Mobil DTE FM Series

Food Machinery Lubricants

Product Description

Mobil DTE FM Series oils are high performance lubricants designed to satisfy a wide range of multi-use equipment requirements for the food processing and packaging industry. These lubricants are qualified as USDA H1 type lubricants and also comply with Title 21 CFR 178.3570 by the Food and Drug Administration (USA) for lubricants with incidental food contact. The lubricants are tasteless, odourless, premium quality lubricants formulated with non-toxic USDA/FDA food grade additives and base oils. The additive system provides good wear protection, excellent oxidation stability and protection against rust. They provide good system cleanliness, long oil/filter life, and optimum equipment protection. The Mobil DTE FM Series oils are excellent gear, bearing and circulating oils. They are also suitable for handling the critical requirements of hydraulic system components such as close clearance servo-valves and the high accuracy numerically controlled (NC) machine tools. These products meet the most rigorous performance requirements of a wide range of system and component manufacturers using various multi-metallurgy designs allowing a single product with outstanding performance characteristics.

The Mobil DTE FM Series oils have high ratings in the FZG Gear Test demonstrating their excellent protection against wear and scuffing. This allows their use in systems other than hydraulics that may contain gears and bearings. The naturally high viscosity index of the base oils ensures outstanding performance over a wide temperature range.

Features & Benefits

Features	Advantages and Potential Benefits
Non-Toxic Formulation	Allows use in food packaging and processing applications
Very Good Anti-wear Properties	Reduces wear Extends equipment life
Excellent Oxidation Stability	Provides long oil and equipment life Extends filter life
High Level Corrosion Protection	Prevents internal hydraulic system corrosion Reduces negative effects of moisture in systems Provides corrosion protection of multi-metallurgy component designs
Meets a Wide Range of equipment requirements	Multi-service applications - One product can replace several Minimises inventory requirements Reduced potential for product misapplication
Excellent Air Separation Characteristics	Reduces foaming and it's negative effects
Very Good Water Separation Properties	Protects systems where small quantities of moisture are present Readily separates larger quantities of water

Applications

- Suitable for multi-service applications in the lubrication of machinery used in all food processing industries, fish processing and met packing plants
- Excellent gear, bearing, circulating system and hydraulic oils
- Compressors and vacuum pumps handling air and inert gasses
- Air line lubricators
- Systems requiring a high degree of load-carrying capability and anti-wear protection
- Mobil DTE FM 220, 320 and 460 are recommended for freezer plants and for outdoor applications due to their low temperature properties and high temperature stability
- Machines employing a wide range of components using various metallurgy

Specifications & Approvals

Meets or Exceeds the following industry specifications	**Mobil DTE FM 32**	**Mobil DTE FM 46**	**Mobil DTE FM 68**	**Mobil DTE FM 100**	**Mobil DTE FM 150**	**Mobil DTE FM 220**	**Mobil DTE FM 320**	**Mobil DTE FM 460**	**Mobil DTE FM 680**
FDA 21 CFR 178.3570	X	X	X	X	X	X	X	X	X
USDA H1	X	X	X	X	X	X	X	X	X

Typical Properties

	Mobil DTE FM 32	**Mobil DTE FM 46**	**Mobil DTE FM 68**	**Mobil DTE FM 100**	**Mobil DTE FM 150**	**Mobil DTE FM 220**	**Mobil DTE FM 320**	**Mobil DTE FM 460**	**Mobil DTE FM 680**
ISO Grade	32	46	68	100	150	220			
Viscosity, ASTM D 445									
cSt @ 40º C	31.9	45.5	68.5	96.7	155.5	214.3	325.8	439.5	670.0
cSt @ 100º C	5.5	6.8	8.7	10.9	17.0	24.5	34.2	43.4	61.2
Viscosity Index, ASTM D 2270	106	105	101	97	118	143	148	152	159
Specific Gravity @	0.862	0.868	0.873	0.878	0.869	0.854	0.852	0.852	0.853

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15.6º C/15.6º C, ASTM D 4.52									
Copper Strip Corrosion, ASTM D 130	1A	1A	1A	1A	1A	1A	1A	1A	1A
Rust Characteristics Proc. A, ASTM D 665	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Pour Point, ºC, ASTM D 97	-12	-9	-12	-18	-12	-21	-30	-36	-39
Flash Point, ºC, ASTM D 92	212	226	228	246	250	246	272	284	278
FZG, DIN 51354, Fail Stage	11	12+	12+	12+	12+	12+	12+	12+	12+
4-Ball wear, ASTM D 4172, Scar Dia, 20Kg, 54º C, 1800 rpm, 1 hr, mm	0.25	0.25	0.25	0.25	0.26	0.25	0.25	0.30	0.30

Health & Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. MSDS's are available upon request through your sales contract office, or via the Internet. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.