

## Preliminary Product Specification

| Emerging Fuels Technology<br>Fischer-Tropsch Diesel   |                         |                   |                     |               |                   |
|---|-------------------------|-------------------|---------------------|---------------|-------------------|
| <p>Fischer-Tropsch diesel fuel is a highly paraffinic synthetic product that meets all requirements of ASTM D975 D-2 Diesel Fuel Oil when properly additized. It can also be blended with conventional diesel fuel in all proportions. F-T diesel fuel is sulfur and aromatics free, is non-toxic and biodegradable. It reduces engine exhaust emissions and is compatible with all emission control devices.</p> |                         |                   |                     |               |                   |
| Typical Physical Characteristics  | Units                   | Test Method       | Specification Value | Typical Value | Sample Properties |
| Flash Point   | °C, min                 | D93               | 52                  | 55            | 60                |
| Water and Sediment  | % vol, max              | D2709             | 0.05                | 0.01          | <0.01             |
| Distillation Temperature, 90% vol recovered   | °C, min                 | D86               | 282                 | 282           | 325               |
|   | °C, max                 |                   | 338                 | 338           | 326               |
| Kinematic Viscosity @ 40°C  | mm <sup>2</sup> /S, min | D445              | 1.9                 | 2.1           | 1.96              |
|   | mm <sup>2</sup> /S, max |                   | 4.1                 |               |                   |
| Ash   | % max                   | D482              | 0.01                | <0.01         | <0.01             |
| Sulfur  | ppm, max                | D5453             | 15                  | <15           | <15               |
| Copper Strip Corrosion Rating   | max                     | D130              | No. 1               | No. 1         | No.1              |
| Cetane Number   | min                     | D613              | 40                  | 65            | 70.1              |
| Cetane Index  | min                     | D976 <sup>b</sup> | 40                  | 65            | 69                |
| Aromaticity   | vol %, max              | D1319             | 35                  | <5            | <5                |
| Cloud Point   | °C, max                 | D2500             | Region specific     | -5            | -72               |
| LTFT/CFPP   | °C, max                 | D4539/D6371       | Region Specific     | -5            | ND(2)             |
| Ramsbottom carbon residue on 10% distillation residue   | % mass, max             | D524              | 0.35                | <0.01         | <0.01             |
| Lubricity, HFRR @ 60°C  | micron, max             | D6079/D7688       | 520                 | ND(1)         | ND(1)             |
| Conductivity  | pS/m, min               | D2624/D4308       | 25                  | >25           | >25               |

(1) No data available for this material. Fischer-Tropsch diesel products routinely require a lubricity additive.

(2) No data available for this material.

## About Us:

Emerging Fuels Technology (EFT) is a technology company focused on methods for producing synthetic fuels and specialty products from a variety of feedstocks such as natural gas, biogas, biomass, municipal solid waste (MSW), sources of CO<sub>2</sub> and bio-derived oils. EFT is one of the world's foremost authorities on Fischer-Tropsch (FT) and related synthesis, licensing the core technologies and upgrade packages for projects from 50 to 10,000 barrels per day. [www.emergingfuels.com](http://www.emergingfuels.com)

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