

Shell Stamina Greases RL

Premium quality industrial bearing greases

THICKENER	NLGI	TEMP RANGE	BASE OIL VISCOSITY		EP	WATER RESISTANCE
DIUREA	0, 1 & 2	-20 °C to +160 °C	40 °C 100 mm ² /s	100 °C 11.3 mm ² /s	✓	☆☆☆

Shell Stamina Greases RL 0, RL 1 and RL 2 are high technology greases designed to give optimum performance for grease lubrication in industrial bearings.

They are based on mineral oil with a special diurea thickener to give long life, low wear and shear-stable properties at high temperatures.

In high temperature applications Shell Stamina Greases RL will outperform even fully synthetic (PAO) lithium complex greases proposed in the market

Applications

Shell Stamina Greases RL are particularly recommended for use in high temperature (160 °C), lightly loaded industrial bearings. It is recommended for use where long operational life and extended re-greasing intervals are an important consideration

An excellent service life in bearings operating between -20 °C and +160 °C. With caution, Shell Stamina Greases RL may, in some circumstances, be used at temperatures up to 180 °C, but only if the re-lubrication period is suitably adjusted.

Performance Features

- **Outstanding life at high temperatures**
- **Excellent wear protection**
- **Excellent mechanical stability at high temperatures**
- **Excellent oxidation resistance**
- **Good protection against false brinnelling**
- **Low oil separation**
- **Excellent corrosion resistance**
Provides protection from the elements of corrosion
- **Versatile**
- **Water resistant**
Withstands washing with water, preventing loss of protection
- **Lead and nitrite free**
For safe handling

Corrosion Protection

When a bearing is running, most high quality greases can maintain an adequate lubricating film even when the grease is loaded with water. However when the grease bearing is idle corrosion may occur causing pitting which can be destructive. Shell Stamina Greases RL are formulated with corrosion inhibitors to help protect bearing surfaces even when the grease is contaminated with water.

The lubrication properties of Shell Stamina Greases RL are unimpaired by small quantities of salt water.

Load Carrying Capacity

Although not specifically designated extreme pressure, Shell Stamina Greases RL have been used very successfully in slow moving, loaded large bearings such as those found in Continuous casters in steel plants:

High Temperature Performance

The diurea thickener used in Shell Stamina Greases RL has a high melting point and the grease performance is limited only by the properties of the base oil and additive components.

The low volatility and excellent oxidation stability of the base oil are such that they give

Operating Temperature Range

Shell Stamina Grease RL 0

-30 °C to +150 °C

Shell Stamina Greases RL1 & RL2

-20 °C to +160 °C (180 °C peak)

Re-lubrication

Grease life varies considerably from application to application, even with bearings operating under nominally identical conditions. Variables such as air flow, dirt and humidity can have a considerable effect in addition to the more commonly recognised parameters of load, speed and temperature.

The use of Shell Stamina Greases RL usually permits considerable extension of the re-lubrication interval.

Oxidation Stability

Shell Stamina Greases RL have a superior high temperature oxidation inhibitor system to ensure that they will withstand high operating temperatures without forming deposits. Unlike the soap thickeners used in most greases, the diurea thickener in Shell Stamina Greases RL does not catalyse grease oxidation, indeed the diurea thickener offers inherent anti-oxidant properties. This contributes to longer grease life at higher temperatures.

The base oil component of Shell Stamina Greases RL is a specially selected high viscosity index mineral oil with excellent oxidation and evaporation resistance.

Sealing

The rheology of Shell Stamina Greases RL is such that at low shear rates and with heating the consistency increases. Consequently, in bearings operating at high temperatures the grease remains in place providing good sealing and continuous lubrication even in the presence of vibration.

Water Washout

Shell Stamina Greases RL exhibit very good resistance to water washout by immersion or spray.

Health & Safety

Shell Stamina Greases RL are unlikely to present any significant health or safety hazard when properly used in the recommended application, and good standards of industrial and personal hygiene are maintained.

For further guidance on Product Health & Safety refer to the appropriate Shell Product Safety Data Sheet.

Typical Physical Characteristics

Shell Stamina Grease	RL 0	RL 1	RL 2
NLGI Consistency	0	1	2
Colour	Brown	Brown	Brown
Soap Type	Diurea	Diurea	Diurea
Base Oil (type)	Mineral Oil	Mineral Oil	Mineral Oil
Kinematic Viscosity @ 40 °C mm ² /s 100 °C mm ² /s (IP 71/ASTM-D445)	100 11.3	100 11.3	100 11.3
Cone Penetration Worked @ 25 °C 0.1 mm (IP 50/ASTM-D217)	370	325	280
Dropping Point °C (IP 132/ASTM-D566-76)	260	270	280
Pumpability Long distance	Excellent	Good	Fair

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.