Technical Data Sheet

Previous Names: **Shell Albida Grease EP 2, Shell Retinax LX 2**

Shell **Gadus** *S3 V220C 2*

- *Extra Protection*
- *High Temperature*
- *Red Lithium Complex*

Premium multipurpose extreme-pressure grease

Shell Gadus S3 V220C greases are premium multi-purpose greases based on high viscosity index mineral oil and a lithium complex soap thickener. They contain the latest additives to offer excellent high temperature oxidation performance and other additives to enhance its anti-oxidation, anti-wear and anti-corrosion properties. Shell Gadus S3 V220C greases are especially suitable for bearings operating at high temperature and under load.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Excellent mechanical stability even under vibrating conditions.** Consistency retained over long periods, even in conditions of severe vibration.
- **Enhanced extreme-pressure properties.** Excellent load-carrying performance.
- **Good water resistance.** Ensures lasting protection even in the presence of large amounts of water.
- **High dropping point.**
- **Long operational life at high temperatures.**
- **Effective corrosion protection.** Ensures components/bearings do not fail due to corrosion.

Main Applications

- Shell Gadus S3 V220C greases are used for the grease lubrication of heavy-duty bearings used in machinery found in the following applications:
- Continuous casting
- Vibrating sieves
- Quarries
- Breakers
- Roller conveyors
- Automotive Wheel bearings

Specifications, Approvals & Recommendations

- ASTM D4950-07 LB-GC

For additional questions regarding equipment approvals and recommendations, please consult your local Shell Technical Helpdesk, or the OEM Approvals website.

Typical Physical Characteristics

Properties			Method	Shell Gadus S3 V220C 2
NLGI Consistency				2
Color				Red
Soap Type				Lithium complex
Base Oil Type				Mineral
Base Oil Viscosity	@40°C	cSt	IP 71 / ASTM D445	220
Base Oil Viscosity	@100°C	cSt	IP 71 / ASTM D445	19
Cone Penetration, Worked	@25°C	0.1mm	IP 50 / ASTM D217	265-295
Dropping Point		°C	IP 396	240
Pumpability Long Distance				Fair

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

Health, Safety & Environment

- **Health and Safety**

  Shell Gadus S3 V220C 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 Material Safety Data Sheet, which can be obtained from http://www.epc.Shell.com/

- **Protect the Environment**

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

Additional Information

- **Re-greasing Intervals**

  For bearings operating near their maximum recommended temperatures, re-greasing intervals should be reviewed

- **Advice**

  Product recommendations for applications and specifications not covered here may be obtained from your Shell representative.

Technical Data Sheet

Previous Names: **Shell Albida Grease HD 2, Shell Retinax SD 2**

Shell Gadus *S3 V460 2*

- *Heavy Duty Protection*
- *High Temperature*
- *Lithium Complex*

Premium multipurpose heavy duty grease

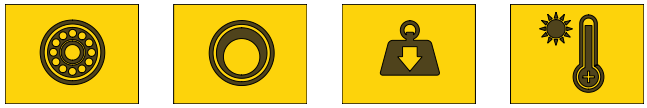
Shell Gadus S3 V460 Greases are premium, high temperature greases for heavy duty industrial applications. This product is based on high viscosity index mineral oil and a lithium complex soap thickener and contains the latest additives to offer excellent high temperature oxidation performance and other additives to enhance its anti-oxidation, anti-wear and anti-corrosion properties.
Shell Gadus S3 V460 Greases are especially suitable for slow moving, heavy-duty bearings operating at high temperature and under severe load.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **High base oil viscosity to meet leading OEM requirements for slow moving large bearings**
  Proven in workroll bending operations in Steel plants
- **Excellent mechanical stability even under vibrating conditions**
  Consistency retained over long periods, even in conditions of severe vibration
- **Enhanced extreme-pressure properties**
  Excellent load-carrying performance
- **Excellent water resistance**
  Ensures lasting protection even in the presence of large amounts of water
- **Effective corrosion protection**
  Ensures components/bearings do not fail due to corrosion
- **High dropping point**
  Resistant to high temperatures

Main Applications



Shell Gadus S3 V460 Greases are used for the grease lubrication of heavy-duty, slow moving bearings used in heavy industries :

- Steel (Continuous casters, Workroll bearings etc)
- Cement
- Paper
- Chemical Industry
- Mining

Specifications, Approvals & Recommendations

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

Typical Physical Characteristics

Properties			Method	Shell Gadus S3 V460 2
NLGI Consistency				2
Colour				Light brown
Soap Type				Lithium complex
Base Oil Type				Mineral
Base Oil Viscosity	@40°C	cSt	IP 71 / ASTM D445	460
Base Oil Viscosity	@100°C	cSt	IP 71 / ASTM D445	31
Cone Penetration, Worked	@25°C	0.1mm	IP 50 / ASTM D217	265-295
Dropping Point		°C	IP 396	250
Low temperature pumpability	30sec@-1°C	psi	Lincoln ventmeter	635
Low temperature pumpability	@-1°C	sec	Lincoln ventmeter to 400psi	483

Properties			Method	Shell Gadus S3 V460 2
Low temperature pumpability	@-1°C	sec	Lincoln Ventmeter to 600psi	41
Low temperature pumpability	30sec@-18°C	psi	Lincoln ventmeter	1800
Low temperature pumpability	@-18°C	sec	Lincoln ventmeter to 600psi	1020
Low temperature pumpability	@-18°C	sec	Lincoln ventmeter to 400psi	1446

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 S3 V460 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 Material Safety Data Sheet, which can be obtained from http://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

- **Re-greasing Intervals**

  For bearings operating near their maximum recommended temperatures, re-greasing intervals should be reviewed

- **Temperature Range**

  -20°C to +140°C (peak 150°C)

  Advice

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