Mobil DTE 10 Excel™ Series

Mobil Industrial , Finland

Synthetic Technology Hydraulic Oils

Product Description

Mobil DTE 10 Excel™ Series are high performance anti-wear hydraulic oils specifically designed to meet the needs of modern, high pressure, industrial and mobile equipment hydraulic systems.

The Mobil DTE 10 Excel Series is constructed from synthetic technology base oils and a proprietary additive package to provide well balanced performance in a range of applications. The products demonstrate outstanding oxidation and thermal stability allowing for long oil life and minimized deposit formation in severe hydraulic systems using high pressure, high output pumps. The innovative ultra keep-clean performance protects critical hydraulic system components from malfunction, such as tight tolerance servo and proportional valves found in many modern hydraulic systems. The shear stable, high viscosity index allows for a wide range of operating temperatures maintaining maximum hydraulic efficiency and utmost component protection at both low and high temperatures. Outstanding air release properties represent an added measure of protection in systems with low residence time helping to prevent cavitation damage and micro dieseling. The zinc free anti-wear system provides a high degree of protection in gear, vane and piston pumps while also minimizing deposit formation. In addition, Mobil DTE 10 Excel is not acutely or chronically toxic to the aquatic environment (per GHS criteria and OECD testing).

Formulated with extensive laboratory and in-service field testing, Mobil DTE 10 Excel series can help provide quantifiable increases in hydraulic efficiency compared to other Mobil™ hydraulic oils. This can translate to reduced power consumption or increased machine output, resulting in monetary savings.

In controlled laboratory efficiency testing, Mobil DTE 10 Excel series were measured to provide up to a six percent improvement in hydraulic pump efficiency compared to Mobil standard hydraulic fluids when operating in standard hydraulic applications.

In additional laboratory and in-service field demonstrations conducted on a wide range of modern hydraulic systems, Mobil DTE 10 Excel series demonstrated, compared to Mobil standard hydraulic fluids, exceptional oil life, outlasting these fluids by up to three times, while maintaining outstanding hydraulic system cleanliness and component protection. Mobil DTE 10 Excel also demonstrated the value of its high viscosity index and outstanding shear stability by operating successfully in temperatures as low as -34°C and by maintaining ISO viscosity grade.

*Energy efficiency explained
The energy efficiency design is a trademark of Exxon Mobil Corporation. Energy efficiency relates solely to the fluid performance when compared with Mobil's standard hydraulic fluids. The technology used allows up to 6 percent increase in hydraulic pump efficiency when tested in standard hydraulic applications. The energy efficiency claim for this product is based on test results on the use of the fluid conducted in accordance with applicable industry standards and protocols. Efficiency improvements will vary based on operating conditions and applications.

Features and Benefits

The Mobil DTE 10 Excel Series hydraulic oils provide outstanding hydraulic system efficiency; ultra keep clean performance, and a high degree of fluid durability. The hydraulic efficiency feature can lead to reduced energy consumption for both industrial and mobile equipment, reducing operating costs and improving productivity. Their excellent oxidation and thermal stability can help to extend oil and filter change intervals while helping to ensure clean systems. Their high level of anti-wear properties and excellent film strength characteristics result in a high degree of equipment protection that not only results in fewer breakdowns but helps improve production capacity.

Features	Advantages and Potential Benefits
Excellent Hydraulic Efficiency	Potentially reduced energy consumption or increased system responsiveness
Ultra Keep Clean Performance	Reduced system deposits leading to reduced machine maintenance and increased component life
Shear Stable, High Viscosity Index	Sustained component protection over a wide temperature
Oxidation and Thermal Stability	Extends fluid life even under harsh operating conditions

Features	Advantages and Potential Benefits
Good compatibility with elastomers and seals	Long seal life and reduced maintenance
Anti-wear properties	Helps reduce wear and protects pumps and components for extended equipment life
Excellent Air Separation Characteristics	Helps prevent aeration and cavitation damage in low residence time systems
Multi metal compatibility	Helps ensure excellent performance and protection with a wide variety of component metallurgy

Applications

- Industrial and mobile equipment hydraulic systems operating at high pressures and temperatures in critical applications
- Hydraulic systems subject to deposit build-up such as sophisticated Computer Numerically Controlled (CNC) machines, particularly where close clearance servo-valves are used
- Systems where cold start-up and high operating temperatures are typical
- Systems requiring a high degree of load-carrying capability and anti-wear protection
- Machines employing a wide range of components using various metallurgy

Specifications and Approvals

This product has the following approvals:	15	22	32	46	68	100	150
Arburg Hydraulic Fluid				X			
Bosch Rexroth Fluid Rating List 90245			X	X	X		
Daimler Truck DTFR 31B100		X					
Denison HF-0			X	X	X		
Denison HF-1			X	X	X		
Denison HF-2			X	X	X		
Eaton E-FDGN-TB002-E			X	X	X		
HOCNF Norway-NEMS, Black	X	X	X	X	X	X	X
Husky				X			
Krauss-Maffei Hydraulic Oil			X	X			
MB-Approval 341.1		X					
Ortlinghaus-Werke GmbH ON 9.2.10			X	X	X	X	
Ortlinghaus-Werke GmbH ON 9.2.19			X	X	X	X	
ZF TE-ML 04K			X	X			
ZF TE-ML 04R			X	X			

This product is recommended for use in applications requiring:	15	22	32	46	68	100	150

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Fives Cincinnati P-68			X				
Fives Cincinnati P-69					X		
Fives Cincinnati P-70				X			
Valmet Paper RAUAH00929_05_EN_V(OIL RECOMMENDATIONS FOR PAPER MACHINE ACTUATOR HYDRAULICS)			X	X			
Valmet Paper RAUAH02724_02_EN_V: MINERAL OIL RECOMMENDATIONS FOR ZONE-CONTROLLED ROLLS					X	X	X
Voith Paper VS 108 5.3.1 2023-04 (wet end)							X
Voith Paper VS 108 5.3.3 2023-04 (off-line coaters)							X
Voith Paper VS 108 5.3.4 2023-04 (hydraulic roll)					X	X	X
Voith Paper VS 108 5.3.5 2023-04 (shoe press)						X	X

This product meets or exceeds the requirements of:	15	22	32	46	68	100	150
ASTM D6158 (Class HVHP)		X	X	X	X		
China GB 11118.1-2011, L-HM(General)		X	X	X	X	X	X
China GB 11118.1-2011, L-HM(HP)			X	X	X	X	
China GB 11118.1-2011, L-HV	X	X	X	X	X		
DIN 51517-3:2018-09						X	X
DIN 51524-2:2017-06	X	X	X	X	X	X	X
DIN 51524-3:2017-06	X	X	X	X	X		
ISO L-HM (ISO 11158:2023)	X	X	X	X	X	X	X
ISO L-HV (ISO 11158:2023)	X	X	X	X	X		
JCMAS HK VG32W			X				
JCMAS HK VG46W				X			

Properties and Specifications

Property	15	22	32	46	68	100	150
Grade	ISO VG 15	ISO VG 22	ISO VG 32	ISO VG 46	ISO VG 68	ISO VG 100	ISO VG 150
Brookfield Viscosity @ -20 C, mPa.s, ASTM D2983			1070	1900	4050	10360	32600
Brookfield Viscosity @ -30 C, mPa.s, ASTM D2983		1660	3390	6790	16780	71400	445000

Property	15	22	32	46	68	100	150
Brookfield Viscosity @ -40 C, mPa.s, ASTM D2983	2490	7120	20000	125000			
Copper Strip Corrosion, 3 h, 100 C, Rating, ASTM D130	1A	1A	1B	1B	1B	1B	1B
Density @ 15 C, kg/l, ASTM D4052	0.840	0.842	0.845	0.851	0.859	0.869	0.884
Dielectric Strength, kV, ASTM D877	39.3	38.3	39.3	38.2	39.2	37.2	37.4
FZG Scuffing, Fail Load Stage, A/8.3/90, ISO 14635-1(mod)			12	12	12	>12	>12
Flash Point, Cleveland Open Cup, °C, ASTM D92	210	215	225	230	260	260	270
Foam, Sequence I, Tendency/Stability, ml, ASTM D892	20/0	20/0	20/0	30/0	30/0	30/0	30/0
Foam, Sequence II, Tendency/Stability, ml, ASTM D892	20/0	20/0	20/0	30/0	30/0	30/0	30/0
Foam, Sequence III, Tendency/Stability, ml, ASTM D892	20/0	20/0	20/0	30/0	30/0	30/0	30/0
Kinematic Viscosity @ 100 C, mm2/s, ASTM D445	3.9	5.0	6.5	8.4	10.9	13.0	17.2
Kinematic Viscosity @ 40 C, mm2/s, ASTM D445	15.0	22.0	31.5	45.7	66.9	97.0	148.0
Pour Point, °C, ASTM D97	-57	-54	-48	-45	-42	-40	-38
Shear Stability, Viscosity (100 C) Loss, %, CEC L-45-A-99	4	6	5	8	10	8	7
Viscosity Index, ASTM D2270	164	164	164	163	155	132	121

Health and Safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ http://www.msds.exxonmobil.com/psims/psims.aspx

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Typical Properties are typical of those obtained with normal production tolerance and do not constitute a specification. Variations that do not affect product performance are to be expected during normal manufacture and at different blending locations. The information contained herein is subject to change without notice. All products may not be available locally. For more information, contact your local ExxonMobil contact or visit www.exxonmobil.com

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