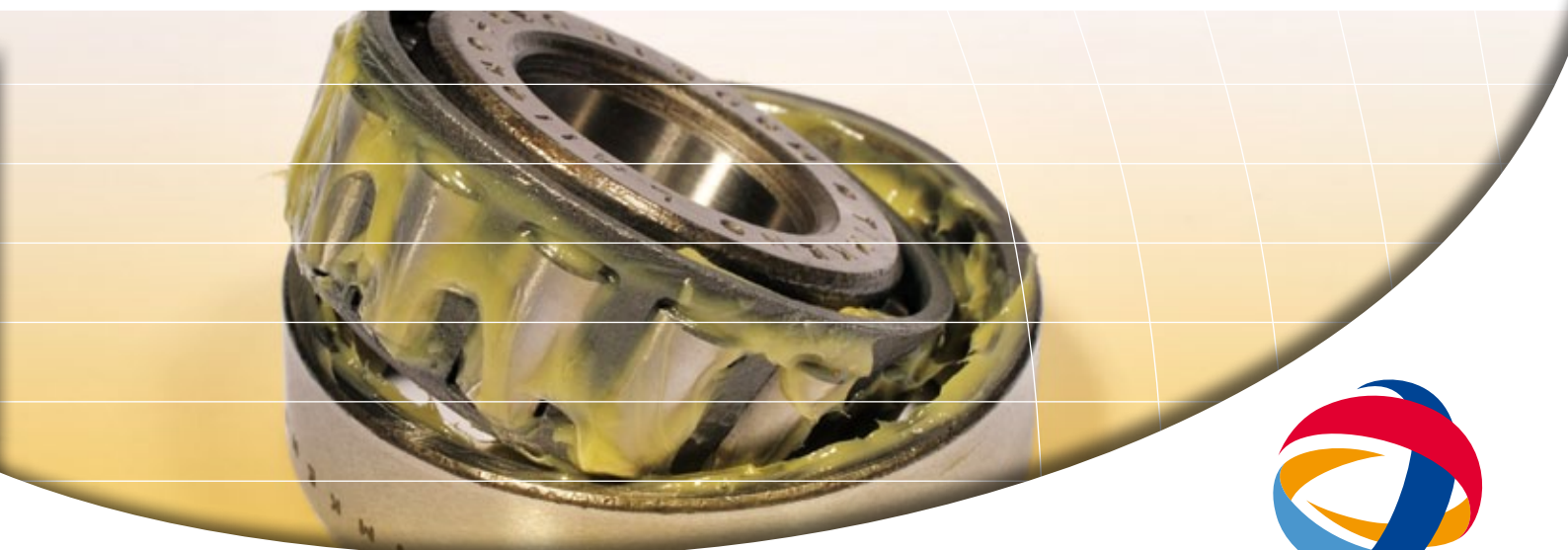


MULTIS COMPLEX Greases

Rely on high technology greases for severe applications



TOTAL



TOTAL

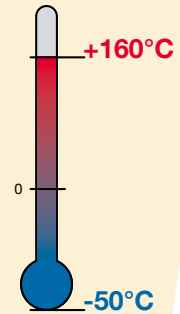
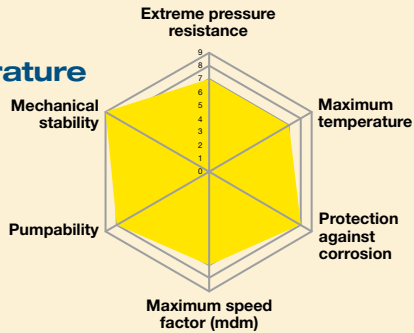
MULTIS COMPLEX, the top tier of multipurpose greases

■ MULTIS COMPLEX SHD

Synthetic PAO oil based

SHD 220

- Recommended temperature range **-50°C to 160°C**
- Medium to heavy loads
- Slow to high speeds (depending on the product)
- Wet conditions



Your advantages

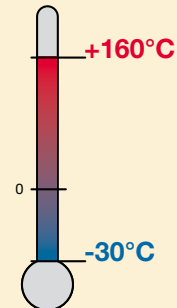
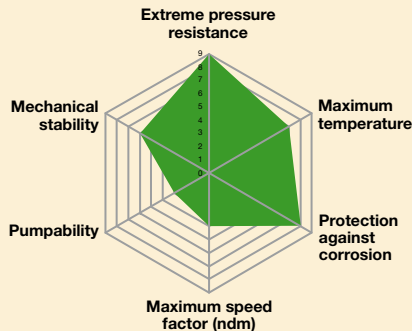
■ Easy starts at very low temperature, down to **-50°C** ■ Low traction coefficient brings energy savings ■ Excellent protection and performance of your equipment even at high temperature ■ Increased service life of the bearings ■ Longer lubrication intervals ■ Reduced downtime for maintenance operations

■ MULTIS COMPLEX HV2

Mineral oil based

HV2

- Very heavy loads
- Recommended temperature range **-30°C to 160 °C**



Your advantages

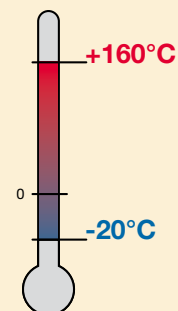
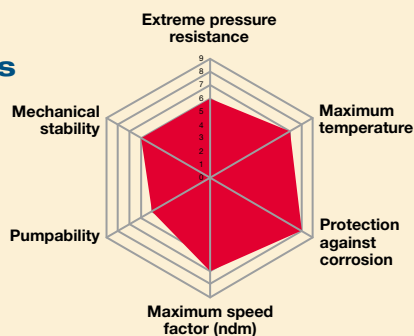
■ Outstanding protection and performance of mechanical parts under extreme pressure ■ Long lasting protection due to durability of the lubricant film ■ Enhanced anti-corrosion properties ■ Longer lubrication intervals

■ MULTIS COMPLEX EP

Mineral oil based

EP2

- Moderate to high speeds
- Medium to heavy loads
- Recommended temperature range **-20°C to 160 °C**
- Centralized greasing system



Your advantages

■ Just one product to lubricate a wide variety of equipments under moderate temperatures ■ Excellent protection of parts against wear and corrosion ■ Simplification of maintenance operations ■ Minimization of lubricant stocks

Outstanding lithium complex greases

for intensive

Product	Nature	Temperature range	Other constraints	NLGI* Grade
MULTIS COMPLEX SHD 00	Synthetic PAO oil based Semi-fluid grease	-50°C to +160°C	<ul style="list-style-type: none"> Moderate to heavy loads 	00
MULTIS COMPLEX SHD 32	Synthetic PAO oil based	-50°C to +160°C	<ul style="list-style-type: none"> High speeds (speed factor nd_m^{***} up to 600 000), Moderate to heavy loads 	2
MULTIS COMPLEX SHD 100	Synthetic PAO oil based	-50°C to +160°C	<ul style="list-style-type: none"> High speed (speed factor nd_m^{***} up to 500 000) Moderate to heavy loads 	2
MULTIS COMPLEX SHD 220	Synthetic PAO oil based	-50°C to +160°C	<ul style="list-style-type: none"> Heavy loads Slow to moderate speeds 	2
MULTIS COMPLEX SHD 460	Synthetic PAO oil based	-40°C to +160°C	<ul style="list-style-type: none"> Heavy loads Slow to moderate speeds Presence of water 	1/2
MULTIS COMPLEX HV2*	Mineral oil based Extreme pressure	-30°C to +160°C	<ul style="list-style-type: none"> Very heavy loads, shocks and vibration 	2
MULTIS COMPLEX EP2	Mineral oil based Extreme pressure	-20°C to +160°C	<ul style="list-style-type: none"> High speeds Moderate to heavy loads 	2
MULTIS COMPLEX EP3	Mineral oil based Extreme pressure	-20°C to +160°C	<ul style="list-style-type: none"> High speeds Moderate to heavy loads 	3

* **MULTIS COMPLEX HV2 MOLY**: doped version with molybdenum disulfide. Grease dedicated for off-road vehicles operating under extreme conditions.

* Viscosity grade, according to the N.L.G.I classification (National Lubricating Grease Institute)

** Typical kinematic viscosity of base oil at 40°C in mm²/s









RECOMMENDATIONS FOR USE

- **Verify the pumpability of the grease** with your lubrication system before the first use.

- **Preferably use a pneumatic pump system** or cartridges for lubrication operations.

industrial applications



Viscosity HDB**	Colour	Specifications		Recommended for
		ISO 6743-9	DIN 51502	
460	Yellow 	L-XEEHB 00	KP00P-50	Worm or slow moving gearboxes filled with grease, when very long lubrication intervals are required.
32	Yellow 	L-XEEHB 2	KP2P-50	Bearings operating at very low temperature. Thermoplastic material.
100	Yellow 	L-XEEHB 2	KP2P-50	Applications requiring long lubrication intervals, like electric motors.
220	Yellow 	L-XEEHB 2	KP2P-50	Heavy duty applications. Specially recommended for papermaking industry, in particular felt rolls.
460	Yellow 	L-XDEHB 1/2	KP1/2P-40	Heavy duty applications. Specially recommended for papermaking industry, in particular felt rolls.
340	Green 	L-XBEHB 2	KP2P-30	Off-road vehicles. Heavy loaded industrial applications.
165	Red 	L-XBEHB 2	KP2P-20	<ul style="list-style-type: none"> • Wheel bearings, ball bearings, roller bearings, plain bearings, seals ... • Wheel bearings, ball bearings, roller bearings, plain bearings, seals ...
165	Brown 	L-XBDHB 3	KP3N-20	

*** n = rotation of the bearing per minute d_m = average diameter of the bearing in mm

• **Avoid contamination of the grease** by dust or dirt when applying.

• **MULTIS COMPLEX greases are miscible** with most other conventional soap greases. Contact us for the choice of the grease suitable to your equipment and operating environment.

Lithium complex, a technology with exceptional performance

In the most severe operating environments (load, temperature, speed, humidity), our multipurpose greases **MULTIS COMPLEX** protect your equipment efficiently and durably, much better than any grease made of simple lithium thickener. Indeed, the **MULTIS COMPLEX** range is formulated with lithium complex soap, characterized by a very dense and solid structure. This premium technology, associated with the properties of synthetic or mineral base oils, brings exceptional lubrication performances to our **MULTIS COMPLEX** greases.

Wide working temperature range

Easy starts of your equipment at very low temperature until -50°C , and resistance to continuous work at high temperature until 160°C .

Excellent mechanical stability

Excellent anti wear protection of parts under heavy loads, due to enhanced ability of the grease to absorb shocks and vibration.

Superior resistance to water washout

Reinforced protection of your equipment against rust and corrosion, with the perfect adhesiveness of the grease on metal.

Long service life

Longer lubrication intervals, as a result of excellent mechanical stability and low bleed tendency.

The performance and multipurpose ability of the greases **MULTIS COMPLEX** ensure simplified maintenance operations, while keeping optimal efficiency and protection of your equipment. As a result, **you gain both on productivity and maintenance cost savings!**



4 good reasons to choose TOTAL

A major company

Total Lubrificants is a subsidiary of TOTAL. The Group is the world's fifth largest integrated energy company* and employs more than 96,000 people on five continents. Total Lubrificants produces and sells its products under the TOTAL brand in more than 160 countries.

Safe and eco-friendly products

Total Lubrificants renews its ISO 9001 certification every three years, as a guarantee of its longterm commitment. Elements aimed to reduce the risk of toxicity, the VOC emissions, and to encourage recycling and elimination from the environment, are incorporated into the design of every new product.

Innovation

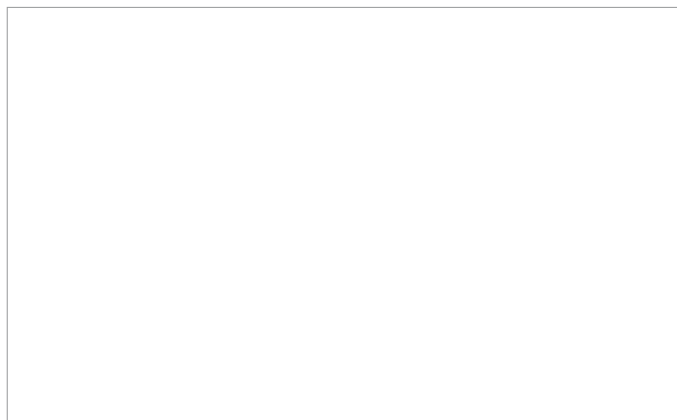
Thanks to a major investment in R&D and close cooperation with equipment manufacturers, Total Lubrificants creates high-technology products with substantial added value, for optimal performance and protection of your machinery.

Partnership

The wide range of TOTAL products means that you can find the maintenance lubricants or specialized products to meet your every need. By choosing TOTAL, you can be fully confident that our team will work with you to enhance your productivity and reduce your maintenance costs.

** Based on market capitalization in dollars at 31 December 2009.*

Material safety data sheets available at www.quickfds.com



www.lubricants.total.com



You know where to turn

TOTAL