

HIBER16X

	Whole crude	Butane and Lighter IBP - 60F	Lt. Naphtha C5 - 165F	Hvy Naphtha 165 - 330F	Kerosene 330 - 480F	Diesel 480 - 650F	Vacuum Gas Oil 650 - 1000F	Vacuum Residue 1000F+
Cut volume, %	100.0	1.4	5.4	15.3	14.1	17.6	29.6	16.6
API Gravity,	34.1	122.3	85.3	56.1	44.0	34.0	23.6	13.6
Specific Gravity (60/60F),	0.854	0.558	0.653	0.754	0.806	0.855	0.913	0.975
Carbon, wt %	86.1	82.5	83.8	86.0	86.0	86.4	86.5	86.3
Hydrogen, wt %	13.3	17.5	16.2	14.0	14.0	13.3	12.6	12.3
Pour point, F	37.4			(131.8)	(62.3)	15.3	107.7	101.0
Neutralization number (TAN), MG/GM	0.091	0.017	0.018	0.020	0.022	0.053	0.117	0.202
Sulfur, wt%	0.559	0.000	0.000	0.001	0.020	0.247	0.711	1.524
Viscosity at 20C/68F, cSt	13.2	0.4	0.5	0.8	1.7	6.4	163.5	1,409,436.0
Viscosity at 40C/104F, cSt	6.4	0.4	0.4	0.7	1.3	3.9	51.4	82,820.0
Viscosity at 50C/122F, cSt	4.8	0.3	0.4	0.6	1.1	3.1	32.4	26,410.0
Mercaptan sulfur, ppm	5.0	0.0	0.3	1.2	2.2	2.0	0.4	0.0
Nitrogen, ppm	1,401.5	-	-	0.0	0.7	71.7	1,293.4	5,177.8
CCR, wt%	2.8						0.2	14.6
N-Heptane Insolubles (C7 Asphaltenes), wt%	0.1						-	0.3
Nickel, ppm	1.1							6.0
Vanadium, ppm	1.0							5.5
Calcium, ppm	3.6							
Reid Vapor Pressure (RVP) Whole Crude, psi	7.5							
Hydrogen Sulfide (dissolved), ppm	-							
Salt content, ptb	0.5							
Paraffins, vol %	33.6	100.0	86.7	49.6	46.7	32.6	19.3	2.8
Naphthenes, vol %	33.2	-	13.3	32.9	36.3	44.4	40.1	19.0
Aromatics (FIA), vol %	33.1	-	-	17.6	17.0	23.0	40.6	78.2
Distillation type, TBP								
IBP, F	20.4		60.9	166.1	330.8	480.9	651.4	1,001.3
5 vol%, F	137.3		68.3	175.2	338.3	488.8	664.5	1,013.7
10 vol%, F	204.0		73.6	184.8	346.4	497.5	679.2	1,028.0
20 vol%, F	305.1		84.1	202.7	362.3	514.7	709.3	1,058.5
30 vol%, F	416.4		100.1	219.3	377.8	531.8	740.4	1,092.0
40 vol%, F	517.2		106.3	235.0	393.0	548.8	772.5	1,129.0
50 vol%, F	613.2		112.4	250.2	407.9	565.7	805.7	1,170.0
60 vol%, F	712.1		131.3	264.8	422.6	582.5	840.1	1,215.7
70 vol%, F	821.7		140.6	279.5	437.1	599.2	875.9	1,267.4
80 vol%, F	948.3		149.3	294.9	451.6	616.0	913.8	1,327.4
90 vol%, F	1,127.9		157.4	312.0	465.8	632.9	954.7	1,399.5
95 vol%, F	1,266.6		161.2	321.0	472.9	641.4	976.7	1,442.9
EP, F	1,463.5		164.6	329.1	479.3	649.1	997.6	1,508.5
Freeze point, F				(119.9)	(50.5)	27.1		
Smoke point, mm				27.0	21.2	14.7		
Naphthalenes (D1840), vol%					3.8	12.0		
Viscosity at 100C/212F, cSt	1.8	0.3	0.3	0.4	0.7	1.4	6.7	520.9
Viscosity at 150C/302F, cSt	1.0	0.2	0.2	0.3	0.5	0.9	2.7	58.9
Cetane Index 1990 (D4737),				30.8	45.2	53.3		
Cloud point, F				(127.4)	(57.8)	20.5		
Aniline pt, F					135.7	154.7	180.9	