

Mobil DTE Excel Series

Hydraulic Oil

Product Description

Mobil DTE Excel Series oils are supreme performance hydraulic oils developed for use in high-speed, high-pressure piston, vane and gear pumps. They are formulated from high quality base stocks and specially selected super-stabilised additives. Their advanced technology ashless anti-wear additive system was developed to give exceptional corrosion protection for copper-based alloys in severe hydraulic applications such as high-pressure axial piston pumps. This unique additive system also gives the Mobil DTE Excel Series excellent compatibility with coolants used in metal working applications.

The Mobil DTE Excel Series oils exhibit excellent oxidation and thermal stability properties which results in extended oil and filter life while providing optimum equipment protection reducing both maintenance and product disposal costs. They were developed in conjunction with the major OEMs to meet the stringent requirements of severe hydraulic systems using high pressure, high output pumps as well as handling the critical requirements of other hydraulic system components such as close clearance servo-valves and the high accuracy numerically controlled (NC) machine tools. They are designed to work with systems operating under moderate to severe conditions where high levels of anti-wear and film strength protection are needed, yet they are formulated to work where non-anti-wear hydraulic oils are generally recommended.

Features and Benefits

The Mobil DTE Excel Series hydraulic oils exhibit outstanding high temperature performance providing an extra margin of equipment protection. Their excellent oxidation resistance and thermal stability characteristics allow extension of oil and filter change intervals while assuring exceptionally clean systems and trouble-free operation. Their high level of anti-wear properties and excellent film strength characteristics result in exceptional equipment performance that not only results in fewer breakdowns but helps improve production capacity. Their controlled demulsibility permits the oils to work well in systems contaminated with small amounts of water yet readily separate large amounts of water readily.

| Features | Advantages and Potential Benefits |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Unique Ashless Anti-wear Additives | Reduced wear Improved coolant compatibility Protects systems using various metallurgy |
| Outstanding Thermal and Oxidation Stability | Provides long oil and equipment life Reduced deposits and sludge formation Extends filter life |
| Excellent Corrosion Protection | Prevents internal hydraulic system corrosion Reduces negative effects of moisture in systems Provides corrosion protection of multi-metallurgy component designs |
| Very Good Multi-metal Compatibility | Assures excellent performance of various components Reduces requirements for additional products |
| Meets a Wide Range of Equipment Requirements | One product can replace several Minimises inventory requirements Reduced potential for product misapplication |



| Features | Advantages and Potential Benefits |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Controlled Demulsibility | Protects systems where small quantities of moisture are present Readily separates larger quantities of water |
| Very Good Coolant Separability | Improved coolant batch life Reduced maintenance costs |

Applications

- Hydraulic systems critical to deposit build-up such as sophisticated Numerically Controlled (NC) machines, particularly where close clearance servo-valves are used
- Systems employing multi-metal designs in pumps and other system components
- Applications where cross-contamination of hydraulic fluids and coolants can occur
- High pressure vane, piston and gear pumps
- Systems where very high operating temperatures are typical
- Where small amounts of water are unavoidable
- In systems containing gears and bearings
- Systems requiring a high degree of load-carrying capability and anti-wear protection
- Applications where thin oil-film corrosion protection is an asset such as in systems containing moisture

Specifications and Approvals

| Mobil DTE Excel Series meets the following industry specifications | 32 | 46 | 68 | 100 |
|--------------------------------------------------------------------|----|----|----|-----|
| DIN 51524 Part 2 (2006) | X | X | X | X |
| ISO 11158 L-HM (2006) | X | X | X | X |

| Mobil DTE Excel Series has the following builder approvals: | 22 | 32 | 46 | 68 | 100 |
|-------------------------------------------------------------|----|----|----|----|-----|
| Cincinnati Machine | | | | | |
| P-68 | | X | | | |
| P-69 | | | | X | |
| P-70 | | | X | | |
| Denison HF-0 | | X | X | X | |
| Vickers I-286-S | | X | X | X | |
| Vickers M-2950-S | | X | X | X | |

Typical Properties

| Mobil DTE Excel Series | 22 | 32 | 46 | 68 | 100 |
|----------------------------------|--------|--------|--------|--------|--------|
| ISO Viscosity Grade | 22 | 32 | 46 | 68 | 100 |
| Viscosity, ASTM D 445 | | | | | |
| cSt @ 40° C | 22.0 | 32.0 | 46.0 | 68.0 | 100.0 |
| cSt @ 100° C | 4.09 | 5.4 | 6.7 | 8.5 | 11.10 |
| Viscosity Index, ASTM D 2270 | 97 | 97 | 97 | 97 | 97 |
| Density 15° C, ASTM D 4052, kg/L | 0.8705 | 0.8725 | 0.8765 | 0.8825 | 0.8845 |

| Mobil DTE Excel Series | 22 | 32 | 46 | 68 | 100 |
|----------------------------------------------------|-----------|-----------|-----------|-----------|------------|
| Copper Strip Corrosion, ASTM D 130, 3 hrs @ 100° C | 1A | 1A | 1A | 1A | 1A |
| Rust Characteristics, ASTM D 665A | Pass | Pass | Pass | Pass | Pass |
| FZG Gear Test, DIN 51534, Fail Stage | - | 12 | 12 | 12 | 12 |
| Pour Point, °C, ASTM D 97 | -33 | -33 | -33 | -33 | -24 |
| Flash Point, °C, ASTM D 92 | 212 | 222 | 226 | 236 | 230 |
| Foam Sequence I, II, III, ASTM D 892 , ml | 20/0 | 20/0 | 20/0 | 20/0 | 20/0 |

Health and 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.

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