

Petro Star North Pole Refinery

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1200 H and H Lane
North Pole, Alaska 99705

On-Road Low Sulfur Motor Diesel #1 MVDF 500 ppm

Report Date:	12-Apr-08
Product:	MVDF 500 ppm, S500 & DF1
Crude Oil Source:	Alaska North Slope Crude
Crude Processing Technique:	Atmospheric Distillation

Test	Units	<u>Specification</u>	Test Method
Saybolt Color, Min.	Code	+14	D156
Gravity, Min.	API	39	D1298
Flash Point, Min.	Celsius	38 (100)	D93
Cloud, Max.	Celsius	-48.5 (-55)	D5771
Gross Btu, Min.	Btu/lb	18,000	D4868
Btu Gross, Min	Btu/Gallon	Report	D4868
Viscosity, @ 104 Deg F	cSt	1.3 - 2.4	D445
Distillation, Auto			
IBP	Celsius	Report	D86
10% Recovery, Max	Celsius	Report	D86
20% Recovery	Celsius	Report	D86
50% Recovery	Celsius	Report	D86
90% Recovery, Max	Celsius	288 (550)	D86
Final Boiling Pt	Celsius	Report	D86
*Copper Strip Corrosion, Max	Code	3	D130
*Ash, Max.	Mass %	0.01	D482
Total Sulfur, Max	wt%	0.05	D4294
Cetane Index (4 variable), Min	Number	40	D4737
Cetane Index, Min	Number	40	D976
*Ramsbottom Carbon Residue on 10% distillation Residue, Max.	Mass %	0.15	D524
*Water and Sediment, Max	Vol. %	0.05	D2709
*Lubricity, HFRR @60 degree C, Max	Micron	520	D6079