



Esso Diesel Efficient Fuel Product Data Sheet

Product Description

Esso Diesel Efficient™ diesel fuel helps improve fuel system performance in both on- and off-highway applications. The advanced fuel has been engineered to improve diesel fuel economy and boost engine performance, and has been tested in multiple real-world applications.

Features and Benefits

Esso Diesel Efficient fuel contains a patented additive technology that is specially designed to clean up both internal injector deposits and nozzle coking deposits. Today's diesel engines have sophisticated fuel systems engineered to meet stringent emissions requirements. Deposits that form inside the fuel injectors can impede the movement of the needle, and cause early failure of the injectors. Deposits building up inside the injector nozzle can restrict fuel flow, deteriorate the fuel spray quality and may result in loss of engine power, increased emissions and reduced fuel economy. Esso Diesel Efficient fuel helps to prevent deposit formation and clean up existing deposits that may impact your engine performance. Further, Esso Diesel Efficient fuel offers fuel system corrosion protection. Esso Diesel Efficient fuel can also help to prevent premature fuel filter plugging.

Features ¹	Advantages and Potential Benefits
Improved injector cleanliness	Enhances fuel system performance, improves engine power and responsiveness, and helps prevent premature injector failure
Improved fuel economy	Lowers fuel costs and reduces greenhouse gases (CO ₂) emissions
"Keep clean" performance	Helps prevent the accumulation of internal and external injector deposits, which assists in maintaining fuel system performance
Corrosion protection	Reduces rusting of critical fuel system components
Improved fuel filter filterability	Reduces filter plugging risk from possible impurities in the fuel, especially related to biodiesel components

¹Applies to Esso Diesel Efficient™ diesel fuel compared to equivalent diesel fuel without detergent additive. Vehicle testing showed an average fuel economy improvement of 2%. Actual benefits will vary depending on factors such as vehicle type, driving style and diesel fuel previously used. Concentration and availability of our proprietary additive package may vary based upon factors beyond our control.

Applications

Esso Diesel Efficient fuel is designed to provide benefits in applications with light, medium and heavy duty diesel engines from different manufactures, including to light duty passenger cars, on-highway heavy duty trucks and off-road construction/mining equipment. Esso Diesel Efficient fuel is specifically recommended for the latest engines with high pressure injection systems, including those with high pressure common rail (HPCR) injection.

Esso Diesel Efficient fuel with ultra-low sulfur level is compatible with today's advanced emission after treatment systems including Diesel Oxidation Catalyst (DOC), Diesel Particulate Filter (DPF), Exhaust Gas Recirculating (EGR), and Selective Catalyst Reduction (SCR) and Lean NOx Trap (LNT) technologies.

Specifications

Esso Diesel Efficient fuel meets CAN/CGSB-3.517, CAN/CGSB-3.520 (B1-B5) or CAN/CGSB-3.522 (B6-B20)

Esso Diesel Efficient™ Fuel Typical Properties

Property	Units	Typical Range	Typical Test Method
Distillation Temperature, 90% recovered, maximum	°C	290-360	ASTM D86
Kinematic Viscosity, 40 °C , min-max depending on operability temperature	mm ² /s	1.30-4.10	ASTM D445
Flash Point, minimum	°C	40.0	ASTM D93
Cetane Number, minimum		40.0	ASTM D613
Carbon Residue on 10% Bottoms, maximum	%mass	0.1-0.2	ASTM D4530
Copper Strip Corrosion, 3 hr @50°C, maximum		No. 1	ASTM D130
Lubricity		Satisfactory	See CAN/CGSB-3.517
Sulphur, maximum	mg/kg	15	ASTM D5453
Acid Number, maximum	mg KOH/g	0.10-0.14	ASTM D974
Ash, maximum	%mass	0.010	ASTM D482
Water & Sediment, maximum	%volume	0.02	ASTM D2709
Cloud Point, maximum	°C	As per seasonal requirement	ASTM D5773
Electrical Conductivity, minimum	pS/m	25	ASTM D2624

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 Esso contact or visit www.essodieseefficient.ca

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