



Chevron

Lubricants

Chevron Lubricating Oils FM

ISO 32, 46, 68, 100, 220, 460

Customer Benefits

Chevron Lubricating Oils FM deliver value through

High quality control — Enables customer to use lubricants almost as pure as the food being processed

High performance — Provides lubrication better than that given by the white mineral oils generally used and comparable to nonfood grade lubricants

Oxidation inhibition — Gives long life without forming gummy and sticky deposits

Multipurpose lubricant — Enables customer to reduce inventory

Container selection — Packaged in new returnable 55-gallon drums, 5-gallon pails, and 330-gallon disposable containers

Odorless and tasteless — Food processor can be sure his product will not be adulterated if incidental food contact should occur

Excellent antiwear protection, long service intervals, and rust protection

Environmental sensitivity — Passes the acute aquatic toxicity (LC 50) test for fish and are considered inherently biodegradable. Suitable for conventional oil collection/recycling programs.

Features

Chevron Lubricating Oils FM are premium performance industrial lubricants designed for use in the food processing and other sensitive industries where incidental food contact may occur.

Chevron Lubricating Oils FM provide performance well above that found in typical white mineral oils often used in the food industry.

They contain a special biocide to prevent growth of molds when the product comes in contact with food or water.



Applications

ISO	Description	Properties						Recommended for		
		Lubricity	Antiwear	Rust protection	Corrosion protection	Water separability	Foam control		Oxidation stability	
32	Hydraulic oils, general purpose lubricants	■	■	■	■	■	■	High pressure hydraulic systems, air compressors, airline lubricators, and the lubrication of bearings and lightly loaded gears		
46		■	■	■	■	■	■			
68		■	■	■	■	■	■		Lubrication of ground water pumps, where contamination of potable water is possible	
100	Circulating oil and general purpose lubricant	■	■	■			■	■	Circulating oil systems, airline lubricators, and bearing lubrication	
220	Gear oil and general purpose lubricant		■	■	■	■	■	■	Enclosed gear sets, reduction gears, and gear drives which are sensitively located in a food processing operation. It can also be used in hydraulic or circulating systems that require a higher viscosity lubricant.	
460	Gear oil and general purpose lubricant, a "compounded" gear oil	■	■	■	■			■	■	Gear sets, rotary steamers, and valves up to 175°C (350°F)

Chevron Lubricating Oils FM

conform to **U.S. Food and Drug Administration (FDA)** requirements of lubricants with incidental food contact, 21 CFR 178.3570. Lubricants with incidental food contact should not contaminate food at levels greater than 10 ppm.

meet the requirements of the **U.S. Department of Agriculture (USDA)** as H1 lubricants for use in federally inspected meat and poultry plants where incidental food contact may occur.

are registered by **NSF International** as H1 lubricants for use in federally inspected meat and poultry plants where incidental food contact may occur.

are certified **Kosher and Pareve**.

are accepted by the **Canadian Food Inspection Agency** for use in Registered Plants and for use on food equipment or machinery parts where contact with food is only incidental.

Chevron Lubricating Oils FM ISO 32, 46, 68, and 100 are certified by **NSF International** as well pump lubricants with a continuous feed rate against ANSI/NSF Standard 60, Drinking Water Treatment Chemicals – Health Effects.

Chevron Lubricating Oils FM meet these stringent standards of purity while performing exceptionally well in high pressure hydraulic applications, airline lubrication, high temperature gears, and gearhead motors.

Chevron Lubricating Oil FM ISO 100 is approved by

- **Racine Fluid Power** for use in their vane-type high pressure pumps
- **Angelus Sanitary Can Machine Company** for use in their Manzel lubricators

Do not use Chevron Lubricating Oils FM ISO 32, 46, or 68 in high pressure systems in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

Typical Test Data

ISO Grade	32	46	68	100	220	460
<i>CPS Number</i>	232103	255150	255110	232105	255106	232106
<i>MSDS Number</i>	6850	6850	6850	6859	6859	6859
AGMA Grade	—	1	2	3	5	7 Compounded
API Gravity	33.4	32.8	32.2	31.5	30.7	29.2
Viscosity, Kinematic						
cSt at 40°C	30.4	41.4	64.6	95.0	209	437
cSt at 100°C	5.2	6.4	8.5	11.3	20.2	34.7
Viscosity, Saybolt						
SUS at 100°F	157	213	334	494	1096	2308
SUS at 210°F	44	48	55	65	102	169
Viscosity Index	100	101	102	105	112	118
Flash Point, °C(°F)	220(428)	234(453)	254(489)	260(500)	260(500)	243(469)
Pour Point, °C(°F)	-9(+16)	-9(+16)	-9(+16)	-9(+16)	-9(+16)	-9(+16)
Rust Test						
Synthetic Sea Water	Pass	Pass	Pass	Pass	Pass	Pass
Four-Ball						
Wear Scar Diameter, mm	0.45	0.43	0.42	0.44	0.43	0.43
Vickers V104C Pump Test						
Total Wear, mg	16.7	—	16.5	19.2	—	—
Oxidation Stability,						
Hours to 2.0 mg KOH/g acid number, ASTM D 943	>15,000	>15,000	>15,000	>15,000	>15,000	—

Typical test data are average values only. Minor variations which do not affect product performance are to be expected in normal manufacturing.