

## Optitemp BT 1LF

Grease for thermally and mechanically highly loaded CV joints

### Description

OPTITEMP™ BT 1 LF is a grease designed for extreme loads in all types of constant velocity joints. It features excellent high and low-temperature characteristics. Due to its special additives it ensures a reduced coefficient of friction which leads to fuel saving. The product further reduces the temperature in the joint and improves the noise and vibration behavior (NVH). The compatibility with conventional boot materials is excellent. The product is formulated on a mineral/synthetic base and is an economical alternative to fully synthetic lubricants.

### Application

- Application in homokinetic ball and tripod joints (free from MoS<sub>2</sub>)
- All types of vehicles where "Fuel Economy" is required
- Vehicles where the periodic axial forces in the joint have a direct influence on the driving comfort
- Joints subjected to high mechanical and thermal loads
- Application at extreme temperatures:
  - - 40°C low temperature
  - 140°C permanent temperature (in CV joints)
  - 160°C maximum temperature (in CV joints)
- At high sliding friction components

### Advantages

- Extremely wide temperature range
- High service life, excellent wear behavior
- Very low coefficients of friction
- Extreme reduction of the axial forces in the joint
- Good oxidation stability
- Optimum boot compatibility with CR and Hytrel
- "Fuel Economy" (in some cases up to 0.05 l / 100 km)
- Significant lowering of the operating temperatures
- Low evaporation losses

## Typical Characteristics

Name	Method	Units	Optitemp BT 1LF
Colour	Visual	-	yellow-green
Base	-	-	polyurea / mineral / synthetic
Worked Penetration (60 strokes @ 25°C / 77°F)	ISO 2137 / ASTM D217	0.1 mm	290-320
Density @ 20°C / 68°F	ASTM D4052 / DIN 51757D	kg/m <sup>3</sup>	870-930
Base Oil Viscosity @ 40°C / 104°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	124.6
Base Oil Viscosity @ 100°C / 212°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	12.5
Dropping point	ISO 2176 / ASTM D566	°C/°F	>200/392
Water Resistance	DIN 51807-1	Rating	0
Rust Test - EMCOR (distilled water)	ISO 11007 / ASTM D6138 / DIN 51802	Rating	0
Flow Pressure @ 20°C / 68°F	DIN 51805	mBar	<100
Flow Pressure @ -20°C / -4°F	DIN 51805	mBar	<600
Flow Pressure @ -35°C / -31°F	DIN 51805	mBar	≤1,600
VW Oil Separation test (1 hr / 90°C)	P-VW-1423	% wt	5
Elastomer Compatibility - with Inepsa CR 4012 (168 hrs @ 100°C / 212°F)	ISO 1817	volume change (%) / change in tensile strength (%) / change in elongation (%) / change in shore hardness	≤20 / ≤ -10 / ≤ -20 / ≤ -20

## Additional Information

OPTITEMP® BT 1 LF is compatible with the elastomers chloroprene rubber CR (e.g. Neopren®) and polyetherester rubber (e.g. Hytel®).

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