Technical Data Sheet

Formerly Known As: **Shell Tivela Grease GL 00**

# Shell **Gadus** *S5 V142W 00*

- Improved Efficiency
- Low Friction
- Lithium

***Advance Performance Semifluid Gear Grease***

Shell Gadus S5 V142W is a synthetic, semi-fluid gear lubricant developed to meet the highest requirements of industrial gearboxes allowing long life trouble free operation.

## DESIGNED TO MEET CHALLENGES

### Performance, Features & Benefits

- Small industrial gear boxes can be lubricated for life with this semi-fluid grease.
- Reduced power consumption and lower bulk lubricant temperature.
- Lower start up torque compared with a conventional grease.
- Reduced lubricant leakage : top up usually not required.
- The load carrying capacity of the base oil in Shell Gadus S5 V142W is extremely good. In steel-steel scuffing tests using the IAE gear rig, under standard conditions, the load carrying capacity is some 65% higher than an equi-viscous mineral oil, without using EP additives.
- Use of a proven product with excellent track records in many types of gear boxes (David Brown, SEW, Leroy-Somer, etc.) in severe service and wide range of operation conditions.

### Main Applications

- Small industrial gear units
- Worm gears the low steel/tin-bronze frictional characteristics of Shell Gadus S5 V142W make it particularly suitable for worm gears having this combination of alloys.
- Steel/Aluminium-bronze: Shell Gadus S5 V142W is not recommended for the combination steel/aluminium- bronze, for which a grease based on a higher viscosity mineral oil is preferred.
- Flushing and filling with Shell Gadus S5 V142W: is a synthetic polyglycol based lubricant and must not be mixed with mineral oils. Care should be taken when changing over from oil or conventional grease. Flushing with a thin mineral oil will ensure, as far as possible, freedom from solid contaminants and deterioration products resulting from previous use of gear oils or greases. It is important to ensure that none of the flushing oil remains in the gearbox. When refilling the gearbox with Shell Gadus S5 V142W every precaution should be taken to ensure complete cleanliness. For optimum performance from both gearbox and lubricant, only the amount recommended by the gearbox manufacturer should be used.
- Paints. High quality red lead or epoxy resin paints are recommended for use in contact with Shell Gadus S5 V142W, as the synthetic polyglycol component will tend to attack certain conventional paints.
- Seals. Shell Gadus S5 V142W may be used satisfactorily with all normal seal materials. Leather seals are not recommended as the natural fats tend to be removed, leaving the seals thin and brittle.

### 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 S5 V142W |
|---|---|---|---|---|
| NLGI Consistency | | | | 00 |
| Colour | | | | Off white |
| Soap Type | | | | Lithium |
| Base Oil (type) | | | | Synthetic Polyglycol |
| Density | @20°C | kg/m³ | ISO 12185 | 1 009 |
| Kinematic Viscosity | @40°C | mm²/s | ISO 3104 | 142 |
| Kinematic Viscosity | @100°C | mm²/s | ISO 3104 | 23 |
| Cone Penetration, Worked | @25°C | 0.1mm | IP 50 / ASTM D217 | 410 |
| Dropping Point | | °C | IP 396 | 185 |
| Oil Separation (18 hrs) | @40°C | % m | IP 121 | 4 |
| Oil Separation (7 days) | @40°C | % m | IP 121 | 12 |
| Copper Corrosion Test | | | ASTM D4048 | 1b |
| Oxidation Stability | 100 hrs @ 99°C | kPa | ASTM D942 | 2.1 |
| Rust Test (48 hrs, Distilled water) | @52°C | | ASTM D1743 | Pass |
| Emcor Rust Test | | | IP 220 | 1/1 |

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 S5 V142W 00 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 Range**

  Lubricants exposed to high temperatures and air will inevitably oxidise resulting in the formation of lacquer and sludge and inefficient operation due to an excessive increase in viscosity.

  Shell Gadus S5 V142W has excellent oxidation stability. It produces no lacquer or sludge and does not increase in viscosity under normal operating conditions. It consequently provides much better performance at high temperatures than conventional gear greases.

  Shell Gadus S5 V142W is suitable for lubrication, at continuing operating bulk lubricant temperatures, up to 130°C.

  The operation of grease-filled gearboxes in low-ambient temperatures presents two major problems:

- high torque, induced by stiffening of the lubricant
- starvation, caused by grease channelling

  In overcoming these problems, Shell Gadus S5 V142W is superior to typical high quality mineral oil based gearbox greases.

- **Advice**

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