J.C. NOLAN PIPELINE

Certified NTDF / Heating Oil Fuel Specifications

15HO2 - SPECIFICATION FOR FUNGIBLE CERTIFIED NON-TRANSPORTATION 15 PPM DISTILLATE FUEL HEATING OIL CONTAINING UP TO 5 % RENEWABLE HYDROTREATED DIESEL FUEL $^{\rm (1)}$

		<u>ASTM</u>	ORIGIN SPECIFICATIONS		
PRODUCT PROPERTY		TEST METHOD	<u>MINIMUM</u>	MAXIMUM	NOTE
Renewable Fuel, vol %			0	5.0	9
Gravity, °API @ 60 °F		D287, D1298, D4052	30		
Flash Point, °F		D93	130		6
	At Delivery		125		
Distillation, °F	50 % recovered	D86	Report		3
90 % recovered			540	640	
End Point				700	
Color, ASTM		D1500, D6045		2.5	
Additives			Report		5
Viscosity, cSt @ 40 °C (104 °F)		D445, D7042	1.9	4.1	
Pour Point, °F		D97, D5985, D5949, D5950		See Note	4
Cloud Point, °F		D2500, D5771, D5772, D5773		See Note	4
Corrosion, 3 hrs @ 122 °F		D130		1	
Sulfur, ppm wt.		D2622, D5453, D7039			7
Origin		,,,,		11	
Connecting carrier				11	
Cetane Number or Index		D613, D6890, D4737A, D7170	40.		8
Aromatics, volume %		D1319, D5186		35	7
OR		,			
Cetane Index		D976, D4737	40		7
Ash, wt. %		D482		0.01	
Carbon Residue: Ramsbottom, wt. %		D524		0.35	
On 10% Bottom					
Water and Sediment, vol. %		D2709		< 0.05	
Thermal stability, 90 minutes					
150 °C Pad Rating		DuPont		7	
OR					
Thermal stability, % Reflectance		D6468			
Y/Green or			73		
W Unit			65		
OR					
Oxidation Stability, mg/100 ml		D2274		2.5	
Haze Rating, @ 77 °F		D4176 Procedure 2		2	
Dye Content, ppm (lb per 1000 Bbls PTB)		D6258, D6756, or Petrospec DT100	R	eport	
Color, visual			Undyed		2
Corrosive Properties		NACE TM0172-2015	B+		
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Effective Date: __9/21/2023__

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Concentration and type of additives permitted only as approved.

This product does not comply with Title 30 Texas Administrative Code, §114.312 or §114.318 requirements for low emission diesel. TxLED-B: "This product may not be used as fuel for diesel engines in any Texas county requiring the use of low emission diesel fuel without further processing."

- (1) 15 ppm sulfur (maximum) certified NTDF This fuel is designated for non-transportation use; 15 ppm Heating Oil.
- (2) Product must exhibit no visible evidence of dye.
- (3) Referee method is ASTM D86. Test Method D2887 may be used as an alternative if correlated to D86 and reported as "Predicted D86".

- (5) Report types and concentrations. Refer to Table 2 for Additive Approvals and Prohibitions.
- (6) Referee method is ASTM D93, test method ASTM D56 may be used as an alternative.
- (7) Refer to test method requirements published in 40 CFR Part 1090 Subpart N.
- (8) Where Cetane number by test method D613 is not available, cetane index test methods can be used as an approximation.
- (9) May contain up to 5.0 % Renewable Diesel as defined in in note (11). The volume of Renewable Diesel must be disclosed on the COA (Certificate of Analysis).
- (10) JCNPL assumes no responsibility as a blender and all RIN's (Renewable Identification Number) must be separated before entering JCNPL's system.
- (11) Renewable diesel is a liquid fuel derived from 100% hydrotreated bio-mass feedstocks that meets the registration requirements for fuels and fuel additives established by the EPA under section 211 of the Clean Air Act and the requirements of ASTM D975. Renewable diesel containing fatty acid esters (FAME, FAEE, or other esters) is prohibited.

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