



## **SAE 20W50 INFINOIL PHENOM DIESEL ENGINE OIL (INFMIN 10024)**

**Performance Standard: API CI4/CI4+/CH4**

**Manufacturer: MICRATTO TECHNOLOGIES, MALAYSIA**

### **Product Description**

SAE 20W50 INFINOIL PHENOM DIESEL ENGINE OIL (INFMIN 10024) is high performance heavy duty diesel engine oil that helps towards long engine life while providing long drain capability for modern diesel engines operating in severe applications. It delivers excellent performance in modern low emission engines, including refrigerated units, as well as older, well maintained engines.

### **Recommendations**

It is recommended for use in a wide range of heavy-duty applications and operating environments found in the on-road transport and off-road mining, construction, and agricultural industries. As a result, this product meets or exceeds the requirements of some of the latest API, Global industry specifications for diesel engine oils, as well as the requirements of many major American, European, and Japanese engine manufacturers.

### **Customer Benefits**

Many modern, low emission diesel engines generate more soot and operate at higher temperatures than older engines. This significantly increases the need for high performance lubricants. Current tighter engine designs reduce oil consumption, resulting in less fresh oil makeup to replenish depleted additives. Top piston rings are located higher, bringing the oil film closer to the combustion chamber and exposing the lubricant to severe thermal stresses. It maintains outstanding performance at high temperatures. It is also fully compatible with conventional oils.

The key benefits include:

| Features                                                | Advantages and Potential Benefits                                        |
|---------------------------------------------------------|--------------------------------------------------------------------------|
| Meets or exceeds demanding specifications of major OEMs | One engine oil for mixed fleet operations                                |
| Outstanding thermal and oxidation stability             | Control of low temperature sludge build-up and high temperature deposits |
| Low volatility, excellent wear and bore polish control  | Good oil consumption control                                             |
| Expertly formulated low viscosity formulation           | Fuel economy potential(1)                                                |
| Good resistance to corrosion                            | Helps towards long life of critical wear surfaces                        |
| Long drain capability                                   | Help towards operational efficiency and overall cost control             |
| Component compatibility                                 | Long gasket and seal life, extended service intervals                    |

## Applications

It is recommended for use in super high performance diesel applications includes the following:

-  On-highway engines operating in both high speed/high load and stop-and-go conditions
-  Off-highway engines operating in severe low speed/heavy load conditions
-  Virtually all diesel powered equipment from American, European, and Japanese equipment builders Refrigeration units

## Specifications & Approvals

| INFINOIL PHENOM DIESEL ENGINE OIL meets or exceeds the requirements of the following industry and builder specifications |                          |                                 |
|--------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------|
| API CI4/CI4+/CH4/SL/SJ                                                                                                   | MB-Approval 228.3/235.28 | API CF/CF-4                     |
| ACEA E7                                                                                                                  | Mack EO-N                | Renault Trucks RXD              |
| Caterpillar ECF-1-a                                                                                                      | Volvo VDS-2/VDS-3        | Volvo VDS-2                     |
| Cummins CES 20076, 20077, 20078                                                                                          | Renault Trucks RLD-2     | Caterpillar ECF-1-a             |
| JASO DH-1                                                                                                                | MTU Oil Category 2       | Cummins CES 20072, 20071, 20075 |

## TYPICAL PROPERTIES:

| SL NO | TEST PARAMETERS              | TEST METHODS   | UNITS    | RESULTS**      |
|-------|------------------------------|----------------|----------|----------------|
| 1     | Appearance                   | Visual         | NONE     | Bright & Clear |
| 2     | Color                        | ASTM D 1500-12 | NONE     | Report         |
| 3     | Total Base Number            | ASTM D 2896    | mg KOH/g | 8Min           |
| 4     | Density @ 15°C               | ASTM D 4052-11 | g/ml     | 0.891          |
| 5     | Kinematic Viscosity @ 40 °C  | ASTM D 445     | cSt      | 154.2          |
| 6     | Kinematic Viscosity @ 100 °C | ASTM D 445     | cSt      | 18.52          |
| 7     | Viscosity Index              | ASTM D 2270    | NONE     | 135            |
| 8     | Pour Point                   | ASTM D 97      | °C       | ≤-25           |
| 9     | CCS @ -25°C                  | ASTM D 5293    | cP       | <8800          |
| 10    | Flash Point                  | ASTM D 92      | °C       | ≤236           |

(\*\*The features mentioned above are average values obtained with some variability in production and do not constitute a specification)

## 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.