

ULTRA-LOW SULFUR DIESEL (EN590)

Automotive Gas Oil (AGO) 10 PPM Spec • Technical Product Data Sheet

1. Product Overview

EN590 Diesel Fuel represents the premium European standard for automotive gas oil, engineered explicitly for high-efficiency compression-ignition engines. Universally referred to in global energy trading as **Ultra-Low Sulfur Diesel (ULSD) 10 ppm**, this mid-distillate petroleum fluid conforms strictly to the European Committee for Standardization (CEN) mandates. Its formulation is highly optimized to maximize energy output while safeguarding highly sensitive exhaust after-treatment mechanisms, such as Diesel Particulate Filters (DPFs) and Selective Catalytic Reduction (SCR) systems.

2. Core Technical Specifications

Property / Parameter	Unit	Limits (Min / Max)	Test Method Reference
Sulfur Content	mg/kg	Max 10.0	EN ISO 20846 / 20884
Cetane Number	—	Min 51.0	EN ISO 5165
Cetane Index	—	Min 46.0	EN ISO 4264
Density at 15°C	kg/m³	820.0 – 845.0	EN ISO 3675 / 12185
Kinematic Viscosity at 40°C	mm²/s	2.00 – 4.50	EN ISO 3104
Flash Point	°C	Above 55.0	EN ISO 2719
Carbon Residue (on 10% dist. residue)	% m/m	Max 0.30	EN ISO 10370
Ash Content	% m/m	Max 0.01	EN ISO 6245
Water Content	mg/kg	Max 200	EN ISO 12937
Total Contamination	mg/kg	Max 24	EN 12662
Copper Strip Corrosion (3h at 50°C)	rating	Class 1	EN ISO 2160
Oxidation Stability	g/m³	Max 25	EN ISO 12205
Lubricity (wsd 1.4 at 60°C)	µm	Max 460	EN ISO 12156-1
FAME Content (Biodiesel)	% v/v	Max 7.0 (B7)	EN 14078

3. Climate-Dependent Classifications & Seasonality

Refineries dynamically alter formulation configurations depending on regional climates to secure fluid operability. Cold Filter Plugging Point (CFPP) variations protect systems against fuel crystallization:

- **Summer Grade:** Optimized for ambient performance; CFPP parameter capped at Max 0°C.
- **Winter Grade:** Augmented with anti-waxing additives; CFPP constrained down to Max -15°C to -20°C.

4. Commercial Compliance & Transaction Guidance

In the international physical energy commodity markets, verifying strict EN590 validation remains critical. Transactions demand severe differentiation from obsolete high-sulfur products like historical 'Russian D2' variants, which chemically breach modern regulatory caps. Standard standard operating procedures require comprehensive, uncompromised quality inspection certificates administered strictly at load and discharge ports by authorized independent bodies including SGS, Intertek, or Bureau Veritas.