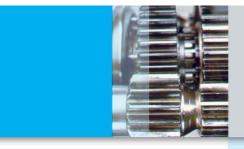


Delo® Gold Ultra SAE 15W-40 Multifunctional Diesel Engine Oil

Product Data Sheet







Customer benefits

- Reduces maintenance costs ISOSYN® technology, including a combination of high performance hydrocracked base fluids and carefully balanced metallic detergent and ashless dispersant additive system, provides excellent overall engine cleanliness in all service conditions. ISOSYN® technology also confers the high degree of soot dispersancy required to maintain oil drain intervals in modern engine designs. Highly effective oxidation stability protects against the formation of gums and varnish at elevated temperatures.
- Prolongs engine life High efficiency dispersant combination plus proven metallo-organic anti-wear additive system provides excellent protection against wear of critically loaded components under all operating conditions. Multigrade viscosity provides additional protection against wear at start-up and under high temperature operating conditions.
- Preserves full power and performance Outstanding metallic detergent additive system preserves full power and performance by providing excellent upper-ringbelt deposit control under the high temperatures encountered in turbocharged diesel engines.
- Extends oil and filter service intervals Highly effective antioxidant system inhibits the formation of sludge forming materials which can lead to premature oil thickening and filter plugging. Very effective dispersant system further assists by keeping insoluble contaminants finely suspended in the oil, minimizing their ability to block oil filters.

Applications

- Mixed fleets of diesel engines (high speed, four-stroke, turbocharged or naturally aspirated)
- Four-stroke gasoline engines in mixed fleets of diesel and gasoline engines
- · Commercial road transport
- Off-highway vehicles and plant
- Agricultural tractors and farm machinery
- High speed diesel engines in marine service (e.g., fishing boat, river transport)

Product features:

High performance, multigrade, heavy-duty diesel engine oil specifically designed to lubricate a wide range of engines requiring API CI-4 or ACEA E7 performance lubricants, including those fitted Selective Catalytic Reduction (SCR) and / or Exhaust Gas Recirculation (EGR) emission control technologies.

Formulated with ISOSYN® technology to provide exceptional soot dispersancy, deposit control and wear protection.











- Generator sets
- Mobile hydraulic systems (where oil type and viscosity are appropriate)
- Diesel engines utilizing diesel fuels with up to 20% biodiesel (B20)*

Note: * When using Biodiesel blended fuel meting ASTM D7467 (B6 - B20) or equivalent. When using >B6 biodiesel it is critical to monitor the engine oil level and performance.

Performance standards

- API CI-4, CH-4 / SL
- Renault RLD-2
- Volvo VDS-3
- Mack EO-N
- MAN M 3275-1
- Detroit Diesel 93K215
- Cummins CES 20078

Meets the requirements of

- Daimler MB 228.3
- Mack EO-M
- MTU Category 2
- Cummins CES 20077, 76 and Cummins CES 20072, 71
- Caterpillar ECF-1-a
- API CF-4, CF, CD
- ACEA E7, ACEA E5-02
- Global DHD-1

Service considerations

For vehicles fitted with Diesel Particulate Filters (DPF), Delo 400 MGX SAE 15W-40 or Delo 400 SDE SAE 15W-40 should be selected in accordance with the manufacturer's recommendations. The use of these low SAPS (sulfated ash, phosphorus and sulfur) products will maximize intervals between filter cleaning.

While modest by typical heavy duty diesel standards, Delo Gold Ultra has a level of phosphorus higher than permitted by certain recent standards for passenger car motor oils, e.g. ILSAC GF-5, and the ACEA "C" standards. Optimum life of catalytic emission control systems will be achieved by using oils of the performance standard recommended by the vehicle manufacturer.

Delo® Gold Ultra SAE 15W-40

High performance heavy duty diesel engine lubricant







continued

When using with biodiesel blends containing >6% B100, monitoring oil condition is critical. Fuels with higher biodiesel content increase the risk of fuel dilution in the engine oil. This reduces the oxidation stability of the engine oil as biodiesel tends to oxidise more rapidly thus directly impacting the oil drain intervals. Biodiesel contents greater than B5 have a lower energy content than diesel fuel, which may result in slight horsepower loss and slightly increased fuel consumption. Use of biodiesel is also known to increase DPF ash loading.

This product is not recommended for motorcycle engines.

Key properties

DELO GOLD ULTRA SAE 15W-40		
TEST	TEST METHODS	RESULTS
SAE Grade		15W-40
Product Code		500574
Base No., mg KOH/g	ASTM D2896	10.2
Sulfated Ash, m %	ASTM D784	1.4
Viscosity,		
mm²/s @ 40°C	ASTM D445	118
mm²/s @ 100°C	ASTM D445	15.2
Viscosity Index	ASTM D2270	135

This bulletin was prepared in good faith from the best information available at the time of issue. While the values and characteristics are considered representative, some variation, not affecting performance, can be expected. It is the responsibility of the user to ensure that the products are used in the applications for which they are intended.

<u>Environment, Health and Safety</u> Information is available on this product in the Material Safety Data Sheet (MSDS) and Customer Safety Guide. Customers are encouraged to review this information, follow precautions and comply with laws and regulations concerning product use and disposal. To obtain a MSDS for this product, visit www.caltexoils.com.