



SHELL CASSIDA[®] FLUIDS HF

Hydraulic fluid for food manufacturing machinery

Product Description

Shell Cassida[®] Fluids HF are specially developed lubricants for use in machinery used in the food and beverage processing and packaging industry. They are high performance, anti-wear multipurpose lubricants and 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, 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). Product contains only substances permitted under US 21 CFR 178.3570, 178.3620 and 182 for use in lubricants with incidental food contact.

Shell Cassida[®] Fluids HF 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 HF** do not promote the growth of bacteria or fungal organisms.

Applications

- hydraulic systems
- hydrostatic gears
- plain and anti-friction bearings
- general purpose lubrication including light duty gearboxes
 - circulating oil systems

Features/Benefits

- ability to provide excellent lubrication under the majority of operating conditions
- good anti-wear performance offers long and reliable component life
- prevents component damage through excellent water separation properties which resist formation of potentially harmful emulsions
- excellent air release and antifoam characteristics helps to prevent cavitation
- resists the formation of harmful products of oxidation, even at elevated temperatures, resulting in long oil life
- effective protection against corrosion of metal surfaces
- 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 and Halal
- DIN 51524 HLP/HVLP (except HF 15)
- ISO 6743/4 HM / HV
- DIN 51517 CLP (HF 68)
- BS 6413/4 HM

Approvals and Recommendations

- Krones
- David Brown
- Buehler Utzwil
- Mannesmann Rexroth (axial piston pumps)
- FAG
- FMC (can seamer)
- Westfalia Food Tec
- Hawe Hydraulic Pumps
- Hoegger Alpina Hydraulic Pumps
- Piller Industrieventilatoern GmbH (Cassida HF 46)
- Poclain-Hydraulics (Cassida HF 46)
- Gregoire (harvesting machinery)
- GEA Niro atomizers (Cassida HF 32-68)
- Stork Food and Dairy Systems (Cassida 15-68)
- Mitsubishi Caterpillar Forklift Europe

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 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 (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 HF** 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.

Handling and Storage

All food grade lubricants, such as Shell Cassida®, should be stored separately, out of direct sunlight or other heat sources, away from other lubricants, chemical substances and foodstuffs. Store inside at ambient conditions. Under these conditions, the recommended shelf life of this product, unopened is 5 years from date of manufacture. Accept new Shell Cassida® products for use 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 potable water. Before opening the package, 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 the package.

April, 2005

Typical Properties of Cassida Fluids HF					
	Test Method	15	32	46	68
Product code/package		5058710/pail	6550905203/pail	6551005203/pail	6551305203/pail
		5058389/drum	6550900055/drum	6551000055/drum	6551300055/drum
Appearance	(Visual)	Water white	Water white	Water white	Water white
Density at 15°C, kg/L	ISO 12185	0.819	0.832	0.836	0.840
Viscosity					
@ 40°C (cSt)	ISO 3104	15	32	46	68
@ 100°C (cSt)	ISO 3104	3.6	6.1	7.9	10.6
@ 100°F, SUS	(calc)	82	164	214	315
@ 210°F, SUS	(calc)	38.4	46.6	52.1	61.4
Viscosity Index	ISO 2909	125	140	142	143
Flash Point COC, °F	ISO 2592	390	430	475	495
Pour Point, °F	ISO 3016	<-75	<-75	-75	-70
FZG Test, Failure Stage	DIN 51353	-----	-----	>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 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/>.