TotalEnergies

Crude **FORTIES**

Country United Kingdom

TBP DISTILLATION

Density at 15°C, kg/m3	837.8
°API	37.3
Bbl/mt	7.522
Acidity, mg KOH/g	0.06
Sulphur, wt%	0.85
Hydrogen Sulphide, mg/kg	3
Mercaptan Sulphur, mg/kg	18
Viscosity, cSt at 10 °C	8.0
50 °C	3.0
Pour Point, °C	-12
Total Nitrogen, wt%	0.09
Wax, wt%	-
Wax Appearance Temperature, °C	-
RVP at 37.8 °C, kPa	53
Water, vol%	-
NaCl, mg/kg	-
Nickel, mg/kg	4.4
Vanadium, mg/kg	12.6
Iron, mg/kg	-
Mercury, µg/kg	-

Assay Date 24-May-14

	wt%	vol%
Ethane	0.0	0.0
Propane	0.6	0.9
Iso-Butane	0.5	0.7
n-Butane	1.4	2.0

°C	wt%	vol%	°C	wt%	vol%
080	9.7	12.7	460	75.5	79.2
090	11.3	14.6	480	78.0	81.5
100	13.0	16.7	500	80.4	83.6
120	17.1	21.3	520	82.6	85.5
140	21.5	26.2	540	84.6	87.3
160	25.6	30.7	560	86.4	88.9
180	29.3	34.5	580	88.1	90.3
200	32.5	37.9			
220	35.8	41.3			
240	39.2	44.7			
260	42.7	48.2			
280	46.3	51.7			
300	49.8	55.2			
320	53.4	58.6			
340	56.9	61.9			
360	60.3	65.2			
380	63.6	68.3			
400	66.8	71.3			
420	69.9	74.1			
440	72.8	76.7			

PROPERTIES OF TBP CUTS

LIGHT NAPHTHA	Cuts °C	Yield wt%	Yield vol %	Den 15°C kg/m3	S wt%	RSH mg/kg	RON clear	MON clear			Napht. vol%	Aro. vol%	RVP kPa			
	15-65	5.2	6.7	648	0.00	4	68.9	67.8			8.4	0.5	-			
	15-80	7.3	9.2	659	0.00	7	65.1	64.2			13.6	1.5	-			
HEAVY NAPHTHA	Cuts °C	Yield wt%	Yield vol %	Den 15°C kg/m3	S wt%	RSH mg/kg					Napht. vol%	Aro. vol%				
	80-150	14.0	15.8	734	0.01	18					31.5	10.8				
	80-175	18.7	20.9	744	0.01	18					30.9	11.8				
	100-150	10.6	11.8	743	0.01	18					31.4	11.8				
KEROSENE	Cuts °C	Yield wt%	Yield vol %	Den 15°C kg/m3	S wt%	RSH mg/kg	Smoke Pt mm	Acidity mgKOH/g	Cetane Index	Freez. Pt °C		Aro. vol%	Visc cSt 50°C			Flash Point
	150-230	13.9	14.5	796	0.06	20	25	0.02	41.1	-56		17.6	1.0			55.0
	175-230	9.1	9.4	807	0.08	21	23	0.03	42.0	-50		19.1	1.1			69.0
	150-250	17.3	17.9	802	0.09	20	24	0.03	42.7	-51		18.6	1.1			57.9
GASOIL	Cuts °C	Yield wt%	Yield vol %	Den 15°C kg/m3	S wt%		Anilin Point °C		Cetane Index	Cloud Pt C	CFPP C	Pour Pt C	Visc cSt 50°C	Visc cSt 100°C	UOPK	Flash Point
	175-400	38.4	37.6	847	0.52		68		50.0	-3	-7	-11	2.7	1.3	11.8	81.4
	230-400	29.3	28.3	861	0.65		71		53.1	2	0	-2	3.8	1.7	11.8	106.5
	230-375	25.3	24.5	855	0.58		70		53.2	-4	-6	-8	3.3	1.5	11.8	104.8
VACUUM DISTILLATE	Cuts °C	Yield wt%	Yield vol %	Den 15°C kg/m3	S wt%	Conrad. wt%	Anilin Point °C	Ni mg/kg	Va mg/kg	Total N wt%	Bas N mg/kg	Pour Pt C	Visc cSt 100°C	Visc cSt 150°C	UOPK	Asp C7 wt %
	375-550	22.8	20.6	918	1.35	0.3	85	0	0	0.12	369	39	8.2	3.2	11.9	0.0
	375-565	24.1	21.7	920	1.38	0.4	86	0	1	0.12	391	40	8.7	3.3	11.9	0.0
	375-580	25.3	22.8	922	1.41	0.6	86	0	1	0.13	413	41	9.3	3.5	11.9	0.1
	400-580	21.3	19.1	927	1.47	0.7	88	0	1	0.14	464	44	11.3	4.0	11.9	0.1
RESIDUE	Cuts °C	Yield wt%	Yield vol %	Den 15°C kg/m3	S wt%	Conrad. wt%	Acidity mgKOH/g	Ni mg/kg	Va mg/kg	Total N wt%		Pour Pt C	Visc cSt 100°C	Visc cSt 150°C	Pene mm/10	Asp C7 wt%
	> 375	37.2	32.5	951	1.85	6.2	0.1	12	34	0.25		37	27	7	-	0.5
	> 550	14.5	11.9	1009	2.64	15.5	0.0	30	87	0.45		48	558	58	226	1.3
	> 565	13.1	10.7	1014	2.72	16.8	0.0	33	95	0.47		49	821	75	185	1.4
	> 580	11.9	9.7	1020	2.80	18.2	0.0	36	104	0.49		50	1250	98	155	1.6