



CERTIFICATE OF ANALYSIS N° PAR-86762

VESSEL : SCHWYZ
LOCATION : ExxonMobil - Beaumont, TX
PRODUCT : ULSD

MOVEMENT : Load
REF. NO. : HV50105

| Volumetric Composite | | After Load | Sample N° : | 48 | 19-NOV-2023 Sampled at 19:00 |
|----------------------|--|------------------|----------------|---------|------------------------------------|
| | | | Minimum | Maximum | Remarks |
| ASTM D4052 | API Gravity @ 60°F | 38.5 °API | 32 | | Pass |
| ASTM D4052 | Density @ 15°C | 832.0 Kg/m3 | | | |
| ASTM D4176 (1) | Appearance | Clear & Bright | Clear & Bright | | Pass |
| ASTM D1500 | ASTM Color | L1.0 | | 2.5 | Pass |
| ASTM D93(A) | Flash Point | 142 °F | 140 | | Pass |
| ASTM D93(A) | Flash Point | 61.0 °C | 60 | | Pass |
| ASTM D2500 | Cloud Point | -10 °C | | | |
| ASTM D97 | Pour Point | -15 °C | | 0 | Pass |
| ASTM D445 | Viscosity @ 40 °C | 2.306 cSt | 2.0 | 4.1 | Pass |
| ASTM D86 | Distillation of Petroleum Products (Recovered) | | | | |
| | Initial Boiling Point | 162.3 °C | | | |
| | 10% | 188.7 °C | Report | | |
| | 50% | 254.4 °C | | 288 | Pass |
| | 90% | 333.8 °C | 282 | 338 | Pass |
| | Final Boiling Point (End Point) | 361.8 °C | | Report | |
| | Recovery | 98.1 Vol. % | | | |
| | Residue | 1.4 Vol. % | | 2.0 | Pass |
| | Loss | 0.5 Vol. % | | 2.0 | Pass |
| ASTM D976 | Cetane Index | 50.3 | 46 | | Pass |
| ASTM D613 | Cetane Number | 48.2 | 46 | | Pass |
| ASTM D5453 | Sulfur | 8.9 ppm wt. | | 15 | Pass |
| ASTM D482 | Ash | <0.001 Mass % | | 0.01 | Pass |
| ASTM D189 | Carbon Residue, Conradson | <0.01 Wt. % | | | |
| ASTM D2709 | Sediment & Water | <0.010 Vol. % | | 0.02 | Pass |
| ASTM D130 | Copper Corrosion @ 50 °C (3 hrs) | 1a | | 2 | Pass |
| ASTM D664 (A) | Acid Number | <0.10 mg KOH/g | | | |
| ASTM D7359 | Chloride Content | <0.50 mg/kg | | | |
| ASTM D2624 | Electrical Conductivity | 118 pS/m | 25 | | Pass |
| ASTM D5186 | Total Aromatics (correlated to D1319) | 22.0 Vol. % | | 35 | Pass |
| EN 12916 | Aromatic Hydrocarbons by HPLC | | | | |
| | Polycyclic Aromatic Hydrocarbons | 2.5 Mass % | | 8 | Pass |
| ASTM D6079 | Lubricity by HFRR | | | | |
| | Wear Scar Diameter @ 60° C | 340 microns | | 460 | Pass |
| ASTM D2274 | Oxidation Stability @ 95 °C Total Insolubles | 0.1 g/m3 | | 25 | Pass |
| EN 12662 | Total Contaminants | <12.0 mg/kg | | 25 | Pass |
| ASTM D7111 | Metals in Distillates by ICP | | | | |
| | Silicon | <0.10 mg/kg(ppm) | | | |



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|----------------------|--------------------------------------|------------|----------------|----------------|------------------------------------|
| | | | <i>Minimum</i> | <i>Maximum</i> | <i>Remarks</i> |
| EN 16576 | Metals by ICP-OES (Scope: FE, MN) | | | | |
| | Manganese | <1.0 mg/L | | | |

All testing is performed on premises by Camin Cargo Control and in accordance to the latest referenced test method unless specifically stated otherwise.

The results apply to the samples as received and specifically to the items listed on this certificate.

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The statement of conformity (i.e. Pass/Fail) within this document does not consider measurement uncertainty and applies the decision rules of Pass if the values are equal or are within limits and Fail if outside of limits. Limits are defined by the product’s recognized specification or as determined by written client contract and/or individual job request.

Ralph Cole / Laboratory Supervisor