TotalEnergies

Crude **GUDRUN BLEND**

Country Norway

TBP DISTILLATION

Density at 15°C, kg/m3	776.2
°API	50.7
Bbl/mt	8.121
Acidity, mg KOH/g	0.01
Sulphur, wt%	0.07
Hydrogen Sulphide, mg/kg	6
Mercaptan Sulphur, mg/kg	1
Viscosity, cSt at 10 °C	1.6
50 °C	1.0
Pour Point, °C	-72
Total Nitrogen, wt%	0.03
Wax, wt%	-
Wax Appearance Temperature, °C	-
RVP at 37.8 °C, kPa	-
Water, vol%	-
NaCl, mg/kg	-
Nickel, mg/kg	0.1
Vanadium, mg/kg	0.1
Iron, mg/kg	0.5
Mercury, µg/kg	-

Assay Date 12-Jan-15

	wt%	vol%
Ethane	0.0	0.0
Propane	0.2	0.3
Iso-Butane	0.9	1.2
n-Butane	3.8	5.0

°C	wt%	vol%	°C	wt%	vol%
080	21.8	26.3	460	91.7	93.1
090	26.0	30.7	480	93.3	94.4
100	30.8	35.6	500	94.6	95.6
120	37.8	42.7	520	95.8	96.5
140	44.7	49.5	540	96.7	97.3
160	51.6	56.3	560	97.5	98.0
180	55.8	60.4	580	98.1	98.5
200	58.5	63.0			
220	61.3	65.6			
240	64.4	68.5			
260	67.7	71.6			
280	70.9	74.6			
300	74.0	77.4			
320	76.8	80.0			
340	79.4	82.2			
360	81.7	84.3			
380	83.9	86.3			
400	86.1	88.2			
420	88.1	89.9			
440	90.0	91.6			

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	12.4	14.9	644	0.00	0	75.7	75.0			3.1	0.1	-			
	15-80	16.9	19.8	661	0.00	0	72.6	71.8			8.3	1.0	-			
HEAVY NAPHTHA	Cuts °C	Yield wt%	Yield vol %	Den 15°C kg/m3	S wt%	RSH mg/kg					Napht. vol%	Aro. vol%				
	80-150	26.5	26.8	763	0.00	1					29.8	25.9				
	80-175	33.2	33.3	768	0.00	1					28.1	26.7				
	100-150	17.6	17.5	774	0.00	1					28.3	32.4				
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	14.5	14.0	799	0.00	1	21	0.03	37.1	-52		27.0	0.9			51.5
	175-230	7.8	7.5	805	0.00	1	20	0.03	43.2	-46		24.2	1.1			69.0
	150-250	17.7	17.0	803	0.00	1	21	0.03	39.8	-49		26.7	1.0			54.2
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	31.0	28.5	838	0.07		70		52.0	-8	-11	-14	2.4	1.2	11.9	80.6
	230-400	23.2	21.1	850	0.10		76		56.0	-4	-4	-5	3.4	1.5	11.9	104.8
	230-375	20.5	18.7	846	0.08		73		55.6	-9	-10	-10	3.0	1.4	11.9	103.3
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	13.7	11.9	892	0.25	0.1	102	0	0	0.10	288	41	7.2	2.9	12.2	0.0
	375-565	14.3	12.3	893	0.26	0.1	102	0	0	0.10	297	42	7.6	3.0	12.2	0.0
	375-580	14.7	12.7	894	0.26	0.2	102	0	0	0.10	305	42	7.9	3.1	12.2	0.0
	400-580	12.0	10.3	899	0.27	0.3	105	0	0	0.11	334	46	9.6	3.6	12.3	0.0
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	16.6	14.2	902	0.30	1.5	0.1	1	1	0.14		48	10	4	-	0.1
	> 550	2.9	2.3	954	0.52	8.5	0.0	3	4	0.33		55	104	19	468	0.3
	> 565	2.4	1.9	960	0.55	10.0	0.0	4	5	0.37		54	142	23	374	0.3
	> 580	1.9	1.5	967	0.58	11.8	0.0	5	6	0.41		53	199	29	301	0.4