Technical Data Sheet

Formerly Known As: **Shell Darina Grease R 2**

Shell **Gadus** *S2 U460L 2*

- Heavy Duty Protection
- High Temperature
- Clay

High Performance Heavy Duty Grease

Shell Gadus S2 U460L Grease, based on an inorganic non-soap thickener and a specially selected base oil, will provide satisfactory lubrication beyond the temperature limitations of lithium based greases.
The base oil component in Shell Gadus S2 U460L Grease is a high quality, solvent refined, high viscosity mineral oil with excellent oxidation and evaporation resistance. Oxidation stability is also improved by the addition of a special high temperature oxidation inhibitor.

DESIGNED TO MEET CHALLENGES

Main Applications



- Recommended for use in bearings operating in the temperature range -20°C to 180°C.
- Shell Gadus S2 U460L Grease gives good service life in many applications where expensive synthetic or silicone lubricants would otherwise be considered.
- The special high viscosity base oil in Shell Gadus S2 U460L Grease makes it particularly suitable for the grease lubrication of heavily loaded slow speed bearings.
- With caution, Shell Gadus S2 U460L Grease may be used at temperatures in excess of 200°C, but only so long as the re-lubrication period is suitably adjusted.

Specifications, Approvals & Recommendations

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

Compatibility & Miscibility

- **Sealing**
  Shell Gadus S2 U460L Grease does not melt like soap thickened greases and hence its consistency changes only marginally with increasing temperature. In bearings operating at high temperature it resists softening and remains in place providing good sealing and continuous lubrication even in the presence of vibration.

Typical Physical Characteristics

Properties			Method	Shell Gadus S2 U460L Grease
NLGI Consistency				2
Soap Type				Inorganic (clay)
Base Oil (Type)				Mineral
Kinematic Viscosity	@40°C	cSt	IP 71	460
Kinematic Viscosity	@100°C	cSt	IP 71	35
Cone Penetration, Worked	@25°C	0.1mm	IP 50 / ASTM D217	265-295
Dropping Point		°C	IP 396	300

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

Health, Safety & Environment

- **Health and Safety**

  Shell Gadus S2 U460L Grease is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

  Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

  Guidance on Health and Safety is available on the appropriate Safety Data Sheet, which can be obtained from https://www.epc.shell.com

- **Protect the Environment**

  Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

Additional Information

- **Operating Temperature**

  A severe limitation in many high temperature greases is the type of organic metallic soap thickener. It can melt at high temperatures destroying the grease structure - greatly reducing its retention and lubrication properties. The special inorganic clay thickener contained in Shell Gadus S2 U460L Grease is free from any melting limitation. It controls the vaporisation and oxidation stability of the base oil and helps to extend grease life and maximise working temperature.

- **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.

  Predicted life is likely to be reduced significantly for less favourable conditions.

  Recommendations should be tested on a trial basis and modified, where necessary, in the light of service experience.

  Preferably, bearing housings should be designed to allow for complete purging during Re-lubrication. Alternatively, the bearing should be dismantled for periodic servicing and complete replacement of the grease charge.

- **Advice**

  Advice on applications not covered here may be obtained from your Shell representative.