



# Lubricants Report



## Product Data Sheet from Shell Lubricants

PDS#4.03.01

# Shell Cassida\* Fluid GL

## Gear lubricants for use in food manufacturing equipment

Shell Cassida Fluid GL 220 and 460 are high performance, anti-wear gear oils specially developed for the lubrication of enclosed gears in food and beverage processing machinery.

They are based on a careful blend of synthetic fluids and selected additives chosen for their ability to meet the stringent requirements of the food industry.

Registered by NSF (Class H1) for use where there is potential for incidental food contact. These products meet the guidelines (1998) of, and were previously authorized by, the US Department of Agriculture Food Safety and Inspection Service (USDA FSIS) for H1 use (lubricant with incidental food contact) and listed in Miscellaneous Publication No 1419 "List of Proprietary Substances and Nonfood Compounds". Product contain only substances permitted under US 21 CFR 178.3570, 178.3620 and 182 for use in lubricants with incidental food contact.

### Applications

- ◆ Lubrication of enclosed gearboxes used in the food industry.
- ◆ Also intended for use in equipment manufacturing food packaging

### Performance Features

- ◆ Resists the formation of harmful products of oxidation even at elevated temperatures
- ◆ Base oil has an ability to provide superior lubrication under all operating conditions
- ◆ Excellent EP properties make Shell Cassida Fluid GL suitable for steel-on-steel and worm and phosphor-bronze wheel applications
- ◆ Neutral odour and taste
- ◆ High viscosity index resulting in minimum variation of viscosity with change in temperature

### Seal and Paint Compatibility

Compatible with the elastomers, gaskets, seals and paints normally used in food machinery lubrication systems.

### Specifications and Certificates

- ◆ NSF H1
- ◆ CFIA
- ◆ Kosher
- ◆ Halal
- ◆ DIN 51517 CLP
- ◆ ISO/DP 6743/6

### Synthetic lubricants

- ◆ Do not contain any natural products derived from animals, nuts or genetically modified organisms (GMOs).
- ◆ Suitable for use where vegetarian and 'nut-free' food is prepared.
- ◆ Biostatic; do not promote the growth of bacteria or fungal organisms.

### Approvals & Recommendations

This is an ongoing process, please contact your Shell representative for any updates.

- ◆ David Brown: Shell Cassida GL 460 for worm gears
- ◆ Lenze
- ◆ Getriebebau Nord: Shell Cassida GL 220
- ◆ Flender, Krones
- ◆ SEW (GL220 for helical units & GL460 for worm gear units)
- ◆ Bonfiglioli (for parallel shaft and helical in-line reducers; Cassida GL 460 for worm or worm/screw gears),
- ◆ FMC can seamers (viscosity for different models according to OEM specification).
- ◆ FAG and Buehler recommendation
- ◆ Westfalia Food Tec (Cassida GL 220)
- ◆ Stork Food and Dairy Systems

### "Incidental Food contact"

Registered by NSF (Class H1) and meet the USDA H1 guidelines (1998) for lubricants for use where there is a potential for incidental food contact.

Made only from substances permitted under the US FDA Title 21 CFR 178.3570, 178.3620 and/or those generally regarded as safe (US 21 CFR 182) for use in food grade lubricants. To comply with the requirements of US 21 CFR 178.3570, contact with food should be avoided where possible. In the case of incidental food contact, the concentration of this product in the food must not exceed 10 parts per million (10mg/kg of foodstuff).

In locations and/or applications where local legislation does not specify maximum concentration limits, Shell recommends that this same 10 ppm limit be observed, as up to this concentration Shell Cassida Fluid GL will not impart undesirable taste, odour or colour to food, nor will cause adverse health effects.

Consistent with good manufacturing practice, use only the amount necessary to achieve correct lubrication and take appropriate corrective action should excessive incidental contact with food be detected

### Health and Safety

Based on information available, Shell Cassida Fluid GL 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. As for all oils, prolonged or repeated contact with the skin should be avoided.

For further information refer to the appropriate Shell Material Safety Data Sheet.

### Handling and storage

All food grade lubricants, such as Shell Cassida Fluid GL, should be stored separately, out of direct sunlight or other heat sources, from other lubricants, chemical

substances and foodstuffs. Store between 0°C and 40°C. Under these conditions the recommended shelf life of this product, unopened, is 5 years from date of manufacture. Consult your Shell representative for details. Accept for use new Shell Cassida Fluid GL only if the manufacturer's seal is intact.

Before opening the pack ensure the area around the closure is clean. It is recommended that it be cleaned with Shell Cassida Fluid PL and/or potable water.

Record the date the seal was broken. To prevent product contamination, always close the package after use. Use the product within 2 years of opening the pack.

### Oil condition during use

It is recommended that the condition of the oil and the equipment be regularly checked to ensure safe operation.

### Protect the environment

Take used lubricants and empty packs to an authorised collection point. Do not discharge into drains, soil or water.

### Typical characteristics

Shell Cassida Fluid GL			220	460
Product Code			407-091	407-093
Property		Test method		
NSF Registration No.			92535	92537
Colour			Colourless, pale yellow	
Density at 15°C	kg/m <sup>3</sup>	ISO 12185	847	855
Flashpoint	°C	ISO 2592	276	270
Pourpoint	°C	ISO 3016	-48	-45
Kin. Visc. at 40°C	mm <sup>2</sup> /s	ISO 3104	220	460
Kin. Visc. at 100°C	mm <sup>2</sup> /s	ISO 3104	25,0	43,8
Viscosity index		ISO 2909	143	148
FZG-Test A/8.3/90	Failure Load Stage	DIN 51354	> 12	

These characteristics are typical for current production. Variations in these characteristics may occur.

Produced according to Shell Quality Standards, in facilities where HACCP audit and Good Manufacturing Practice have been implemented and form part of the quality/environment management system ISO 9001/ ISO 14001.

Visit your nearest Shell Associate or Reseller for more details.

Need more information? Please contact the Shell Helps Centre Technical Desk at 1-800-661-1600 or e-mail us at [questions@shell.com](mailto:questions@shell.com)

MSDS requests? Please call 1(403) 691-3321

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