

22777 Springwoods Village Parkway,
Spring, TX 77389

AZRLT15Z

	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	1.3	4.0	14.0	16.0	20.4	31.3	12.9
API Gravity,	35.3	125.8	82.1	56.2	43.9	36.0	25.8	15.9
Specific Gravity (60/60F),	0.848	0.550	0.663	0.754	0.807	0.845	0.900	0.960
Carbon, wt %	86.1	82.3	83.9	85.7	85.9	86.2	86.5	86.6
Hydrogen, wt %	13.6	17.7	16.1	14.3	14.1	13.6	13.1	12.6
Pour point, F	15.8			(133.0)	(53.9)	14.4	97.4	99.8
Neutralization number (TAN), MG/GM	0.284	0.396	0.369	0.407	0.418	0.305	0.184	0.210
Sulfur, wt%	0.205	0.000	0.003	0.014	0.035	0.112	0.275	0.572
Viscosity at 20C/68F, cSt	11.3	0.4	0.5	0.8	1.9	7.1	138.1	205,011.3
Viscosity at 40C/104F, cSt	5.8	0.3	0.4	0.7	1.4	4.2	45.1	17,191.4
Viscosity at 50C/122F, cSt	4.4	0.3	0.4	0.6	1.2	3.3	28.9	6,341.9
Mercaptan sulfur, ppm	17.5	1.0	2.8	3.6	8.6	10.5	2.5	0.1
Nitrogen, ppm	1,185.9	-	-	0.1	3.9	93.0	1,074.5	5,520.3
CCR, wt%	1.5						0.1	9.7
N-Heptane Insolubles (C7 Asphaltenes), wt%	0.0						-	0.1
Nickel, ppm	3.6							24.4
Vanadium, ppm	3.4							23.2
Calcium, ppm	0.5							
Reid Vapor Pressure (RVP) Whole Crude, psi	4.1							
Hydrogen Sulfide (dissolved), ppm	-							
Salt content, ptb	1.7							
Paraffins, vol %	35.0	100.0	84.3	45.4	46.3	41.8	22.5	3.7
Naphthenes, vol %	40.2	-	15.7	43.2	39.9	42.2	49.5	26.1
Aromatics (FIA), vol %	24.8	-	-	11.3	13.9	15.9	28.0	70.2
Distillation type, TBP								
IBP, F	(8.1)		61.0	166.2	330.8	480.9	651.4	1,001.2
5 vol%, F	159.4		69.9	176.1	338.2	488.7	663.7	1,012.0
10 vol%, F	228.3		78.6	186.3	346.3	497.2	677.5	1,024.6
20 vol%, F	336.5		93.6	205.3	362.3	514.3	706.1	1,051.6
30 vol%, F	432.7		106.1	222.8	378.0	531.1	735.9	1,081.1
40 vol%, F	518.7		117.0	239.4	393.5	547.9	767.1	1,113.5
50 vol%, F	601.3		126.8	255.3	408.6	564.7	799.4	1,149.6
60 vol%, F	687.6		135.6	270.8	423.4	581.5	833.0	1,190.7
70 vol%, F	784.7		143.7	286.0	438.0	598.4	868.4	1,238.9
80 vol%, F	896.3		151.2	300.9	452.2	615.4	906.6	1,297.7
90 vol%, F	1,059.1		158.4	315.5	466.2	632.5	949.1	1,374.5
95 vol%, F	1,196.6		161.7	322.8	473.1	641.2	973.1	1,425.0
EP, F	1,438.4		164.7	329.3	479.3	649.1	997.2	1,499.5
Freeze point, F				(120.9)	(41.7)	26.2		
Smoke point, mm				31.9	25.4	17.5		
Naphthalenes (D1840), vol%					1.2	5.6		
Viscosity at 100C/212F, cSt	1.7	0.2	0.3	0.4	0.7	1.5	6.3	208.6
Viscosity at 150C/302F, cSt	0.9	0.2	0.2	0.3	0.5	0.9	2.6	31.5
Cetane Index 1990 (D4737),				32.4	45.0	58.0		
Cloud point, F				(128.3)	(48.3)	20.0		
Aniline pt, F					147.7	173.8	202.2	