# Mobil DTE Excel Series

Mobil Industrial , Venezuela

Hydraulic Oil

### Product Description

Mobil DTE Excel™ Series oils are superior 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 can help to provide extended oil and filter life, as well as optimum equipment protection, thereby 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 can lead to extension of oil and filter change intervals and help to provide exceptionally clean systems and trouble-free operation. Their high level of anti-wear properties and excellent film strength characteristics can lead to exceptional equipment performance that can not only result in fewer breakdowns, but can help to 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<br>Improved coolant compatibility<br>Protects systems using various metallurgy |
| Outstanding Thermal and Oxidation Stability | Provides long oil and equipment life<br>Reduced deposits and sludge formation<br>Extends filter life |
| Excellent Corrosion Protection | Prevents internal hydraulic system corrosion<br>Reduces negative effects of moisture in systems<br>Provides corrosion protection of multi-metallurgy component designs |
| Very Good Multi-metal Compatibility | Assures excellent performance of various components<br>Reduces requirements for additional products |
| Meets a Wide Range of Equipment Requirements | One product can replace several<br>Minimises inventory requirements<br>Reduced potential for product misapplication |
| Controlled Demulsibility | Protects systems where small quantities of moisture are present<br>Readily separates larger quantities of water |

| Features | Advantages and Potential Benefits |
|---|---|
| Very Good Coolant Separability | Improved coolant batch life<br>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

| This product meets or exceeds the requirements of: | 32 | 46 | 68 | 100 |
|---|---|---|---|---|
| DIN 51524-2:2006-09 | X | X | X | X |
| ISO L-HM (ISO 11158:1997) | X | X | X | X |

## Properties and Specifications

| Property | 32 | 46 | 68 | 100 | 150 |
|---|---|---|---|---|---|
| Grade | ISO 32 | ISO 46 | ISO 68 | ISO 100 | ISO 150 |
| Copper Strip Corrosion, 3 h, 100 C, Rating, ASTM D130 | 1A | 1A | 1A | 1A | 1A |
| Density @ 15 C, kg/l, ASTM D1298 | 0.8725 | 0.8765 | 0.8825 | 0.8845 | |
| FZG Scuffing, Fail Load Stage, A/8.3/90, ISO 14635-1 | 12 | 12 | 12 | 12 | |
| Flash Point, Cleveland Open Cup, °C, ASTM D92 | 222 | 226 | 236 | 230 | 230 |
| Foam, Sequence I, Stability, ml, ASTM D892 | 0 | 0 | 0 | 0 | 0 |
| Foam, Sequence I, Tendency, ml, ASTM D892 | 20 | 20 | 20 | 20 | 20 |
| Foam, Sequence II, Stability, ml, ASTM D892 | 0 | 0 | 0 | 0 | 0 |
| Foam, Sequence II, Tendency, ml, ASTM D892 | 20 | 20 | 20 | 20 | 20 |
| Foam, Sequence III, Stability, ml, ASTM D892 | 0 | 0 | 0 | 0 | 0 |
| Foam, Sequence III, Tendency, ml, ASTM D892 | 20 | 20 | 20 | 20 | 20 |

| Property | 32 | 46 | 68 | 100 | 150 |
|---|---|---|---|---|---|
| Kinematic Viscosity @ 100 C, mm2/s, ASTM D445 | 5.4 | 6.7 | 8.5 | 11.1 | 14.5 |
| Kinematic Viscosity @ 40 C, mm2/s, ASTM D445 | 32 | 46 | 68 | 100 | 150 |
| Pour Point, °C, ASTM D97 | -33 | -33 | -33 | -24 | -24 |
| Rust Characteristics, Procedure A, ASTM D665 | PASS | PASS | PASS | PASS | Pass |
| Viscosity Index, ASTM D2270 | 97 | 97 | 97 | 97 | 94 |

### 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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