



SHELL CASSIDA[®] FLUIDS GL

Gear lubricants for use in food manufacturing equipment

Product Description

Shell Cassida[®] Fluids GL 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 contact with food, these products meet the former guidelines (1998) of the US Department of Agriculture Food Safety and Inspection Service (USDA FSIS) for H1 use (lubricant with incidental food contact and in Publication No. 1419 “List of Proprietary Substances and Nonfood Compounds”. **Shell Cassida[®] Fluids GL** contain only substances permitted under US 21 CFR 178.3570, 178.3620 and 182 for use in lubricants with incidental food contact.

Shell Cassida[®] Fluids GL do not contain any natural products derived from animals, nuts or genetically modified organisms (GMOs). It is suitable for use where vegetarian and nut-free food is prepared. **Shell Cassida[®] Fluids GL** do not promote the growth of bacteria or fungal organisms.

Applications

- lubrication of enclosed gearboxes used in the food industry
- for use in equipment manufacturing food packaging

Features/Benefits

- resists the formation of harmful products of oxidation even at elevated temperatures
- an ability to provide excellent lubrication under a wide variety operating conditions
- excellent EP properties; suitable for steel on steel worm and phosphor-bronze wheel applications
- neutral odor and taste
- high viscosity index resulting in minimum variation of viscosity with change in temperature
- compatible with the elastomers, gaskets, seals and paints normally used in food machinery lubrication systems

Specifications and Certificates

- NSF H1
- Kosher
- Halal
- ISO/DP 6743/6
- DIN 51517 CLP
- DIN 51506 VBL (GL 150, 220)
- DIN 51506 VCL (GL 150)

Approvals and Recommendations

- David Brown; GL 460 for worm gears
- Lenze
- Getriebebau Nord: Cassida GL 220 and 680
- Flender, Krones
- SEW; (GL 220 for helical units and GL 460 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 (various viscosities depending on model)
- FAG and Buehler recommendation
- Westfalia Food Tec (Cassida GL 220)
- Toyo Can Seamer type 43M (Cassida GL 150)
- Stork Food and Dairy Systemes (GL 150-680)

Handling and Storage

All food grade lubricants, such as **Shell Cassida® Fluids GL**, should be stored separately, out of direct sunlight or other heat sources, from other lubricants, chemical substances and foodstuffs. Store between 0 and 40 deg. C. Provided that the product has been stored under these conditions, the recommended shelf life of the product unopened, is 5 years from date of manufacture. Accept for use new Shell Cassida products only if the manufacturer's seal is intact, and then record the date the seal was broken. Before opening the pack ensure the area around the closure is clean. It is recommended that it be cleaned with Shell Cassida Fluid PL or Shell Cassida Flushing Fluid 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.

Incidental Food Contact

Registered by NSF (Class H1) and meet the former USDA H1 guidelines (1998) for lubricants 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 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 (10 mg/kg of foodstuff). In locations and/or applications where local legislation does not specify maximum concentration limits, this same 10 ppm limit should be observed, as up to this concentration **Shell Cassida® Fluid GL** will not impart undesirable taste, odor, or color to food. 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.

Typical Properties of Shell Cassida® Fluids GL						
	Test Method	150	220	320	460	680
Product Code		65186	65507	65511	5058711 (drums)	5058234 (drums)
NSF Reg. No.		92534	92535	92536	92537	92538
Appearance	Visual	Colorless to pale yellow	Colorless to pale yellow	Colorless to pale yellow	Colorless to pale yellow	Colorless to pale yellow
Density at 15°C, kg/L	ISO 12185	0.845	0.847	0.852	0.855	0.858
Viscosity						
@ 40°C (cSt)	ISO 3104	150	220	320	460	680
@ 100°C (cSt)	ISO 3104	18.9	25.0	33.4	43.8	58.6
@ 100°F, SUS	(calc)	771	1141	1665.8	2405	3571
@ 210°F, SUS	(calc)	100	123.4	162.5	212.0	283.1
Viscosity Index	ISO 2909	143	143	147	148	152
Flash Point, COC, °F	ISO 2592	514	529	532	515	545
Pour Point (°F)	ISO 3016	-65	-54	-49	-49	-38
FZG Test, Failure Load Stage	DIN 51354	>12	>12	>12	>12	>12

Produced according to Shell Quality Standards, in facilities where HACCP audit and Good Manufacturing Practice have been implemented and form part of the ISO 9001 quality system. The characteristics given above are typical of current production and slight batch-to-batch variations may occur. However, all production will conform to Shell's specifications.

Handling & Safety Information

As for all oils, prolonged or repeated contact with the skin should be avoided. For information on the safe handling and use of this product, refer to its Material Safety Data Sheet at <http://www.shell-lubricants.com/msds/>. If you are a Shell Distributor, please call **1+800-468-6457** for all of your service needs. All other customers, please call **1+800-840-5737** for all of your service needs. Information is also available on the World Wide Web: <http://www.shell-lubricants.com/>