter free operations.
- Excellent thermal and oxidation stability.
- High viscosity index insures min. change in viscosity at high temperatures.
- Excellent foaming control.

Typical Characteristics

MAGNA ™ TRANSMISSION FLUID F	
Density @ 15°C Kg/m³	878
Kinematic viscosity, 40°C cSt	39.68
Kinematic viscosity, 100°C cSt	7.83
Viscosity Index	205
Flash point, COC, °C	210
Pour point, °C, Max	-41
Color	Red

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ TRANS-FLUID DX-III

MAGNA ™ TRANS-FLUID DX-III – Multipurpose automatic transmission fluid (ATF) formulated from premium base stocks and advanced additive technology to meet the stringent demands of all modern equipment and machineries. It is a high-quality friction modified lubricant which can be used in electronic and hydraulic controlled transmissions and transaxles.

Applications

MAGNA TRANS-FLUID DX-III Expressly recommended for use in automatic/semiautomatic transmission in passenger cars and commercial vehicles operating under severe, varied conditions. It can also be used as power shift transmissions/hydraulic oils in off-road construction, farming, mining machineries, industrial and marine hydraulic systems equipment.

Specifications: Meets

- GENRAL MOTORS DEXRON-III
- FORD MERCON-III
- ALLISON C-4
- CAT TO-2
- MB 236.1

Features & Benefits

- Excellent compatibility with all seals and metals.
- Excellent anti-wear, anti-foaming, anti-oxidation properties.
- Outstanding low temperature performance.
- Protection against rust and corrosion.
- Superior frictional properties ensure smoothness and trouble.
- Free clutch and brake systems operations.
- High viscosity index insures min. change in viscosity even at high temperatures.

Typical Characteristics

MAGNA ™ TRANS-FLUID DX-III	
Density @ 15°C Kg/m³	869
Kinematic viscosity, 40°C cSt	37.1
Kinematic viscosity, 100°C cSt	7.18
Viscosity Index	190
Flash point, COC, °C	210
Pour point, °C, Max	-38
Color	Red

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ TRANS-FLUID C-4

MAGNA ™ TRANS-FLUID C-4 – Specialized transmission and drive train fluids designed to meet caterpillar TO-4 specification for use in off road equipment. This fluid can be used in Allison transmissions, torque converters and hydraulic system requiring an Allison C-4 fluid.

Applications

MAGNA TRANS FLUID C-4 Designed from premium base stocks and special additive system for use in powershift, direct drive transmissions, winches and final drives of all equipment requiring TO-4 and C-4 fluids.

Specifications: Meets

- CATERPILLAR TO-4
- ALLISON C-4

Features & Benefits

- Good fluidity and low temperature properties.
- Excellent anti-wear protection to critical components.
- Excellent oxidation stability, foam resistance and rust control.
- Superior frictional characteristics.
- Better friction and anti-wear performance compared to TO-4 and C-2 fluids.

Typical Characteristics

MAGNA TRANS-FLUID C-4 SAE	10W	30	40	50
Density @ 15°C Kg/m³	883	898	901	904
Kinematic viscosity, 40°C cSt	38.2	106	151	232
Kinematic viscosity, 100°C cSt	7.1	12.3	15.5	18.9
Viscosity Index	111	107	104	101
Flash point, COC, °C	210	214	220	238
Pour point, °C, Max	-33	-21	-15	-10

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ UNIVERSAL HD BRAKE FLUID

MAGNA ™ UNIVERSAL HD BRAKE FLUID – Premium quality, long life performance synthetic fluid with excellent viscosity-temperature properties, designed with water soluble polyglycol for use in modern brakes and hydraulic clutch systems.

Applications

MAGNA UNIVERSAL HD BRAKE FLUID Heavy duty brake fluid blended from selected inputs incorporating a balanced combination of antioxidant, metal deactivation and corrosion inhibitor to impart a long service life.

Specifications: Meets

- FMVSS NO. 116 DOT 4
- FMVSS NO.116 DOT 3
- SAE J 1703
- ISO 4925

Features & Benefits

- High boiling point/low vapor pressure providing anti vapor lock characteristics leading to Increased vehicle safety.
- Compatible with all gaskets and seals.
- Excellent frictional and wear control between pistons and cylinders in brake systems.
- Long term rust and corrosion protection.
- Outstanding water versatility ensures a long term brake system safety.
- Excellent oxidation and thermal stability.

Typical Characteristics

MAGNA UNIVERSAL HD BRAKE FLUID	
Density @15°C Kg/m³	1055
Kinematic viscosity, 40 °C cSt	1300
Kinematic viscosity, 100°C cSt	2.02
Ph, value	9
Equilibrium reflux boiling point, °C	264
Wet boiling point, °C	165

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ SUPERCOOL COOLANT

MAGNA ™ SUPERCOOL COOLANT – Specially formulated mixture of ethylene glycol and selected chemical agents, free of amines, phosphorus, nitrites available in different concentrations level for mixed fleet operations.

Applications

MAGNA SUPERCOOL COOLANT Engine coolant concentrates for use in diesel and gasoline engines of all makes and types operating under severe service at extremely high and low temperatures.

Specifications: Meets

- SAE J 1034
- ASTM D 3308/3306
- BMW 1701
- MAN 324
- MB 7700.00

Features & Benefits

- Excellent choice for mixed fleet operations.
- Outstanding cooling power in all seasons.
- Excellent and effective lasting protection against corrosion.
- Compatible with all rubbers.
- Good antifoam abilities.
- Better cooling system protection because of the absence of metal salts in water.
- Noncorrosive to cast iron and aluminum parts.
- Prevention against electrolysis.

Typical Characteristics

SUPER COOL	33%	50%	100%
Density @ 15°C Kg/m³	1040	1070	1130
pH(50% vol. in water)	8.1	7.7	7.7
Reflux boiling point	103	106	170
freezing protection	-14	-36	-36

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

INDUSTRIAL LUBRICANTS AND SPECIALITES

Industrialize the Magna way

MAGNA ™ HYDRO FLUID AWH

MAGNA ™ HYDRO FLUID AWH – Premium quality hydraulic oil designed from highly refined base stocks, selective balanced additive system to give a high degree of wear, rust and oxidation control properties and are also compatible with all seal materials commonly used in hydraulic systems.

Applications

MAGNA HYDROFLUID AWH is Primarily used for hydraulic equipment but can be used where lubricants with good oxidation stability and anti-wear properties are needed. HYDROFLUID AWH can also be used in circulation systems, compressors, pumps, and gear lubrication where rust and oxidation inhibited oil is required.

Specifications: Meets

- ISO 6743/4, CATEGORY HM
- DIN 51524 PART II
- DENISON HF-0
- CINCINNATI MILACRON P-68, P-69, P-70
- U.S STEEL 127

Features & Benefits

- Excellent anti-wear performance based on zinc Di thiophosphate additive.
- Excellent rust and anti-foam properties.
- Outstanding high/low temperature operating properties.
- Excellent hydrolytic stability in the presence of water.
- Outstanding filterability and good shear stability.
- compatible with all seals and metals.
- Good frictional control.

Typical Characteristics

MAGNA HYDRO FLUID AWH ISO VG	32	46	68	100	150
Density @ 15°C Kg/m³	861	874	883	886	890
Kinematic viscosity, 40°C cSt	32	46	68	100	149.5
Kinematic viscosity, 100°C cSt	5.5	6.7	8.8	11.4	14.1
Viscosity Index	97	96	100	99	99
Flash point, COC, °C	204	210	220	226	242
Pour point, °C, Max	-30	-30	-30	-30	-18
Rust Test	PASS	PASS	PASS	PASS	PASS
Oxidation stability, hrs	3000+	3000+	3000+	3000+	3000+
Zinc, wt %	0.043	0.043	0.043	0.043	0.043

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ HYDROFLUID HV-AWH

MAGNA ™ HYDROFLUID HV-AWH– Premium quality hydraulic oil designed from highly refined base stocks, selective balanced additive systems and possessing a higher VISCOSITY INDEX to give a high degree of wear, rust and oxidation control properties and are also compatible with all seal materials commonly used in hydraulic systems.

Applications

MAGNA HYDROFLUID HV-AWH are primarily used for machinery which operates in a wide variation of temperature or in equipment's that require hydraulic fluid whose viscosity changes with temperature is minimal and can function even at low temperature.

Specifications: Meets

- ISO 6743/4, CATEGORY HM
- DIN 51524 PART II
- DENISON HF-0
- CINCINNATI MILACRON P-68, P-69, P-70
- U.S STEEL 127

Features & Benefits

- Excellent anti-wear performance based on zinc Di thiophosphate additive.
- Excellent rust and anti-foam properties.
- Outstanding high/low temperature operating properties due to high viscosity index.
- Excellent hydrolytic stability in the presence of water.
- Outstanding filterability and good shear stability.
- compatible with all seals and metals.
- Good frictional control

Typical Characteristics

HYDROFLUID HV -AWH ISO	32	46	68	100	150
Density @ 15°C Kg/m³	861	874	883	886	890
Kinematic viscosity, 40 °C cSt	32	46	68	100	149.5
Kinematic viscosity, 100°C cSt	5.5	6.7	8.8	11.4	14.1
Viscosity Index	138	145	147	148	150
Flash point, COC, °C	204	210	220	226	242
Pour point,°C, Max	-30	-30	-30	-30	-18
Rust test	pass	pass	pass	pass	pass
Oxidation stability, hrs	3000+	3000+	3000+	3000+	3000+
Neutralize value	0.5	0.5	0.5	0.5	0.5

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ EP INDUSTRIAL GEAR OIL

MAGNA ™ EP INDUSTRIAL GEAR OIL– Formulated with highly refined high viscosity index (HVI) base oil and special Sulphur-phosphorus EP (extreme pressure) additive system designed to minimize wear of enclosed gears and other equipment operating under heavy loads and shock conditions.

Applications

MAGNA EP INDUSTRIAL GEAR OIL Provides outstanding protection in industrial gear sets operating under severe conditions where extreme pressure properties and adequate film strength are critical for component protection and can withstand intermittent shock loads, high peak loads and heavy tooth loads. They are recommended for use in spur, bevel, helical, worm and industrial hypoid gear cases as well as plain, ball, roller and sleeve type bearings and for lubrication of slides, ways, sprockets, chain drives, winches, hoists and machine tools.

Specifications: Meets

- US STEEL 224
- AGMA 250.04,251.02
- DIN 51517, PART 3
- CINCINNATI MACHINE
- DAVID BROWN S1.53.101

Features & Benefits

- Superior bearing protection.
- Excellent anti-foam protection.
- Excellent rust and corrosion protection.
- Resistance to oxidative sludge and varnish formation.
- Protection from galling, scuffing and welding of gear teeth.
- Noncorrosive to bronze, brass, copper, and other copper alloy parts.

Typical Characteristics

EP INDUSTRIAL GEAR OIL ISO	68	100	150	220	320	460	680
Density @ 15°C Kg/m³	886	898	903	907	912	921	929
Kinematicviscosity, 40°C cSt	68	100	150	220	320	460	680
Kinematic viscosity, 100°C cSt	8.6	11	14.4	18.7	28.8	30	40
Viscosity Index	97	96	95	95	95	95	98
Flash point, COC, °C	214	226	236	236	260	286	304
Pour point,°C, Max	-15	-5	-15	-12	-13	-9	-3
FZG Scuffing test	12	12	12	12	12	12	12
Four-ball wear test, mm	0.27	0.27	0.26	0.27	0.26	0.23	0.23
Four-ball EP test							
Load-wear index, Kgf	47	47	47	54	65	66	66
Weld point, Kgf	250	250	250	250	250	250	250
Timken OK load, lbs	60	60	60	65	65	75	75
Cincinnati Machines	P-63	P-76	P-77	P-74	P-59	P-35	

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ PREMIUM AIR COMPRESSOR OIL

MAGNA ™ PREMIUM AIR COMPRESSOR OIL– Highly refined mineral oils coupled with a well-balanced additive system to give antioxidant, anti- corrosion, anti- foam properties to the oil for use in reciprocating type air compressor.

Applications

MAGNA PREMIUM AIR COMPRESSOR OIL Recommended for the lubrication of reciprocating type air compressors. They are particularly suitable for compressors with high air delivery temperatures up to 220 C, where oil of inferior quality could considerably damage the compressor and the discharge system so as to which can lead to fire and explosions hazards. **MAGNA PREMIUM COMPRESSOR OIL** is recommended for use in high speed, single or multistage centrifugal, rotary, screw, vane, and reciprocating compressors used in construction projects, mining, stationary, industrial, and outdoor applications confirming to DIN 51506, category VDL.

Specifications: Meets

- ISO DP 6743/3.2 CATEGORIES DAA-DAB
- DIN 51506 CATEGORY VDL

Features & Benefits

- Outstanding low volatility and minimum carbon deposit formation tendency to avoid the hazards of fire and explosions.
- Extended oil change intervals contributing to reduction in maintenance costs.
- Highly effective control over wear, rust and corrosion.
- Excellent resistance to oxidation and foaming.
- Strong demulsibilty power, air release capability and filter ability.

Typical Characteristics

PREMIUM AIR COMPRESSOR OIL ISO	32	46	68	100	150
Density @ 15°C Kg/m³	871	877	881	884	890
Kinematic viscosity, 40°C cSt	32	46	68	100	150
Kinematic viscosity, 100°C cSt	5.5	6.68	8.8	11.3	14.6
Viscosity Index	102	101	100	99	98
Flash point, COC, °C	221	228	238	242	258
Pour point,°C, Max	-21	-21	-24	-18	-12
TAN, mgm KOH/gm	0.17	0.17	0.17	0.17	0.17
Demulsibility	40-40-0	40-40-0	40-40-0	40-38-2	40-37-2
Rust test	Pass	Pass	Pass	Pass	Pass
Pneurop oxidation test	0.68	0.78	0.88	0.96	1.03

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ GAS ENGINE OIL-RS

MAGNA ™ GAS ENGINE OIL-RS– Formulated with high quality base oil having a high viscosity index (HVI) and state of art chemical additive system to meet the stringent demands of natural gas engines and compressors which needs low ash detergents to prevent deposits on pistons and exhaust parts.

Applications

MAGNA GAS ENGINE OIL-RS Recommended for all gas engines requiring low ash forming lubricating oils. They have excellent thermal stability which ensures protection of the engine, in addition they protect engine against sludge and varnish deposits while continuing to avert corrosion to engine components and offer good resistance to oxidation and foaming.

Specifications: Meets

API CD

- DRESSER RAND
- AJAX
- COOPER-SUPERIOR
- CATERPILLAR
- WAUKESHA

Features & Benefits

- compatible with all catalytic converters.
- Low ash additives ensure engines cleanliness.
- Excellent thermal stability to high HVI.
- Extended oil change and service intervals.
- High alkalinity reserves neutralize acids from high Sulphur in fuel.

Typical Characteristics

GAS ENGINE OIL-RS SAE	15W40	30	40
API Grades	CD	CD	CD
Density @ 15°C Kg/m³	881	883	889
Kinematic viscosity, 40°C cSt	106.7	99.6	135
Kinematic viscosity, 100°C cSt	14.5	11.3	14
Viscosity Index	138	96	96
Flash point, COC, °C	238	230	235
Pour point,°C, Max	-30	-27	-18
TBN – mgKOH/g	10	9	9
Sulfated Ash, ASTM D874, wt %	0.4	0.4	0.4
Phosphorus, ppm	284	284	284

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ CIRCULATION OIL GP

MAGNA ™ CIRCULATION OIL GP– Premium quality, additive free oil designed from highly refined base stocks inherently possessing good resistance to oxidation, good demulsification properties and high viscosity index.

Applications

MAGNA CIRCULATIONS OIL GP Primarily use for equipment where non-additive type lubricant fluid is required having inherent resistance to oxidation and good thermal stability. MAGNA CRCULATION OIL GP can be used in circulatory systems for rolling mills and calendars, vacuum pumps and hydraulic systems where type HH fluid is required.

Specifications: Meets

- ISO 6743/0 CATEGORY A
- DIN 51501 CATEGORY L-AN

Features & Benefits

- Relatively long life due to a high natural oxidation resistance.
- Outstanding high/low temperature operating properties.
- Excellent hydrolytic stability in the presence of water.
- Outstanding filter ability and good shear stability.
- Fair resistance to foaming, rust and corrosion.
- Good frictional control.

Typical Characteristics

CIRCULATION OIL GP ISO	32	46	68	100	150
Density @ 15°C Kg/m³	861	874	883	886	890
Kinematic viscosity, 40°C cSt	32	46	68	100	149.5
Kinematic viscosity, 100°C cSt	5.5	6.7	8.8	11.4	14.1
Viscosity Index	97	96	100	99	99
Flash point, COC, °C	214	220	230	245	258
Pour point,°C, Max	-30	-30	-30	-30	-18
Neutralization value mgKOH/g	0.03	0.03	0.03	0.03	0.03

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ MAX TURBINE R & O

MAGNA ™ MAX TURBINE R & O –Premium quality, zinc free oil designed from highly refined base stocks, selected additives and inherently possessing good resistance to oxidation, rust, foaming, good demulsification properties and high viscosity index for good load carrying properties.

Applications

MAX TURBINE R & O Primarily used for TURBINES and equipment where ashless type lubricant fluid is required having inherent resistance to oxidation and good thermal stability. MAGNA MAX TURBINE R & O can be used for the lubrication of all parts of heavy duty, high speed steam, water and gas turbines used in electric power generation, power take off and marine propulsion using nonferrous alloys operating under severe service conditions.

Specifications: Meets

- BS 489:1983
- DIN 51515
- GENERAL ELECTRIC GE-K-32568A/B
- BROWN BOVERI HT GD 90117E
- ALSTHOM ATLANTIQUE NBA P50001

Features & Benefits

- Relatively long life due to a high natural oxidation resistance.
- Outstanding high/low temperature operating properties.
- Excellent hydrolytic stability in the presence of water.
- Outstanding filter ability and good shear stability.
- Fair resistance to foaming, rust and corrosion.
- Good frictional control.
- Low sludging tendency and outstanding load carrying ability.

Typical Characteristics

MAX TURBINE R & O ISO	32	46	68	100	150	220
Density @ 15°C Kg/m³	869	873	883	886	889	882
Kinematic viscosity, 40 °C cSt	32	46	68	100	150	220
Kinematic viscosity, 100°C cSt	5.3	6.7	8.5	11	14.3	18.8
Viscosity Index	98	98	98	101	97	96
Flash point, COC, °C	211	215	240	246	250	258
Pour point,°C, Max	-33	-27	-25	-25	-18	-11
Copper strip, 100°C, 3 h	1	1	1	1	1	1
Foam test	Pass	Pass	Pass	Pass	Pass	Pass
Demulsibility	40-40-0	40-40-0	40-40-0	40-40-0	40-39-1	40-39-1
TAN-mgKOH/g	0.07	0.07	0.07	0.07	0.07	0.07
Rust test	Pass	Pass	Pass	Pass	Pass	Pass
Oxidation stability, hrs	6000+	6000+	6000+	6000+	6000+	6000+

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ TRANSMOL-BS

MAGNA ™ TRANSMOL-BS– Naphthenic based insulating and cooling oil for transformers, switch gear and circuit breakers.

Applications

MAGNA TRANSMOL-BS Supreme quality insulating and cooling oil with high level of di-electric strength, designed with extremely filtered thermally and chemically stable base stock for use in transformers, rheostats, circuit breakers, high voltage switch gears, condensers and other electrical equipment operating under severe critical conditions, subject to great thermal stresses.

Specifications: Meets

- BS 148:1984 CLASS I AND CLASS II
- IEC 296 CLASS I AND CLASS II
- NFC 27101
- DIN 57 370 PART 1 CLASS A
- VDE 0370 CLASS A

Features & Benefits

- Relatively long life due to a high natural oxidation resistance.
- Outstanding high/low temperature operating properties.
- Higher initial interfacial tension for smoother function.
- Outstanding filterability and good shear stability.
- Long term resistance to foaming, rust and corrosion.
- Exceptional di-electric strength and low power loss.
- Excellent resistance to acid and sludge formation.

Typical Characteristics

TRANSMOL-BS	
Sp. Gravity @ 15°C	0.851
Viscosity, 40°C cSt	12.85
Flash point, COC, °C	203
Pour point, °C	-40
TAN, mgm KOH/gm	0.2
Oxidation test, sludge value % (IEC 74)	0.07
Breakdown voltage, KV (IEC 156)	65

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ THERMAX FLUID

MAGNA ™ THERMAX FLUID– High quality oil designed with VI paraffinic oil and specially selected chemical additive system which imparts low vapor pressure, high thermal stability, specific, heat and thermal conductivity to the oil.

Applications

MAGNA THERMAX FLUID Recommended for non-pressurized, closed liquid phase heating systems operating up to 310 C. such systems are widely used in the food, construction, plastic, timber, asphalt plants metal industries as well as laundries, ships and where waste heat is extracted from flue gases.

Special note: the term flash point and fire point, in the typical characteristics constitute purely technical results achieved at specific tests they cannot be assumed to be actuals, for in a heat transfers system it is quite normal for the oil temperature to be higher than its flash and fire point resulting in hazards like explosions and fire.

Features & Benefits

- Excellent resistance to sludging and fouling of heat transfer zone.
- Excellent fluidity at low temperatures ensures easy circulation.
- High thermal and oxidation stability at high temperatures.
- Good long-term rust and corrosion protection.
- Excellent heat transfer properties and consistently high heat transfer performances.

Typical Characteristics

THERMAX FLUID ISO	32	46	68	100
Density @ 15°C Kg/m³	874	877	891	894
Kinematic viscosity, 40 °C cSt	32	46	68	100
Kinematic viscosity, 100°C cSt	5.5	6.7	8.7	11.3
Viscosity Index	102	101	100	100
Flash point, COC, °C	220	224	232	236
Pour point,°C, Max	-12	-10	-9	-9
Fire point, COC, °C	243	243	241	240
Autogeneous ignition temperature°C	345	345	345	345

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ MOULD RELEASE OIL-RS

MAGNA ™ MOULD RELEASE OIL-RS– Mineral oil fortified with special chemical additives to give more spreading properties. It should be applied by brush, spray, roller or swabs. MAGNA MOULD RELEASE OIL-RS are available in LOW/HIGH viscosity grades for multiple operations.

Applications

Used to coat the walls and floors of moulds prior to pouring aerated concrete. Due to its special composition and easy spreading and elastic nature this oil is ideal for aerated blocks and construction industries.

Special note : Excessive application can result in staining and discoloration of the aerated concrete product.

Features & Benefits

- Excellent ease of application.
- Provides good surface finish of the concrete.
- Prevents mould damage.
- Allow easy removal of the concrete from the mould.
- Excellent spreading abilities.

Typical Characteristics

MOULD RELEASE OIL -RS		
Density @ 15°C kg/m³	853	898
Kinetic Viscosity, 40 cSt	7.7	150
Flash point, COC, °C	120	248
Pour point,°C, max	-12	-7
water displacing characteristics	positive	positive

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ SOL-CUT OIL

MAGNA ™ SOL-CUT OIL– Non-phenolic coupled solvent refined nitrites free water-soluble cutting fluid which forms a stable milky white emulsion when mixed with water, and contains biocide/fungicide to give the fluid extended service life. It also contains a non-silicone anti-foam agent.

Applications

Suitable for the majority of conventional machining operations such as turning, milling, sawing, tooling, tapping of steel and brasses.

Dilution Ratios

- Turning, drilling, and sawing 5%
- Milling, reaming, and tapping 5% - 10%
- Griding 3% - 8%

Special note : It is always preferable to use di-ionized or soft water for proper miscibility.

Features & Benefits

- Forms homogenous and extremely stable milky emulsion.
- Effective biocides/fungicides allow extended service life.
- Effective lubrication and cooling properties ensure a better finish and extended tool life.
- Excellent control over foaming, rust and corrosion.

Typical Characteristics

SOL-CUT OIL	
Density @ 15°C Kg/m³	900
Kinematic viscosity, 40°C cSt	55
Kinematic viscosity, 100°C cSt	7.6
Flash point, COC, °C	130
Pour point,°C, Max	-7
Emulsion test (5% emulsion)	stable milky
Corrosion test (5% emulsion)	Pass

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ ADHESIVE OIL

MAGNA ™ ADHESIVE OIL– Premium quality residual compound lubricants with natural inherent strength against washout and blended with special additives to prevent rust and promote metal wetting and penetration.

Applications

MAGNA ADHESIVE OIL Expressly recommended for use where heavy adhesive oil is required, like open gears, chains, sprockets and wire ropes of drag lines, shovels, and dredging equipment where resistance to water wash out and penetration of wire ropes is a consideration.

AVAILABILITY: Light tacky and heavy tacky

Features & Benefits

- Forms a durable, adhesive coating that will not be thrown or wiped from the ropes as it operates over pulleys and drums.
- Excellent metal wetting and penetration of wire ropes preventing.
- Rope core from drying out and deteriorations.
- Resists water washout.
- Protects against rusting and corrosion by acid, alkane or salt after.
- Excellent metal adhesive properties.

Typical Characteristics

ADHESIVE OIL		
Appearance	Light tacky oil	Heavy tacky oil
Kinematic viscosity, 40°C cSt	1200	9000
Kinematic viscosity, 100°C cSt	100	1100
Flash point, COC, °C	270	270
Pour point, °C, max	0	10

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ MACHINE SLIDEWAY-SS

MAGNA ™ MACHINE SLIDEWAY-SS– Premium quality multi-functional workshop oil designed from highly refined base stocks, selective frictional control and 'tackiness' additive system to give a high degree of protection against wear, rust and oxidation. They combine the anti-stick slip, adhesive and protective properties of a slideway lubricant with the anti-wear properties of a hydraulic oil, making them ideal machine shop lubricants.

Applications

MAGNA MACHINE SLIDEWAY-SS Primarily suitable for machine tools with combined slideway lubrication and hydraulic systems. They are recommended for use in planers, grinders, horizontal boring machines, shapers, jig borers, etc. involving high precision work and can also be used for lubrication of gears by oil cans.

Specifications: Meets

- DARMSTADT FRICTION RIG
- DIN 51524 PART II
- CINCINNATI MILACRON P-68, P-69, P-70
- SCHMIDT (SKC) INCLINED TRIBOTESTAR
- STATICINEMETER
- AGMA 250.04

Features & Benefits

- Excellent anti-wear capability to maintain the required boundary film under heavy loads.
- Strong film strength to maintain the required boundary film under heavy loads.
- Excellent rust and anti-foam properties.
- Outstanding adhesiveness to maintain film even at vertical surface.
- Excellent hydrolytic ability for water based cutting fluids.
- Outstanding filterability and good shear stability.
- Minimize rejection rates and extended cutting tool life.
- Good frictional control prevents stick-slip and chatter.

Typical Characteristics

MACHINE SLIDEWAY -SS ISO	32	68	150
Density @15°C Kg/m³	869	877	890
Kinematic viscosity, 40°C cSt	32	68	149.5
Kinematic viscosity, 100°C cSt	5.5	8.8	14.1
Viscosity Index	115	108	101
Flash point, COC, °C	204	220	242
Pour point,°C, Max	-30	-30	-18
Rust test	Pass	Pass	Pass
CM stick slipratio (0.8 max)	0.76	0.75	0.72

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ SYN EP INDUSTRIAL GEAR OIL

Magna Syncon EP Industrial Gear Oil is a premium quality, synthetic, extreme pressure industrial gear lubricant developed for the lubrication of enclosed gear drives and heavily loaded plain or rolling-element bearings operating at extreme temperatures or in severe service. It is suitable for use over a wider temperature range than conventional mineral oil-based gear oils. It meets the performance requirements of major gear drive manufacturers. Syncon EP Industrial Gear Oil is formulated with synthetic polyalphaolefin (PAO) base oils, a viscosity modifier, and a non chlorinated extreme-pressure additive package. It has outstanding oxidation resistance and thermal stability at high temperatures to help minimize deposit formation and provide long service life. It has high load carrying capacity for protection against scuffing and wear, protects against rust and corrosion, and is resistant to excessive foaming that can interfere with proper lubrication. It has a high viscosity index and low pour point for use in equipment operating at extreme temperatures or over a very wide temperature range.

Applications

- Heavily loaded enclosed gear drives, such as those found in mine hoists and mining machinery.
- Enclosed industrial gear drives operating at very low or very high temperatures, or operating continuously at higher than normal operating temperatures.
- Heavily loaded plain and rolling-element bearings operating at extreme temperatures.
- Applications where the equipment manufacturer recommends a high VI, synthetic, extreme-pressure gear oil.

Specifications: Meets

Syncon EP Industrial Gear Oil meets the requirements of the following industry and OEM specifications: • ANSI/AGMA Standard 9005-F16, Anti-Scuff Lubricants (AS) • DIN 51517 Part 3, Lubricating Oils, Type CLP HC • German Steel Industry SEB 181226, Type CLP HC • ISO 12925-1:1996, Type L-CKC • Joy Machinery Specification TO-SHEP (ISO VG 320), TO-SMEP (ISO VG 220) • U.S. Steel 224

Features/Benefits

- Outstanding oxidation resistance and thermal stability at high temperatures
- Outstanding low-temperature properties
- High viscosity index and low pour point for use over wide temperatures
- Excellent extreme-pressure properties
- Protection against scuffing and wear
- Protects against rust, corrosion, and foaming
- Non-chlorinated additive system • Suitable for year-round use
- Extended service intervals compared to mineral oil-based gear oils

Typical characteristics

MAGNA SYN EP INDUSTRIALGEAR OIL ISO	150	220	320	460	680
AGMA Grade (obsolete)	4 EP	5 EP	6 EP	7 EP	8 EP
AGMA Classification	AS	AS	AS	AS	AS
Specific Gravity @ 60°F	0.861	0.865	0.866	0.87	0.875
Density, lbs/gal @ 60°F	7.17	7.2	7.21	7.24	7.29
Color, ASTM D1500	1	1	1	1	1
Flash Point (COC), °C (°F)	249 (480)	249 (480)	249 (480)	249 (480)	249 (480)
Pour Point, °C (°F)	-49 (-56)	-49 (-56)	-44 (-47)	-47 (-53)	-42 (-44)
Viscosity					
cSt @ 40°C	150	220	320	460	680
cSt @ 100°C	20.9	27.5	35.3	47.6	64.4
SUS @ 100°F	769	1134	1660	2392	3549
SUS @ 210°F	105	135	170	230	311
Viscosity Index	163	161	156	162	166
Acid Number, ASTM D974, mg KOH/g	0.76	0.76	0.76	0.76	0.76
Copper Corrosion, ASTM D130, 48 hrs @ 80°C	1a	1a	1a	1a	1a
Four-Ball EP, ASTM D2783, Weld Load, kgf	315	315	315	315	315
Four-Ball Wear Test, ASTM D4172, Scar Diameter, mm	0.45	0.45	0.45	0.45	0.45
FZG Scuffing Test, ASTM D5182, Failure Load Stage	>12	>12	>12	>12	>12
Oxidation Stability, ASTM D2893B					
Viscosity Increase @ 121°C, %	<6	<6	<8	<10	<10

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

GREASES

Greasing it up the Magna way

MAGNA ™ ALPHA EP GREASE

MAGNA ™ ALPHA EP GREASE – Multipurpose high-quality, water-resistant lithium complex grease with oxidation and corrosion inhibitors which help to give them a wide range of industrial and automotive applications. It combines good high temperature performance with excellent EP properties.

Applications

Provides outstanding high and low temperature protection ranging from -18 to 204 C in continuous operation. With its high thermal stability this product withstands high temperature generated during severe braking with disc brakes. It is recommended for use in all types of automotive and industrial bearing, gears and coupling where a general-purpose water-resistant EP grease is applicable.

SP. NOTE: Test reports shown in typical characteristics are proven in specified tests conditions and cannot be assumed as actual and cannot be constituted as specifications.

Features & Benefits

- Good resistance to water washout.
- Enhanced anti-wear and EP qualities to resist wiping action.
- Outstanding structural stability to provide lubrication without softening or hardening.
- Highly effective control over rust, corrosion and oxidation.
- Controlled oil bleeding to supply small amount of oil needed to form EHL film.
- Good shear stability and resistance to vibration

Typical Characteristics

ALPHA EP GREASE NLGI	2	3
Appearance	smooth	smooth
Thickner type (soap)	lithium	lithium
Dropping point, °C	260	260
Cone penetration @ 25°C	280	280
Worked, 60X-10,000X, %change	±10	±10
Copper corrosion	pass	pass
Water washout, wt%loss	5	5
Rust preventing, rating	pass	pass
Range of use @ °C	-18 to 204	-18 to 204
Four ball weld point, kgf	250	250
Base oil viscosity @ 40°C cSt	200	200

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ ALPHA MP GREASE

MAGNA ™ ALPHA MP GREASE – Multipurpose high-quality, water-resistant lithium complex grease with oxidation and corrosion inhibitors which help to give them a wide range of industrial and automotive applications. It combines good high temperature performance with excellent EP properties.

Applications

Provides outstanding high and low temperature protection ranging from -18 to 135 C in continuous operation. With its high thermal stability this product exhibits excellent shear stability and provides superior resistance to rust, corrosion and oxidation. This grease is an excellent choice for an off road equipment, manufacturing, agriculture, mining, marine, forestry and other general purpose applications where lubrication of automotive and fleet chassis points, non-disk brake, wheel bearing, roller and needle bearing, central lubrication system and general plant lubrication needed.

SP. NOTE: Test reports shown in typical characteristics are proven in specified tests conditions and cannot be assumed as actual and cannot be constituted as specifications.

Features & Benefits

- Good resistance to water washout.
- Enhanced anti-wear and EP qualities to resist wiping action.
- Outstanding structural stability to provide lubrication without softening or hardening.
- Highly effective control over rust, corrosion and oxidation.
- Controlled oil bleeding to supply small amount of oil needed to form EHL film.
- Good shear stability and resistance to vibration

Typical Characteristics

ALPHA MP GREASE NLGI	2	3
Appearance	smooth	smooth
Thickener type (soap)	lithium	lithium
Dropping point, °C	190	193
Cone penetration @ 25°C	280	280
Worked, 60X-10,000X, %change	±8	±8
Water washout, wt%loss	5	5
Rust preventing, rating	pass	pass
Range of use @ °C	-18 to 135	-18 to 138
Four ball weld point, kgf	200	200
Base oil viscosity @ 40°C cSt	80	185

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ ALPHA WB GREASE

MAGNA ™ ALPHA WB GREASE – Premium quality sodium base wheel bearings grease with short to medium fiber, good structural stability and high melting point. It ensures excellent performance even when subjected to heavy shearing and withstands excessive churning effectively.

Applications

Provides outstanding high and low temperature protection ranging from -6 to 180 C in continuous operations. It maintains high structural stability, excellent shear stability and does not separate between high temperature and centrifugal force. This grease is an excellent choice for on and off-road equipment, manufacturing, agriculture, mining, marine, forestry and other general-purpose applications where lubrication of ball and bearing of wheels in cars, trucks, lcvs, tractors, universal joints, generators, fan bearing etc. is needed.

However, it being a soda-based grease and susceptible to water washout it is not recommended for bearing which are exposed to moisture e.g., water pumps etc.

SP. NOTE: Test reports shown in typical characteristics are proven in specified tests conditions and cannot be assumed as actual and cannot be constituted as specifications.

Features & Benefits

- Outstanding load bearing capacity.
- Resists separation at high temperatures and centrifugal force.
- Outstanding structural stability to provide lubrication without softening or hardening.
- Highly effective control over rust, corrosion and oxidation.
- Controlled oil bleeding to supply small amount of oil needed to form EHL film.
- Good shear stability and resistance to vibration.

Typical Characteristics

ALPHA WB GREASE NLGI	3
Color	dark green
Texture fiber	short to medium
Soap type	sodium
Worked penetration	220-250
(60 stroke) @25°C	10
Drop point, °C, min	180

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ ALPHA GP GREASE

MAGNA ™ ALPHA GP GREASE – Premium quality calcium base multi-purpose grease with good structural stability and workable melting point. It ensures excellent resistance to water washout.

Applications

Designed for the lubrication of medium duty roller and plain bearings within an operating temperature range -25 C to 120 C. They are easily pumpable and maybe used in centralized lubrication systems as well as for general grease lubrication of vehicle chassis, water pump, farm, workshop, and construction site machineries and other services, where water resistance is an important consideration.

SP. NOTE: Test reports shown in typical characteristics are proven in specified tests conditions and cannot be assumed as actual and cannot be constituted as specifications.

Features & Benefits

- Fairly economical product.
- Good structural stability.
- Effective control over rust, corrosion and oxidation.
- Outstanding ability to resist water washout.
- Good shear stability and resistance to vibration.

Typical Characteristics

ALPHA GP GREASE NLGI	2	3
Color	brown	brown
Texture fiber	smooth	smooth
Soap type	calcium	calcium
Worked penetration	220-250	280
(60 stroke) @25°C	265-295	220-260
Drop point, °C, min	120 TO 140	120 TO 140
Water washout, wt.% loss @ ,80°C, 1h	3	4
Base oil viscosity @ 40°C	200	185

MAGNA ™ MOLY LC-5 GREASE

MAGNA ™ MOLY LC-5 GREASE – Heavy duty, high performance, extreme pressure greases fortified with 5% molybdenum disulfide to meet caterpillars' multipurpose molybdenum grease requirements. They are primarily intended for agriculture, mining, construction, heavy duty industrial applications requiring protection from heavy shock loading situations. The presence of moly provides reserve from metal-to-metal contact, unclean environments or where proper re-greasing intervals are not followed and thus prevents costly equipment downtime.

Applications

Utilize a lithium complex thickener system compounded with premium ISO 220 paraffinic base oil to provide excellent mechanical and structural stability to give operational working temperature range of -18 to 190 C and are formulated from state-of-the-art additive system to give superior rust, corrosion protections, good low temperature pumpability and resistance to water washout. MAGNA MOLY LC-5 grease are recommended for use in agricultural, mining, construction and heavy duty industrial applications where lubrications of all grease points on earthmovers, dozers, backhoes, scrapers, cranes, shovels, automotive and chassis lubrication, fifth wheels, CV joints and universal joints. They are also ideal for lubrication of heavily loaded pivot pins, spined shafts or sliding surface.

SP. NOTE: Test reports shown in typical characteristics are proven in specified tests conditions and cannot be assumed as actual and cannot be constituted as specifications.

Features & Benefits

- Good resistance to water washout.
- Enhanced anti-wear and EP qualities to resist wiping action.
- Outstanding structural stability to provide lubrication without softening or hardening.
- Highly effective control over rust, corrosion and oxidation.
- Controlled oil bleeding to supply small amount of oil needed to form EHL film.
- Good shear stability and resistance to vibration

Typical Characteristics

ALPHA MOLY LC-5 GREASE NLGI	2
Appearance	Smooth
Thickener type (soap)	lithium
Dropping point, °C	260
Cone penetration @ 25°C	280
Worked, 60X-10,000X, %change	10
Water washout, wt%loss	8
Rust preventing, rating	pass
Range of use @ °C	-18 to 190
Four ball weld point, kgf	250
Base oil viscosity @ 40°C cSt	220
Color	dark grey

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ SUPER HT GREASE

MAGNA ™ SUPER HT GREASE – Non-melting high temperature, oxidation resistant, thermally stable grease made of inorganic thickener.

Applications

Recommended for lubrication of rolling and plain bearings at extreme temperatures such as in carriages for hardening/drying in tunnel ovens, bearings of bitumen mixing plants, cranes in foundries, hot air blowers etc. it can be used at a temperature range of -20 to 190 C and for short periods at a temperature of up to 220 C. it can be used where high temperature combine with high-speed requiring frequent grease change.

SP. NOTE: Test reports shown in typical characteristics are proven in specified tests conditions and cannot be assumed as actual and cannot be constituted as specifications.

Features & Benefits

- Good resistance to water washout.
- Enhanced anti-wear and EP qualities to resist wiping action.
- Outstanding structural stability to provide lubrication without softening or hardening.
- Highly effective control over rust, corrosion and oxidation.
- Controlled oil bleeding to supply small amount of oil needed to form EHL film.
- Good shear stability and resistance to vibration

Typical Characteristics

SUPER HT GREASE NLGI	2
Appearance	Smooth
Thickener type (soap)	Bentonite/polymer
Dropping point, °C	260
Cone penetration @ 25°C	280
Worked, 60X-10,000X, %change	10
Water washout, wt%loss	6
Rust preventing, rating	pass
Range of use @ °C	-20 to 190
Four ball weld point, kgf	250
Base oil viscosity @ 40°C cSt	200

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA ™ HI-TEMP BLU GREASE

MAGNA ™ HI-TEMP BLU - *Lithium Complex Blue Grease* is a high-quality, multipurpose, extreme-pressure (EP), lithium complex grease developed for the lubrication of automotive and industrial equipment operating under heavy loads and at moderate to high temperatures. It complies with NLGI GC-LB for multipurpose automotive wheel bearing and chassis lubricant.

Applications

- Wheel bearings of passenger cars, trucks, high-performance vehicles, sport utility vehicles and motorcycles, particularly those equipped with disc brakes.
- Ball joints, universal joints, other chassis parts and water pumps on passenger cars, trucks and other mobile equipment.
- Heavily loaded plain and rolling-element bearings in industrial and mobile equipment.
- It is recommended for wheel bearings, earth moving equipment, gear couplings, electric motors, and general industrial machinery.
- These greases are also widely used in steel plants mining and engineering industries.

Features & Benefits

- Excellent performance over a wide temperature range
- High Dropping Point making it ideal for High Temperature applications.
- High load-carrying capacity and good shear properties for stability & resistance to vibration
- Excellent wear protection
- Protects against rust and corrosion.
- Excellent resistance to water washout
- Complies with NLGI GC-LB
- Low friction Torque, Good Pumpability and Longer service life.

Typical Characteristics

NLGI Grade	2
Thickener Type	Lithium Complex
Color	Blue
Texture	Smooth
Density, lbs/gal	7.85
Dropping Point, °C (°F), ASTM D2265	>280 (>500)
Viscosity, Kinematic, ASTM D445	
Viscosity @ 40°C, cSt	144
Viscosity @ 100°C, cSt	10.8
Penetration, Worked (60 strokes), ASTM D217	265-295
Oxidation Stability, 100 Hours, psi (kPa), ASTM D942	2 (13.8)
Four-Ball Wear Scar, mm, ASTM D2266	0.43
Four-Ball EP, Weld Load, Kgf, ASTM D2596	250
Timken OK Load, lbs, ASTM D2509	45
Corrosion Prevention, ASTM D1743	Pass
Copper Corrosion, ASTM D4048	1a
Water Wash-out, wt%, ASTM D1264	3

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

MAGNA LUBRICANTS

LIQUID TECHNOLOGY AT WORK

Liquid Technology At Work

MAGNA
LUBRICANTS

MAGNA LUBRICANTS CO.
admin@fatahlube.com
Head Office : +971 4 2690884 | Sharjah: +971 6 5257793 | Oman Muscat: +968 97869253 | 97865221