

MOTUL **TECH**

GREASE RANGE



The background of the page is a photograph of a motorsport event. On the right, a large black truck is visible with a tall pole carrying a red and white Motul flag. The side of the truck features a large graphic of a driver's helmet and the text 'LUBRICANTE UFFICIALE DEL DAI'. In the foreground, a red and white Motul sign is partially visible. The overall scene is set on a dirt track under a clear sky.

MOTUL

WHO IS MOTUL?

Universally recognised for more than 160 years for the quality of its products, its capacity for innovation, and its involvement in the field of competition, Motul is truly acknowledged as the specialist in synthetic lubricants.

Passion is what unites lovers of engineering with their machinery, the same passion that fuels Motul's drive for innovation.

Constantly striving to develop the next step in performance, Motul demands the same commitment to excellence from its suppliers as from its own team, with the aim of delivering the highest level of products and services to its clients.

From Pennsylvania's first oil rig to the brand's latest laboratory, the unfolding desire for improvement fuels the company day-by-day in its quest to deliver innovative solutions.

The connection between Motul and its community delivers ingenious ideas and enables them together to achieve the unachievable, to push performance beyond the normal boundaries, and to deliver the unexpected over the long-term, time after time.

Supporting its customer's projects, and fighting side-by-side to deliver cost effectiveness inextricably linked to performance is the way that Motul commits to its business partners in a way in which no one else would.

Thanks to this commitment, Motul is now the only choice of many of the most renowned workshops in over 100 countries.





WHY CHOOSE MOTUL FOR GREASES



Capitalizing on its expertise to meet the constant demand for improved mechanical performance, Motul has developed a high-performance range of greases which meets and exceeds the standards demanded by industry OEMs and our customers.

This comprehensive range of greases can be used in numerous automotive, heavy-duty and industrial applications from general purpose to more specialized high and low temperature, or food grades.

These greases will provide performance, reliability and protection to all equipment and vehicles, in all conditions, day after day.

BENEFITS FOR YOU



PRODUCT SELECTION SUPPORT

We understand the importance of selecting the right lubricant that offers the customer peace of mind through performance. Our experience and knowledge enable us to deliver reliable grease solutions with superior performance and protection for both the equipment and the environment.



MOTUL CUSTOMER RELATIONS

Choosing Motul gives you access to a tailor-made relationship. Technical experts are available to provide you with the highest advice for your equipment. Customer support is also at your disposal to offer you a worry-free experience.



MOTUL SOLUTIONS FOR DELIVERIES AND STORAGE

Motul offers different solution for deliveries and storage.



MOTUL GLOBAL RANGE TO FULFILL ALL YOUR FLUID NEEDS FOR YOUR BUSINESS

Saving time and making gains in efficiency is key to running a successful business. Motul provides single source solution for all your product needs (engine oils, transmission fluids, coolants, additives, etc.).



MOTUL SCHOOL

Motul offers you the opportunity to acquire Motul knowledge and expertise in the field of lubricants and fluids for your applications. As a Motul customer, all your employees can benefit from Motul School to gain experience or know-how.



MOTUL EXPERTS OFFER LUBRICANT DIAGNOSIS TO YOUR COMPANY

Our specialists conduct a comprehensive study and generate a report reflecting the condition of your lubricant, thus helping you to diagnose problems at an early stage. Having this valuable data to hand means that you can make informed decisions influencing the service life of your equipment and reducing costs associated with its ownership.



TAILOR MADE SOLUTIONS

Whether you require a first-fill specialty or a premium after sales solution for a specific market, MOTUL's broad range of grease technology platforms provides us with the potential to develop finished products capable of meeting the needs of both.



EXPERIENCE

Over many years, our expert formulators have developed greases based on technology platforms that focused on delivering the right balance of physical and protective properties.



APPROVALS

Motul has worked closely with Original Equipment Manufacturers for several years to provide products approved by the brands and to meet their standards.

MOTUL MEETS ALL YOUR GREASE NEEDS

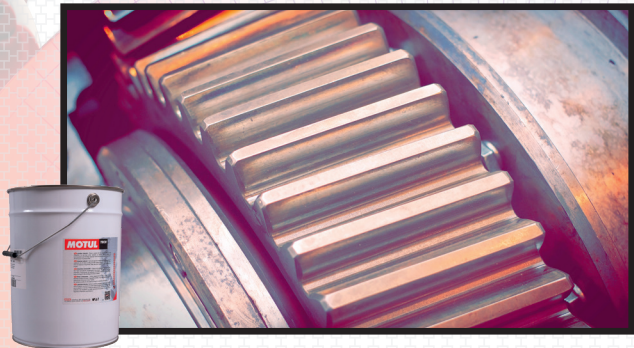
GENERAL PURPOSE GREASES



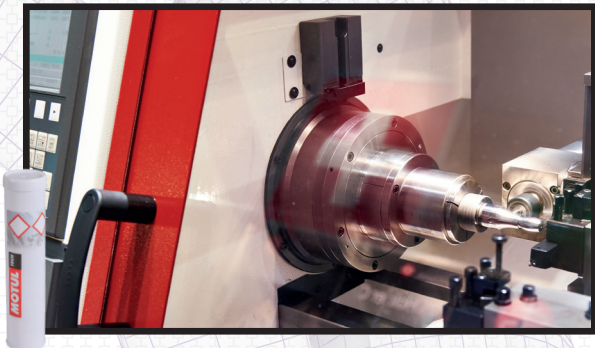
HIGH & LOW TEMPERATURE GREASES



GEAR GREASE



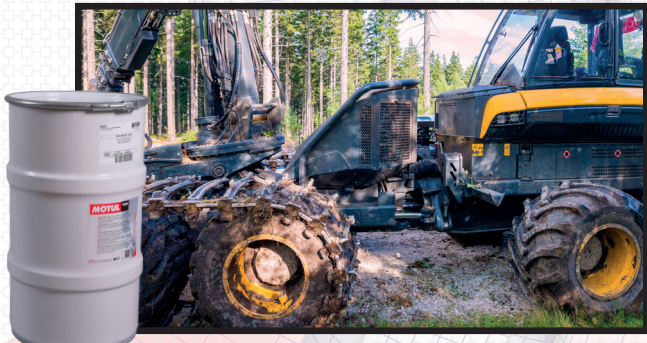
MACHINE TOOL GREASES



MINING, HD AUTOMOTIVE GREASES



AGRICULTURE & FORESTRY GREASES



FOOD & BEVERAGE GREASES



SPECIALTY GREASES



GREASES FOR GENERAL PURPOSE

Today's production facilities have a variety of grease-lubricated equipment, varying significantly in speed and load, and operating in wet or dusty environments. To maximize grease lubrication effectiveness, to minimize cost and risk of application-induced failure, Motul offers greases that cover a variety of applications. These greases range from slow to high speeds and from low to high loads. Single products meet a multitude of requirements.

Grease Range

Motul

CALCIUM / CALCIUM EP GREASES

IRIX C 120-2

(formerly **GRAISSE 113**)

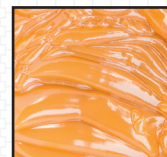
Multi-purpose grease for machines working under mild loads and temperatures.

CLASSIFICATION

ISO 12924: L-XCCIB2
DIN 51502: KP2G-30

APPLICATION

Suitable for bearing and plain bearings, slideways, sliding blocks, lubrication of various machine movements. Also intended for the temporary protection of metal parts and the protection of spray booths.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	120	Calcium	2	-30 to +110 (peaks of 120 °C)	> 140	280	amber

Extreme Pressure



Multi-Purpose



Water Resistant



Corrosion Protection



IRIX C 310-2

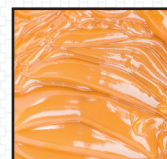
Calcium thickened multi-purpose EP grease based on a mineral oil.

CLASSIFICATION

ISO 12924: L-XCCHB2
DIN 51502: KP2G-30

APPLICATION

Recommended for lubrication of bearings, bushings and plain bearings at low to medium speed, medium temperatures and high loads in wet environments. Mainly for agricultural machinery, heavy-duty and automotive applications. This grease is compatible with multipurpose greases based on lithium and lithium/calcium.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	310	Calcium	2	-30 to 120 (peaks of 130 °C)	> 140	n/a	amber

Extreme Pressure



Multi-Purpose



Water Resistant



Corrosion Protection



IRIX C 1370-0

(formerly **IRIX CSM 1370**)

Semi-fluid grease with corrosion inhibitors and EP/AW additives.

CLASSIFICATION

ISO 12924: ISO-L-XD(F)CHB0
DIN 51502: KPOK-40

APPLICATION

Suitable for the lubrication of heavily loaded bearings in wet and corrosive environments. Ideal for chassis or marine applications and as an universal grease for forestry, agricultural and construction vehicles. Easily pumpable even at low temperature in most high-pressure centralised lubrication systems even with a high base oil viscosity.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	1370	Calcium	0	-40 to +120 (peaks of 130 °C)	> 120	310	yellow

Extreme Pressure



Heavy Loads



Low Temperature



Central Lubrication



Water Resistant



Grease Range

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LITHIUM EP GREASES

IRIX L 50-00

(formerly IRIX LSM 1500)

Multi-purpose, extreme-pressure grease formulated from premium mineral base oils and a lithium thickener.

CLASSIFICATION

ISO 12924: L-XCCIB00
DIN 51502: KPOOK-30

APPLICATION

IRIX L 50-00 grease can be used to lubricate bearings, gears and all mechanical units operating under medium loads, especially enclosed gears and bearings in poorly sealed gearcases. Also perfectly suitable for low pressure centralised systems.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	60	Lithium	00	-30 to 120	> 160	250	amber

Central Lubrication



Multi-Purpose



Extreme Pressure



Corrosion Protection



IRIX L 80-0

(formerly IRIX LSM 150)

Multi-purpose, extreme-pressure grease formulated from premium mineral base oils and a lithium thickener.

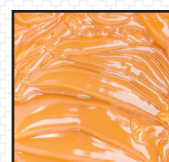
CLASSIFICATION

ISO 12924: L-XCCIB0
DIN 51502: KPOK-30

APPLICATION

IRIX L 80-0 grease can be used to lubricate bearings, gears and all mechanical units operating under medium loads.

• Grade 0: Reducers, centralised greasing, gears in crankcases, various parts working in a cold atmosphere, all soft EP grease applications.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	65	Lithium	0	-30 to 120	> 160	250	amber

Central Lubrication



Multi-Purpose



Extreme Pressure



Corrosion Protection



IRIX L 130-1

(formerly name IRIX LSM 151)

Multi-purpose, extreme-pressure grease formulated from premium mineral base oils and a lithium thickener.

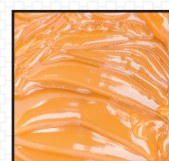
CLASSIFICATION

ISO 12924: L-XCB1
DIN 51502: KP1K-20

APPLICATION

IRIX L130-1 grease can be used to lubricate bearings, gears and all mechanical units operating under high loads.

• Grade 1: Centralised greasing with high pressure.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	130	Lithium	1	-20 to 130	> 180	250	amber

Multi-Purpose



Extreme Pressure



Corrosion protection



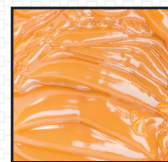
IRIX L 130-2**(formerly IRIX LSM 152)**

Multi-purpose, extreme-pressure grease formulated from premium mineral base oils and a lithium thickener.

CLASSIFICATIONISO 12924: L-XBCHB2
DIN 51502: KP2K-20**APPLICATION**

IRIX L 130-2 grease can be used to lubricate bearings, gears and all mechanical units operating under medium loads.

- Grade 2: Suitable for a wide range of general-purpose lubrication applications ranging from bearings to cables, chains and other linkages. Also suitable as a multipurpose chassis, pin and bushing grease.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	130	Lithium	2	-20 to 120	> 180	315	amber

Multi-Purpose



Extreme Pressure



Corrosion Protection

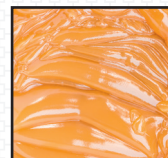
**IRIX L 130-3****(formerly IRIX LSM 153)**

Multi-purpose, extreme-pressure grease formulated from premium mineral base oils and a lithium thickener.

CLASSIFICATIONISO 12924: L-XBCIB3
DIN 51502: KP3K-20**APPLICATION**

IRIX L 130-3 grease can be used to lubricate bearings with vertical shaft, gears and all mechanical units operating under high loads.

- Grade 3: Truck hubs, very loaded sleeves.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	130	Lithium	3	-20 to 130	> 190	285	amber

Multi-Purpose



Extreme Pressure



Corrosion Protection

**IRIX L 150-2 MO****(formerly IRIX LSM 112 MO, MOLY GREASE)**Lithium thickened lubricating grease based on mineral oil, antioxidants, corrosion inhibitors, EP/AW additives and MoS₂.**CLASSIFICATION**ISO 12924: L-XBCHB2
DIN 51502: KPF2K-30**APPLICATION**

Suitable for general industrial applications such as lubrication of gears, rolling contact bearings, plain bearings, splined shafts, etc. under heavy conditions (load, shock, presence of water).



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	150	Lithium	2	-30 to 130 (peaks of 140 °C)	≥ 185	≥ 325	black

Multi-Purpose



Extreme Pressure



Corrosion Protection



HIGH & LOW TEMPERATURE GREASES

Suitable greases with good sealing properties are essential, especially when it comes to the lubrication of components, that are exposed to high or low temperatures and extreme environmental conditions such as humidity and pollution. The selection of this specific grease must include consideration of oil type and viscosity, oil viscosity index and thickener type.

Grease Range

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LITHIUM COMPLEX GREASES

IRIX EVO LX 200-2

Heavy-duty grease for the long-term lubrication.

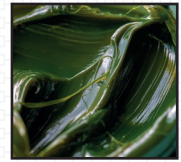
CLASSIFICATION

ISO 12924: L-XBDHB2

DIN 51502: KPX2N-20

APPLICATION

Specifically developed for the long-term lubrication of all mechanisms subjected to very harsh working conditions. Perfectly suited for the lubrication of plain and anti-friction bearings, small reduction gears, joints and other mechanisms subjected to high temperatures and loads including car and truck wheel bearings.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	200	Lithium Complex	2	-20 to 160	≥ 240	400	green

Multi-Purpose



High Temperature



Extreme Pressure



Corrosion Protection



IRIX INO LX 40-2

(formerly IRIX HP - PLC 42)

High speed and low temperature grease.

CLASSIFICATION

ISO 12924: L-XEDIB2

DIN 51502: KPHC2N-55

APPLICATION

Universal grease for wide range of temperature applications particularly at high speed and low temperature and where a lubricant with low frictional resistance even at low temperatures is required.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Synthetic	44	Lithium complex	2	-55 to 140 (peaks of 180 °C)	> 260	> 380	beige

Extreme Pressure



High Speed



Low Temperature



Corrosion Protection



IRIX INO LX 220-2

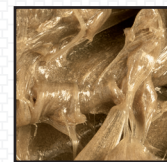
High-performance grease based on synthetic base stocks.

CLASSIFICATION

ISO 12924: L-XD(F)DIB2
DIN 51502: KPHC2N-40

APPLICATION

Suitable for both industrial and automotive applications. The product's all-round properties and wide temperature range make it the primary choice for various types of bearing applications including in high and low temperature conditions.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Synthetic	220	Lithium Complex	2	-40 to 150 (peaks of 220 °C)	> 260	> 380	beige

Corrosion Protection



Extreme Pressure



High Temperature



Low Temperature

**IRIX INO LX 460-2**

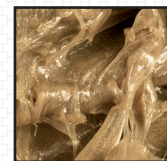
High-performance grease based on synthetic base stocks.

CLASSIFICATION

ISO 12924: L-XD(F)DIB2
DIN 51502: KPHC2N-40

APPLICATION

Suitable for heavily loaded bearings in low to medium speed applications, applications at elevated temperatures, and wet and corrosive environments. The grease is perfectly adapted to carry high loads and to resist vibrations and shock loads.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Synthetic	460	Lithium Complex	2	-40 to 150 (peaks of 220 °C)	> 260	> 380	beige

Corrosion Protection



Extreme Pressure



Heavy Loads



High Temperature



CALCIUM SULPHONATE COMPLEX GREASES

IRIX EVO CSX 290-2

(formerly IRIX HP - CXSM 292)

Calcium sulphonate complex thickened lubricating grease based on mineral oil.

CLASSIFICATION

ISO 12924: L-XC(F)DIB2
DIN 51502: KP2N-30

APPLICATION

Suitable for both industrial, marine and off-road applications. The extreme load carrying capacity and excellent water resistance make the product a perfect choice for heavily loaded applications in hot, or wet and corrosive environments.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	290	Calcium Sulphonate Complex	2	-30 to 140 (peaks of 180 °C)	> 280	765	brown

Corrosion Protection



Extreme Pressure



Heavy Loads



High Temperature



Water Resistant



IRIX EVO CSX 440-2

Calcium sulphonate complex thickened lubricating grease based on mineral oil.

CLASSIFICATION

ISO 12924: L-XC(F)DIB2
DIN 51502: KP2N-20

APPLICATION

Suitable for both industrial, marine and off-road applications. The extreme load carrying capacity and excellent water resistance make the product a perfect choice for heavily loaded applications in hot, or wet and corrosive environments.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	440	Calcium Sulphonate Complex	2	-20 to 140 (peaks of 180 °C)	> 280	765	brown

Corrosion Protection



Extreme Pressure



Heavy Loads



High Temperature



Water Resistant



Grease Range

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GEAR GREASES

Oils are commonly used for closed gears, but greases with low base oil viscosity can be used for high speed or open gears. The grease characteristics will then be chosen according to speed and load: With decreasing speed or increasing load, grease with correspondingly higher base oil viscosity will be used.

IRIX EVO LCX 920-000**(formerly IRIX HP - LCM 92000)**

Semi-fluid slideway and closed gear grease.

CLASSIFICATION

ISO 12924: L-XB(F)CCB000

DIN 51502: GP000K-20

APPLICATION

Suitable for industrial and automotive applications with high loads and slow speeds. Particularly developed for high pressure centralised lubrication systems, lubrication of low speed rollers in linear machine tool guides and closed gears. Prime choice for wet, dirty and highly loaded environments with low speeds.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	920	Lithium / Calcium Complex	000	-20 to 120 (peaks of 130 °C)	> 180	700	brown

Corrosion Protection



Extreme Pressure



Heavy Loads



Central Lubrication

**IRIX EVO LCX 500-0 G****(formerly IRIX HP - LCXM 500 G)**

High-performance open gear grease with graphite.

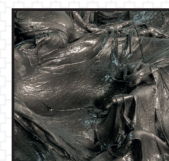
CLASSIFICATION

ISO 12924: L-XB(F)DIB0

DIN 51502: OGPFOK-20

APPLICATION

Designed to lubricate open mesh gears operating under heavy loads to avoid pitting and seizing. Especially suited for girth gears in the chemical, cement, mineral, fertiliser and metalworking industry or any mechanism requiring a lubricant capable of resisting severe operating conditions. Suitable spraying equipment for open gear.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	500	Lithium / Calcium Complex	0	-20 to 120 (peaks of 130 °C)	> 240	710	black

Corrosion Protection



Extreme Pressure



Heavy Loads



Water Resistant



Grease Range

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GREASES FOR MACHINE-TOOLS

Machine tools increasingly run three shifts a day. So, a perfect lubrication of machine components is key to ensure reliability and durable performance whilst reducing wear and maintenance costs. Motul offers a range of lubricating greases dedicated to machine tools and formulated to offer the best performance and compatibility with process lubricants in use.

Grease Range

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IRIX EVO LCX 920-000**(formerly IRIX HP - LCM 92000)**

Semi-fluid slideway and closed gear grease.

CLASSIFICATION

ISO 12924: L-XB(F)CCB000

DIN 51502: GP000K-20

APPLICATION

Suitable for industrial and automotive applications with high loads and slow speeds. Particularly developed for high pressure centralised lubrication systems, lubrication of low speed rollers in linear machine tool guides and closed gears. Prime choice for wet, dirty and highly loaded environments with low speeds.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	920	Lithium / Calcium Complex	000	-20 to 120 (peaks of 130 °C)	> 180	700	brown

Corrosion protection



Extreme Pressure



Heavy Loads



Central Lubrication

**IRIX INO LX 40-2****(formerly IRIX HP - PLC 42)**

High-speed and low temperature grease.

CLASSIFICATION

ISO 12924: L-XEDIB2

DIN 51502: KPHC2N-55

APPLICATION

Universal grease for a wide range of temperature applications particularly at high speed (NDM > 1 million) and where a lubricant with low frictional resistance even at low temperatures is required.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
PAO	44	Lithium	2	-55 to 140 (peaks of 180 °C)	> 260	> 380	beige

Extreme Pressure



High Speed



Low Temperature



Corrosion Protection

**IRIX EVO LC 150-2**

High-performance grease for wet environments

CLASSIFICATION

ISO 12924: L-XB(F)CHB2

DIN 51502: KPF2K-10

APPLICATION

Suitable for application in wet conditions, extends the relubrication intervals and performance due to its high degree of mechanical stability even when mixed with water. Recommended for lubrication of roller and plain bearings, manual lubrication of linear guide at low to medium speed in wet environments (machine tools, paper machines, etc.).



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	150	Lithium / Calcium	2	-20 to 120 (peaks of 130 °C)	> 180	325	green

Extreme Pressure



Heavy Loads



Water Resistant



IRIX EVO LC 1200-2

(formerly IRIX HP - LCM 1202 CC)

High-load and low-speed protective grease.

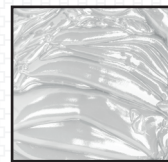
CLASSIFICATION

ISO 12924: L-XB(F)CHB2

DIN 51502: KPF2K-10

APPLICATION

Suitable for heavily loaded industrial and heavy-duty applications including extreme outdoor wet and dirty conditions. Perfect choice for the lubrication of slow moving and heavily loaded bearings and tool or workpiece clamping systems in machine tools. This lubricating grease provides excellent adhesion and water resistance for perfect protection of chucks, collets and vices.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	1200	Lithium / Calcium	2	-20 to 120 (peaks of 130 °C)	> 180	≥ 500	white

Extreme Pressure



Heavy Loads

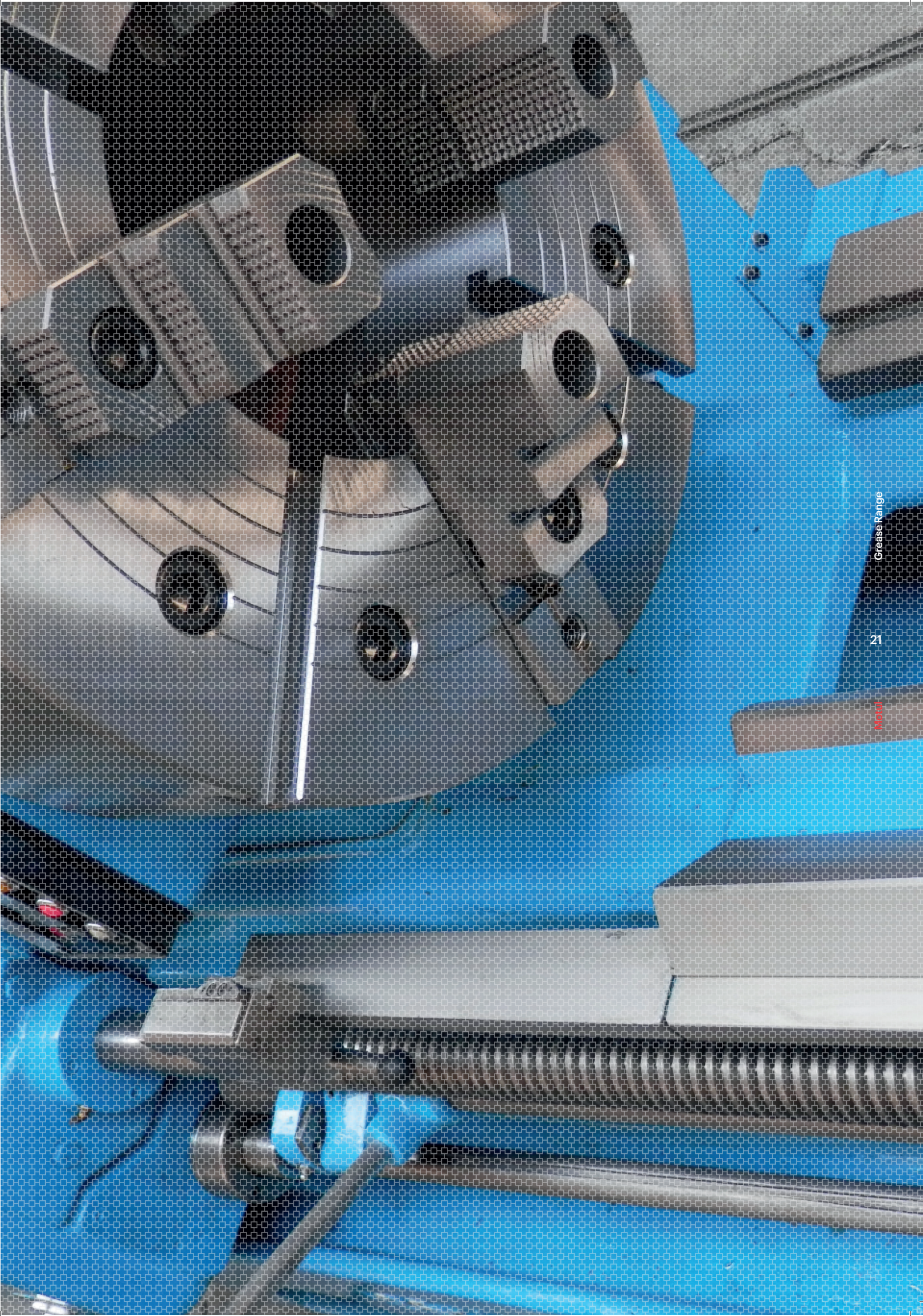


Water Resistant



NOTES

MOTUL



MINING, HD & AUTOMOTIVE GREASES

Cars and on-road vehicles are not necessarily exposed to extreme conditions but they still require protection and performance in order to offer a long lasting and worry-free use. Thus, the greases in use have to bring lubrication for the moving parts as well as protection against the effects of water and dust for the lifetime of the vehicle.

IRIX L 150-2 MO**(formerly IRIX LSM 112 MO, MOLY GREASE)**Lithium thickened lubricating grease based on mineral oil, antioxidants, corrosion inhibitors, EP/AW additives and MoS₂. **CLASSIFICATION** DIN 51502: KPF2K-30**APPLICATION**

Suitable for general industrial applications such as lubrication of gears, rolling contact bearings, plain bearings, splined shafts, etc. under heavy conditions (load, shock, presence of water).



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	150	Lithium	2	-30 to +120 (peaks of 140 °C)	≥ 185	≥ 325	black

Multi-Purpose



Extreme Pressure



Corrosion Protection

**IRIX EVO LX 200-2****(formerly IRIX HP - LXM 202)**

Heavy-duty grease for the long-term lubrication.

CLASSIFICATIONISO 12924: L-XBDHB2
DIN 51502: KPX2N-20**APPLICATION**

Especially developed for the long-term lubrication of all mechanisms subjected to very harsh working conditions. Perfectly adapted to greases for plain bearings, anti-friction bearings, small reduction gears, joints and other mechanisms subjected to high temperatures and loads as well as car and truck wheel bearings.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	200	Lithium Complex	2	-20 to 160	≥ 240	400	green

Multi-Purpose



High Temperature



Extreme Pressure



Corrosion Protection

**IRIX C 1370-0****(formerly IRIX CSM 1370)**

Semi-fluid grease with corrosion inhibitors and EP/AW additives.

CLASSIFICATIONISO 12924: ISO-L-XD(F)CHB0
DIN 51502: KPOK-40**APPLICATION**

Suitable for the lubrication of heavily loaded bearings in wet and corrosive environments. Ideal for chassis or marine applications and as an universal grease for forestry, agricultural and construction vehicles. Easily pumpable even at low temperature in most high-pressure centralised lubrication systems.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	1370	Anhydrous Calcium	0	-40 to +120 (peaks of 130 °C)	> 120	310	yellow

Extreme Pressure



Heavy Loads



Low Temperature



Central Lubrication



Water Resistant



NOTES

Grease Range

24

Motul

MOTUL



AGRICULTURE & FORESTRY GREASES



As agriculture and forestry activities are highly seasonal and weather dependent, the reliability of vehicles and equipment is a must for users. Using a suitable lubricating grease is therefore a key factor for a carefree harvest, ground preparation or forestry. Furthermore, lubricants have to be compatible with an outdoor use where spillage must not create any enduring contamination of natural environment.

IRIX C 310-2

Calcium thickened multi-purpose EP grease based on mineral oil.

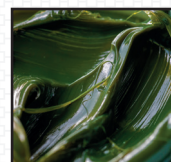
CLASSIFICATION

ISO 12924: L-XCCHB2

DIN 51502: KP2G-30

APPLICATION

Recommended for lubrication of bearings, bushings and plain bearings at low to medium speed, medium temperatures and high loads in wet environments. Mainly for agricultural machinery, heavy-duty and automotive applications. This grease is compatible with multipurpose greases based on lithium and lithium/calcium.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	310	Anhydrous Calcium	2	-30 to 120 (peaks of 130 °C)	> 140	320	green

Extreme Pressure



Multi-Purpose



Water Resistant



Corrosion Protection

**HD-AGRI GREASE**

Multipurpose grease for civil engineering, machinery and agriculture.

CLASSIFICATION

DIN 51502: KP2N-30

APPLICATION

Multipurpose grease specially formulated for applications requiring a good resistance to heavy loads and water. Greasing of roller and plain bearings, articulations, cables of tractors, harvesters, wine machinery and all types of civil engineering machinery.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Semi-synthetic	800	Lithium	2	-30 to 140	190	285	light brown

Extreme Pressure



Corrosion Protection



Water Resistant

**IRIX BIO 30-000**

EAL (Environmentally Acceptable Lubricant) grease.

CLASSIFICATION

DIN 51502: KPE000K-40

APPLICATION

Suitable for automatic centralized outdoor lubricating installations in the industrial and heavy-duty sector, particularly for outdoor utility vehicles. Also appropriate for the onboard lubrication of wheel flanges for underground or aboveground rail vehicles and for the temporary protection of metal parts.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Ester	32	Anhydrous Calcium	000	-40 to 120	none	-	amber

Environmentally acceptable



Central Lubrication



Multi-Purpose



Corrosion Protection



Grease Range

27

Motul

IRIX BIO C 110-2

EAL (Environmentally Acceptable Lubricant) grease.

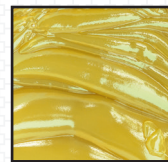
CLASSIFICATION

ISO 12924: L-XCBHB2

DIN 51502: KPE2E-30

APPLICATION

Multifunctional biodegradable grease for machines working under mild conditions of load and temperature. Suitable for bearing and plain bearings, slideways, sliding locks, lubrication of various machine movements. Also intended for the temporary protection of metal parts. This lubricating grease offers a good mechanical stability, a good resistance to shock loads and is easily pumpable in most modern centralised lubrication systems.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Ester	110	Calcium	2	-30 to 80 (peaks of 100 °C)	> 140	285	yellow greenish

Central Lubrication



Environmentally acceptable



Extreme Pressure



Multi-Purpose



Water Resistant



Corrosion Protection

**IRIX BIO C 210-2 FG**

High-performance EAL (Environmentally Acceptable Lubricant) and food grade grease.

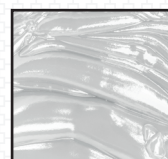
CLASSIFICATION

ISO 12924: L-XD(F)BIB2

DIN 51502: KPE2G-40

APPLICATION

This grease is ideal not only for applications in the food producing sector, but also in marine, forestry, agriculture and construction machinery. It is easily pumpable in most modern high-pressure centralized lubrication systems.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Ester	210	Calcium	2	-40 to 120	> 140	305	white

NSF H1



Environmentally acceptable



Extreme Pressure



Multi-Purpose



Water Resistant



Corrosion Protection

**IRIX HP - SI 180**

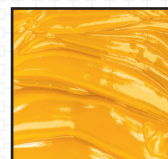
Biodegradable railway switch and wheel flange grease.

CLASSIFICATION

DIN 51502: KPF2K-30

APPLICATION

Year-round grease for railway points and wheel flanges. Suitable for all kind of trackside lubrication spray systems. This product features excellent sprayability even at very low temperatures and extreme climatic conditions.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Biodegradable oil	20	Microgel	n/a	-30 to 120	none	n/a	dark yellow

Central Lubrication



Water Resistant



Environmentally acceptable



Special Application



MARINE GREASES

IRIX EVO CSX 440-2

Calcium sulphonate complex thickened lubricating grease based on mineral oil.

CLASSIFICATION

ISO 12924: L-XC(F)DIB2

DIN 51502: KP2N-30

APPLICATION

Suitable for both industrial, marine and off-road applications. The extreme load carrying capacity and excellent water resistance make the product a perfect choice for heavily loaded applications in hot, or wet and corrosive environments. Meets the latest requirements of Otan G 460.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	440	Calcium Sulphonate Complex	2	-30 to 140 (peaks of 180 °C)	> 280	765	brown

Corrosion Protection



Extreme Pressure



Heavy Loads



High Temperature



Water Resistant



GREASES FOR FOOD & BEVERAGE INDUSTRY

Like any industry, lubrication is key to reliability and productivity, but it is equally important that the lubricants used in the food industry actively contribute to improving food safety standards too, hence MOTUL has consistently invested in its capability to formulate food grade lubricants that deliver equipment protection whilst ensuring compliance with relevant industry regulations. The Motul range of high performance food grade greases are NSF H1 registered.

Grease Range

30

Motul

NSF®

IRIX BE 70-2 FG

All-purpose food grade grease.

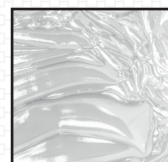
CLASSIFICATION

ISO 12924: L-XBCAA2

DIN 51502: KPX2K-15

APPLICATION

Suitable for the lubrication of antifriction bearings, chains, joints, slides in food processing, cosmetic and pharmaceutical industries. IRIX BE 70-2 is intended for use in applications where there is only potential for incidental food contact.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
White oil	70	Bentonite	2	-15 to 120	none	n/a	crystal

Water Resistant



NSF H1



Kosher Certified



Halal Certified

**IRIX EVO CSX 100-2 FG**

Calcium sulfonate complex thickened lubricating grease based on pharmaceutical grade white oil and synthetic base stock.

CLASSIFICATION

ISO 12924: L-XC(F)DHB1.5

DIN 51502: KP1.5N-30

APPLICATION

Suitable for food industries where lubricants may have incidental contacts with food. It is recommended for heavy loaded applications with medium to high speed bearings such as pellet presses and compactors used to process pet food and animal feed. Good pumpability in centralised lubrication system even at low temperature.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Semi-synthetic	100	Calcium Sulphonate Complex	1.5	-30 to 140 (peaks of 180 °C)	> 300	660	brown

Extreme Pressure



NSF H1



Heavy Loads



Low Temperature



Water Resistant

**IRIX EVO CSX 460-2 FG**

Calcium sulfonate complex thickened lubricating grease based on pharmaceutical grade white oil.

CLASSIFICATION

ISO 12924: L-XB(F)DHB2

DIN 51502: KP2N-20

APPLICATION

Suitable for food industries where lubricants may have incidental contacts with food. Recommended for heavy loaded applications with low to medium speed bearings, such as pellet presses and compactors used to process pet food and animal feed.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
White oil	460	Calcium Sulphonate Complex	2	-20 to 140 (peaks of 180 °C)	> 280	660	brown

Extreme Pressure



NSF H1



Heavy Loads



High Temperature



Water Resistant



Grease Range

31

Motul

IRIX INO AX 330-2 FG

(formerly IRIX HP - PAK 332)

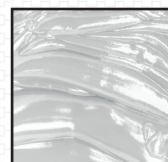
High-performance universal food machinery grease.

CLASSIFICATION

ISO 12924: L-XDCEB2
DIN 51502: KPHC2K-40

APPLICATION

Suitable for food industries where lubricants may have incidental contacts with food; bearings operating at medium speeds, including heavily loaded applications. The grease has good water and oxidation resistance.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Synthetic	330	Aluminium Complex	2	-40 to 120 (peaks of 130 °C)	> 230	> 400	white

Extreme Pressure



NSF H1



Heavy Loads



Water Resistant



IRIX INO TF 1000-3 FG

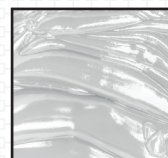
Grease developed from a high viscosity silicon oil, thickened with PTFE.

CLASSIFICATION

ISO 12924:
DIN 51502:

APPLICATION

Suitable for the lubrication of seals and gaskets, plastic parts for tap and valve systems, sealing of glass instruments. Can also be used for very low-load rolling bearings used in food and beverage industry.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Silicone	1000	PTFE	3	-45 to 180	> 300	-	white

NSF H1



High Temperature



Special Application

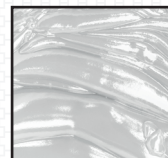


IRIX CERAMIC PASTE

Non-toxic assembly paste based on synthetic oil with a high content of solid ceramic lubricants.

APPLICATION

Suitable for lubricating bushes, sliding surfaces, and small open plastic or metal gears. It is also an anti-seize compound for threaded fasteners. The compound is designed to prevent damage during startup and protect against premature wear during the running in period. Not recommended for the lubrication of anti-friction bearings.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Semi-synthetic	240	Silica	2	-30 to 150 1150 °C as anti-seize agent	none	600	white

NSF H1



High Temperature



Special Application



Heavy Loads



Water Resistant



IRIX BIO C 210-2 FG

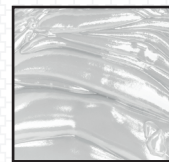
High-performance EAL (Environmentally Acceptable Lubricant) and food grade grease.

CLASSIFICATION

ISO 12924: L-XD(F)BIB2
DIN 51502: KPE2G-40

APPLICATION

This grease is ideal not only for applications in the food producing sector, but also in marine, forestry, agriculture and construction machinery. It is easily pumpable in most modern high-pressure centralized lubrication systems.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Ester	210	Calcium	2	-40 to 120	> 140	305	white

NSF H1 	Environmentally acceptable 	Extreme Pressure 	Multi-Purpose 	Water Resistant 	Corrosion Protection 
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NOTES

MOTUL

SPECIALITY GREASES

From a large variety of additives and base oils, these specialty greases offer peak performance and reliability in extreme conditions, for day to day maintenance or lifetime lubrication.

IRIX INO P 260-2

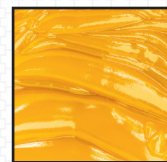
One-of-a-kind high-performance synthetic lubricant grease.

CLASSIFICATION

ISO 12924: L-XC(F)CIB2
DIN 51502: KPHC2K-30

APPLICATION

Suitable for a wide variety of applications where long life is of critical importance. Improved lubrication of sensitive materials such as aluminium, ceramics, and elastomers. Due to the inert nature of the thickener system, the product is also compatible with most types of conventional lubricating greases.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
PAO	260	Polymer	2	-30 to 120	> 140	320	yellow

Corrosion Protection



Extreme Pressure



Central Lubrication



Multi-Purpose



Water Resistant

**IRIX EVO PU 190-2**

High-temperature grease.

CLASSIFICATION

DIN 51502: KP2P-30

APPLICATION

This grease is extremely temperature stable and covers a wide temperature range. It is extremely suitable for lubricating roller and friction bearings exposed to high temperatures and pressure. It is especially appropriate for life-time lubrication of roller bearings in maintenance-free devices but also for earthmoving equipment or the crushing industry where longer lubrication intervals are determined.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	190	Polyurea	2	-30 to 160 (peaks of 180 °C)	> 300	315	amber

Corrosion Protection



Extreme Pressure



High Temperature



Special Application



Water Resistant

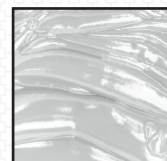
**IRIX INO TF 500-2**

High-performance grease based on fluorinated base stock and a PTFE thickener.

APPLICATION

Adapted for the lubrication of bearings and articulations submitted to high temperatures as in corrugator service, ovens, drying and stabilisation tunnels. Typical applications include preconditioner rolls, single facers, and double backers. It is well suited for the lubrication and preservation of electrical contacts. The product is chemically inert, non-flammable, non-toxic and remains unaffected by water and steam, preventing lubricant washout.

* Special lubricant, please contact Motul before ordering.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
PFPE	500	PTFE	2	-30 to 300	none	> 500	white

High Temperature



Extreme Pressure



Corrosion Protection



Water Resistant



Special Application



Grease Range

35

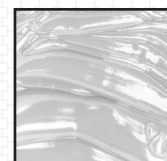
Motul

IRIX INO TF 1000-3 FG

Grease developed from a high viscosity silicon oil, thickened with PTFE.

APPLICATION

Suitable for the lubrication of seals and gaskets, plastic parts for tap and valve systems, sealing of glass instruments. Can also be used for very low-load rolling bearings used in food and beverage industry.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Silicone	1000	PTFE	3	-45 to 180	> 300	-	white

NSF H1



High Temperature



Special Application



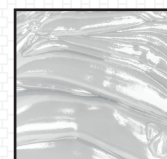
ASSEMBLY PASTES

IRIX CERAMIC PASTE

Non-toxic assembly paste based on synthetic oil with a high content of solid ceramic lubricants.

APPLICATION

Suitable for lubricating bushes, sliding surfaces, and small open plastic or metal gears. It is also an anti-seize compound for threaded fasteners. The compound is designed to prevent damage during startup and protect against premature wear during the running in period. Not recommended for the lubrication of anti-friction bearings.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Synthetic	330	Silica	2	-30 to 150 1150 °C as anti-seize agent	none	600	white

NSF H1



High Temperature



Special Application



Water Resistant



Heavy Loads

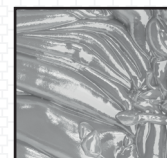


IRIX ALUMINIUM PASTE

Assembly paste blended from mineral oil, lithium thickener, a mix of aluminium and graphite solid lubricants (20%) and EP additives.

APPLICATION

Suitable to ease assemblies, static or semi-static (coupling electrical motor/gear box, ingot clamps, and any other mechanical parts working at very low speed and high temperatures). This paste considerably reduces contact corrosion effects and eases disassembly even after a long period of exposure at high temperature.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	100	Lithium	2	-20 to 700	> 190	315	aluminium

Heavy Loads



High Temperature



Special Application



Corrosion Protection



IRIX COPPER PASTE

(formerly IRIX HP - BEM 482 CU)

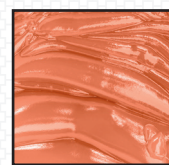
Assembly paste based on mineral oil and copper powder (25%).

CLASSIFICATION

ISO 12924: L-XCGDB2
DIN 51502: KF2T-35

APPLICATION

Suitable to ease assemblies, static or semi-static (coupling electrical motor/gear box, ingot clamps, and any other mechanical parts working at very low speed and high temperatures). This paste considerably reduces contact corrosion effects and eases disassembly even after a long period of exposure at high temperature.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	485	Bentonite	2	-35 to 1100	none	400	copper

Heavy Loads



Corrosion Protection



Special Application



High Temperature



IRIX ROCK DRILL PASTE

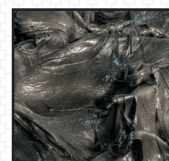
High-performance chisel / rock drill paste

CLASSIFICATION

ISO 12924: L-XBCHB2
DIN 51502: KPF2K-20

APPLICATION

Suitable for various types of bearing applications including heavy load conditions and wet environments. The copper and graphite solid additives give extra protection in applications with slow moving or oscillating motions.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Semi-synthetic	320	Lithium Complex	2	-20 to 180 (peaks of 200 °C)	> 240	≥ 620	black

Extreme Pressure



Heavy Loads



Water Resistant



IRIX EVO LC 1200-2

(formerly IRIX HP - LCM 1202 CC)

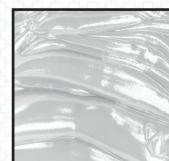
Non-toxic, assembly paste based on synthetic oil with a high content of solid lubricants (ceramic).

CLASSIFICATION

ISO 12924: L-XB(F)CHB2
DIN 51502: KPF2K-10

APPLICATION

Suitable for heavily loaded industrial and heavy-duty applications including extreme outdoor wet and dirty conditions. Perfect choice for the lubrication of slow moving and heavily loaded bearings and tool or workpiece clamping systems in machine tools. This paste provides excellent adhesion and water resistance for perfect protection of chucks, collets and vices.



BASE OIL	BASE OIL VISCOSITY AT 40 °C (cSt)	THICKENER	NLGI GRADE	TEMPERATURE RANGE (°C)	DROP POINT (°C)	4-BALL WELD LOAD (kg)	COLOUR
Mineral	1200	Lithium/ Calcium	2	-20 to 120 (peaks of 130°C)	> 180	≥ 500	white

Extreme Pressure



Heavy Loads



Water Resistant



UNDERSTANDING GREASES

Motul offers an extensive range of industrial greases designed to meet the specific needs of modern industry. Each product is the result of long collaboration with industry experts. Our specialists listen to each of their requests, and then develop greases that contribute to the performance of our customers' equipments, reduce maintenance costs, and optimize productivity.

WHAT IS A GREASE?

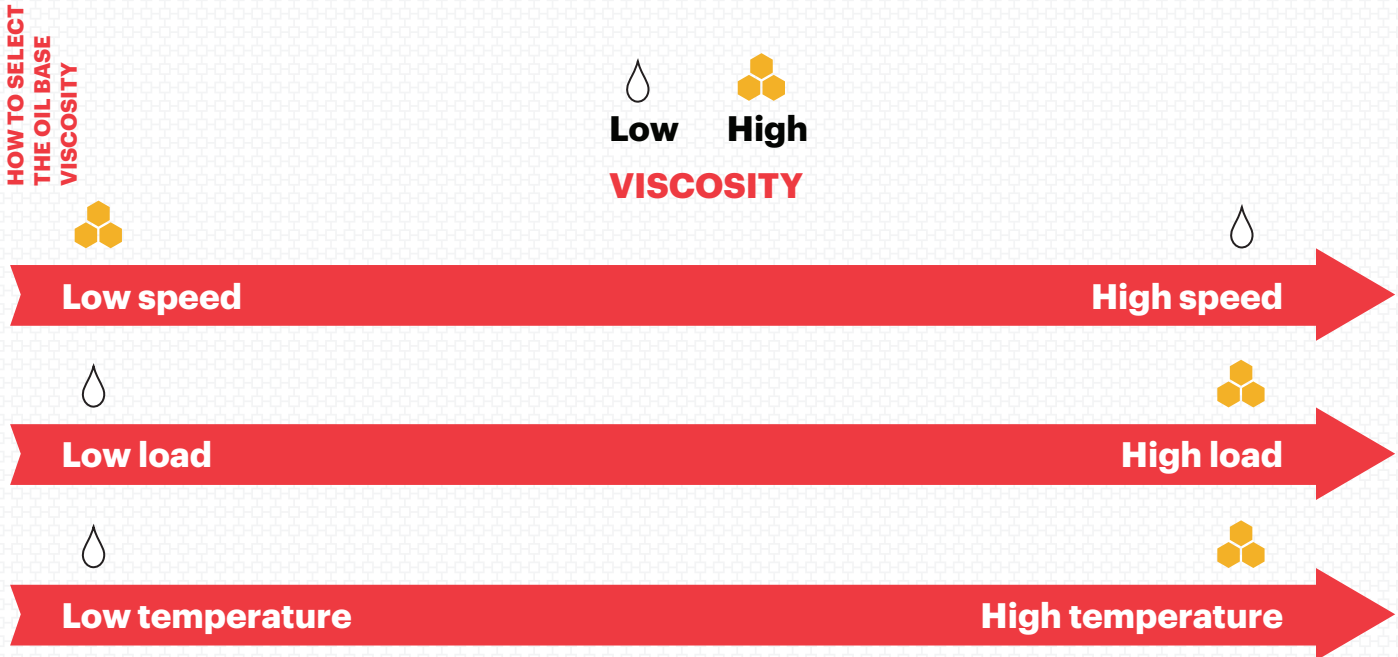


FIVE STEPS TO CHOOSE THE CORRECT MOTUL INDUSTRIAL GREASE

1 BASE OIL

It is the largest component of a grease, representing 80 - 97% by weight. The choice of base fluid may be mineral oil, synthetic oil, or any fluid that lubricates by reducing friction between moving parts and gives performance across a wide range of temperatures.

BASE OIL	VISCOSITY INDEX	LOW TEMPERATURE PROPERTIES	HIGH TEMPERATURE PROPERTIES	LOW VOLATILITY	ANTI CORROSION PROTECTION
MINERAL	●	●	●	●	●●●
PAO	●●	●●	●●	●●	●●●
PAG	●●	●●	●●●	●●	●
ESTER	●	●●	●●●	●●●	●
SILICONE	●●●	●●	●●●	●●●	●



02 THICKENER

The thickener or the soap is what gives a grease its structure and stability. Different thickeners offer unique properties like water resistance or high temperature performance. The soap structure acts like a "sponge" with regards to holding and releasing the lubricating base fluids and additives at the place they are needed.

SOAP PROPERTIES	LITHIUM	LITHIUM COMPLEX	LITHIUM CALCIUM	CALCIUM	CALCIUM SULPHONATE COMPLEX	CALCIUM COMPLEX	ALUMINIUM COMPLEX	POLYUREA	BENTONITE
HIGH TEMPERATURE RESISTANCE	●	●●●	●●	●	●●●	●●	●●	●●●	●●
WATER RESISTANCE	●	●●	●●	●●	●●●	●●	●●	●●	●●●
CORROSION PROTECTION	●	●	●●	●●	●●●	●●●	●●●	●	●●●
LOW TEMPERATURE PUMPABILITY	●	●●	●●	●●●	●	●●	●●	●	●●
ADHESIVENESS TO METAL	●	●●●	●●	●●	●●●	●●	●●	●	●
MULTI-PURPOSE	●●●	●	●●●	●	●●●	●●●	●	●	●
HIGH SPEED USAGE	●●	●●	●	●	●	●	●	●●	●

● - STANDARD ●● - ADVANCED ●●● - PREMIUM

03 ADDITIVES

These components supplement the lubricating capability of the base oil, improving upon characteristics such as load carrying, anti-wear and corrosion protection. Solid lubricants such as Molybdenum di-sulphide, graphite and calcium carbonate are used to offer high load carrying capability.

04 GREASE CONSISTENCY / NLGI GRADE

The NLGI (National Lubricating Grease Institute) consistency number measured by ASTM D 217 expresses a measure of the relative hardness of a lubrication grease.

NLGI NUMBER	Worked (60 double strokes) penetration at 25 °C 0.1 mm after 5 s	Appearance	Application
000	445-475	very fluid	centralised lubrication systems, enclosed gears
00	400-430	semi fluid	centralised lubrication systems, enclosed gears
0	355-385	fluid	bearings, centralised lubrication systems
1	310-340	soft	low ambient temperatures and oscillating applications
2	265-295	"normal" grease	normal bearing applications
3	220-250	firm	large bearings, vertical shaft arrangements, high ambient temperatures or the presence of vibration
4	175-205	very firm / stiff	very high speed and low load
5	130-160	hard	low speed journal bearings
6	85-115	very hard	very slow-moving journal bearings

Common greases are in the range 1 through 3, the most common greases, used in normal bearing applications, have an NLGI grade of 2. Low consistency rolling bearing greases, classified as NLGI 1 greases, are preferred for low ambient temperatures and oscillating applications. NLGI 3 greases are recommended for large bearings, vertical shaft arrangements, high ambient temperatures or the presence of vibration.

05

GREASE COMPATIBILITY

Before replacing a grease one should always check base oil and thickener compatibility. Not all greases are compatible due to the unique nature of the soap and base oil chemistries. When looking to replace a grease, please consider this. If in doubt, please consult a Motul technical expert.

BASE OIL COMPATIBILITY

MINERAL	PAO	POLYGLYCOL	ESTER	SILICON	
●	●	●	●	●	MINERAL
●	●	●	●	●	PAO
●	●	●	●	●	POLYGLYCOL
●	●	●	●	●	ESTER
●	●	●	●	●	SILICON

● - COMPATIBLE ● - INCOMPATIBLE

THICKENER COMPATIBILITY

LITHIUM	LITHIUM COMPLEX	LITHIUM CALCIUM	ANHYDROUS CALCIUM	CALCIUM SULPHONATE COMPLEX	CALCIUM COMPLEX	ALUMINIUM COMPLEX	POLYUREA	INORGANICALLY THICKENED	
●	●	●	●	●	●	●	●	●	LITHIUM
●	●	●	●	●	●	●	●	●	LITHIUM COMPLEX
●	●	●	●	●	●	●	●	●	LITHIUM CALCIUM
●	●	●	●	●	●	●	●	●	ANHYDROUS CALCIUM
●	●	●	●	●	●	●	●	●	CALCIUM SULPHONATE COMPLEX
●	●	●	●	●	●	●	●	●	CALCIUM COMPLEX
●	●	●	●	●	●	●	●	●	ALUMINIUM COMPLEX
●	●	●	●	●	●	●	●	●	POLYUREA
●	●	●	●	●	●	●	●	●	INORGANICALLY THICKENED

● - COMPATIBLE ● - INCOMPATIBLE IN CERTAIN PROPORTIONS ● - INCOMPATIBLE

Grease Range

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Motul

SIMPLE THICKENEND GREASES												
Base Oil	Base oil viscosity at 40 °C	Thickener	NLGI Grade	Temperature range °C	Drop Point °C	4-ball weld load kg	Colour	Water protection	Load carrying ability	Speed	Corrosion protection	
IRIX C 120-2	Mineral	120	Anhydrous Calcium	2	-30 to 110 (peaks of 120 °C)	> 140	280	amber	●●	●	medium to high	●●
IRIX C 310-2	Mineral	310	Anhydrous Calcium	2	-30 to 120 (peaks of 130 °C)	> 140	320	green	●●	●●	medium	●●
IRIX C 1370-0	Mineral	1370	Anhydrous Calcium	0	-40 to 120 (peaks of 130 °C)	> 120	310	yellow	●●●	●●●	slow	●●●
IRIX L 50-00	Mineral	60	Lithium	00	-30 to 120	> 160	250	amber	●●	●	high	●●
IRIX L 80-0	Mineral	65	Lithium	0	-30 to 120	> 160	250	amber	●●	●●	high	●●
IRIX L 130-1	Mineral	130	Lithium	1	-20 to 130	> 180	250	amber	●	●●	medium to high	●●
IRIX L 130-2	Mineral	130	Lithium	2	-20 to 120	> 180	315	amber	●	●●	medium to high	●●
IRIX L 130-3	Mineral	130	Lithium	3	-20 to 130	> 190	285	amber	●	●●	medium	●●
IRIX L 150-2 MO	Mineral	150	Lithium	2	-20 to 130 (peaks of 140 °C)	≥ 185	≥ 325	black	●	●●	medium	●●
LITHIUM CALCIUM THICKENEND GREASES												
IRIX EVO LC 150-2	Mineral	150	Lithium Calcium	2	-30 to 120 (peaks of 130 °C)	> 180	315	green	●●●	●●	medium to high	●●
IRIX EVO LC 1200-2	Mineral	1200	Lithium Calcium	2	-20 to 120 (peaks of 130 °C)	> 180	≥ 500	white	●●●	●●●	slow	●●●
IRIX EVO LCX 920-000	Mineral	920	Lithium Calcium Complex	000	-20 to 120 (peaks of 130 °C)	> 180	700	brown	●●	●●●	low	●●
IRIX EVO LCX 500-0 G	Mineral	500	Lithium Calcium Complex	0	-20 to 120 (peaks of 130 °C)	> 240	710	black	●●	●●●	low to medium	●●

SYNTHETIC BASED AND COMPLEX THICKENED GREASES													
IRIX EVO LX 200-2	High Temperature lithium complex grease	Mineral	200	Lithium Complex	2	-20 to 160	≥ 240	400	green	●●	●●	medium	●●
IRIX INO LX 40-2	Synthetic high speed grease	Synthetic	44	Lithium Complex	2	-55 to 140 (peaks of 180 °C)	> 260	> 380	beige	●	●●	high	●●
IRIX INO LX 220-2	Synthetic high temperature grease	Synthetic	220	Lithium Complex	2	-40 to 150	> 260	> 380	beige	●●	●●	medium to high	●●
IRIX INO LX 460-2	Synthetic high temperature low speed grease	Synthetic	460	Lithium Complex	2	-40 to 150	> 260	> 380	beige	●●	●●	low to medium	●●
IRIX EVO CSX 290-2	High performance grease for high load, water and high temperature	Mineral	290	Calcium Sulphonate Complex	2	-30 to 140 (peaks of 180 °C)	> 280	765	brown	●●●	●●●	medium	●●●
IRIX EVO CSX 440-2	High performance grease for high load, water and high temperature	Mineral	440	Calcium Sulphonate Complex	2	-20 to 140 (peaks of 180 °C)	> 280	765	brown	●●●	●●●	medium	●●●
HIGH PERFORMANCE SPECIALITY GREASES													
IRIX INO P 260-2	Synthetic long life and extremely low friction grease	Synthetic	260	Polymer	2	-30 to 120	> 140	320	yellow	●●●	●●	high and slow	●●●
IRIX EVO PU 190-2	High temperature grease	Mineral	190	Polyurea	2	-30 to 160 (peaks of 180 °C)	> 260	315	amber	●●	●●	medium	●●
IRIX INO TF 500-2	High temperature grease	PFPE	500	PTFE	2	-30 to 300	none	> 500	white	●●●	●●●	low to medium	●●●
IRIX INO TF 1000-3 FG	Silicone grease for seals and valves	Silicone	1000	PTFE	3	-45 to 180	> 300	/	white	●●●	●	static to very low	●●●
IRIX BE 70-2 FG	General purpose food grease	Mineral white oil	70	Bentonite	2	-15 to 120	none	/	crystal	●●●	●	medium to high	●●
IRIX EVO CSX 100-2 FG	Food grade grease for high load, water and high temperature	Semi-synthetic	100	Calcium Sulphonate Complex	1.5	-30 to 140 (peaks of 180 °C)	> 300	660	brown	●●●	●●●	medium to high	●●●
IRIX EVO CSX 460-2 FG	Food grade grease for high load, water and high temperature	Mineral white oil	460	Calcium Sulphonate Complex	2	-20 to 140 °C (peak 180)	> 280	660	brown	●●●	●●●	medium	●●●
IRIX INO AX 330-2 FG	High performance general purpose food grease	Synthetic	330	Aluminium Complex	2	-40 to 120 (peaks of 130 °C)	> 230	> 400	white	●●	●●	medium	●●●

	Base Oil	Base oil viscosity at 40 °C	Thickener	NLGI Grade	Temperature range °C	Drop Point °C	4-ball weld load kg	Colour	Water protection	Load carrying ability	Speed	Corrosion protection
HD - GREASES												
IRIX L 150-2 MO	Mineral	150	Lithium	2	-30 to 130 (peaks of 140 °C)	≥ 185	≥ 325	black	●	●●	medium	●●
HD-AGRI GREASE	Semi-synthetic	800	Lithium	2	-30 to 140	190	280	light green	●●	●●●	low	●●
BIO GREASES												
IRIX BIO BE 30-000	Ester	32	Bentonite	000	-40 to 120	none	n/a	amber	●●	●	medium to high	●●●
IRIX BIO C 210-2 FG	Ester	210	Anhydrous Calcium	2	-40 to 120	> 140	305	white	●●	●●	medium	●●
IRIX BIO C 110-2	Biodegradable oil	110	Anhydrous Calcium	2	-30 to 80 (peaks of 100 °C)	> 140	285	yellow greenish	●●	●●	medium to high	●●
IRIX HP - SI 180	Biodegradable oil	20	Microgel	n/a	-30 to 120	none	n/a	dark yellow	●●●	●	low to medium	●●●
ASSEMBLY PASTES												
IRIX ALUMINIUM PASTE	Mineral	100	Lithium	2	-22 to 140	> 190	315	aluminium	●●	●●●	static	●●●
IRIX COPPER PASTE	Mineral	485	Bentonite	2	-35 to 1100	none	400	copper	●●	●●●	static	●●●
IRIX CERAMIC PASTE	Semi-synthetic	240	Silica	2	-30 to 1150	none	600	white	●●	●●	static	●●●
IRIX ROCK DRILL PASTE	Semi-synthetic	320	Lithium Complex	2	-20 to 180 (peaks of 200 °C)	> 240	≥ 620	black	●●	●●●	low to medium	●●●



MOTUL Deutschland GmbH
Butzweilerhofallee 3 | D-50829 Köln | motul.de
T +49.(0)221.67003 0 | **F** +49.(0)221.67003 199
E info@de.motul.com | facebook.com/motul.de

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motul.com



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