



# SHELL FM HYDRAULIC OILS

## Hydraulic oils for use in food manufacturing equipment

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### Product Description

**Shell FM Hydraulic Oils** are anti-wear multi-purpose lubricants, which are specifically designed for use in the food and beverage processing and packaging industry. They are based on a careful blend of base 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 former guidelines (1998) of the US Department of Agriculture Food Safety and Inspection Service (USDA FSIS) for H1 use (lubricant with incidental food contact). These products contain only substances permitted under US 21 CFR 178.3570, 178.3620 and 182 for use in lubricants with incidental food contact.

### Applications

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

### Features/Benefits

- carefully selected base fluid allows for good lubrication in a variety of applications
- good anti-wear properties
- good resistance to oxidation
- good air release and anti-foam properties help prevent cavitation
  - good water separation properties
  - neutral odor and taste
  - does not contain any natural products derived from nuts or genetically modified organisms (GMOs).
  - compatible with elastomers, gaskets, seals and paints normally used in food machinery lubrication systems

### Specifications and Certificates

- NSF H1
- Kosher

## Incidental Food Contact

Registered by NSF (Class H1) and meets the former 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 (10 mg/kg of foodstuff). In location 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 FM Hydraulic Oil** 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 FM Hydraulic Oils

Code No.	Test Method	32	46	68	100
		65547	65548	65549	65550
NSF Registration Number		124739	125263	124738	124741
Appearance		-----Colorless-----			
API Gravity	D 1298	32.0	32.2	31.0	30.5
Viscosity					
@ 40°C, cSt	D 445	33.9	46.9	67.9	100.8
@ 100°C, cSt	D 445	5.6	7.0	9.0	11.2
Viscosity Index	D 2270	102	105	107	102
Flash, °F	ISO 2592	395	435	475	420
Pour Point, °F	ISO 3016	15	15	20	20
FZG Test, Fail Stage	DIN 51354	----	>10	>10	-----

## Handling and Safety Information

As for all oils, prolonged or repeated contact with the skin should be avoided.

All food grade lubricants 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. Provided that the product has been stored under these conditions we recommend that the product be used within 5 years from the date of manufacture. Consult your local Shell Company for details. Only accept new **Shell FM Hydraulic Oil** for use 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 potable water and then dried with a clean cloth before opening. Record the date the seal was broken. To prevent product contamination, always close the package after use. Upon opening a package, the product must be used within 2 years (or within 5 years of date of manufacture, whichever is the earliest).

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/>.