

## Crude Summary Report

General Information		Molecules (%wt on crude)				Whole Crude Properties			
Reference:	TERGC11X	methane + ethane	0.00	Density @ 15°C (g/cc)	0.6915				
Name:	Terengganu Condensate	propane	0.12	<b>API Gravity</b>	<b>73.1</b>				
Origin:	Malaysia	isobutane	0.06	Total Sulfur (% wt)	0.00				
Assay Date:	6/2/2011	n-butane	2.38	Pour Point (°C)	-36				
Comments:		isopentane	11.70	Viscosity @ 20°C (cSt)	0.5				
		n-pentane	14.83	Viscosity @ 40°C (cSt)	0.4				
		cyclopentane	0.82	Nickel (ppm)	0.5				
		C6 paraffins	17.67	Vanadium (ppm)	0.5				
		C6 naphthenes	4.82	Total Nitrogen (ppm)	2				
		benzene	0.95	Total Acid Number (mgKOH/g)	0.01				
		C7 paraffins	8.05	Mercaptan Sulfur (ppm)	3.0				
		C7 naphthenes	7.03	Hydrogen Sulfide (ppm)	0.0				
		toluene	2.68	Reid Vapor Pressure (kPa)	75.2				

Cut Data	IBP	Atmospheric Cuts									Vacuum Cuts				
		C5	65	100	150	200	250	300	350	370	370	450	500	550	
Start (°C)															
End (°C)	FBP	65	100	150	200	250	300	350	370	FBP	450	500	550	FBP	
Yield (% wt)		46.4	22.8	17.4	6.2	3.3	2.1	0.6	0.1	0.4	0.1	0.0	0.1	0.1	
Yield (% vol)		50.3	22.1	15.8	5.5	2.9	1.8	0.5	0.1	0.3	0.1	0.0	0.1	0.1	
Cumulative Yield (% wt)		0.8	47.2	69.9	87.3	93.5	96.9	99.0	99.6	99.6	99.6	99.7	99.7	99.9	
Volume Average B.P. (°C)	81	41.0	80	121	171	223	272	319	359	523	390	491	524	594	
Density @ 15°C (g/cc)	0.6915	0.6418	0.7168	0.7663	0.7894	0.8066	0.8274	0.8320	0.8367	0.8462	0.8586	0.8435	0.8377	0.8496	
API Gravity	73.1	89.0	65.9	53.1	47.7	43.8	39.4	38.5	37.5	35.6	33.2	36.2	37.3	35.0	
UOPK	12.45			11.63	11.76	11.94	12.00	12.27	12.47	13.32	12.35	13.18	13.46	13.65	
Molecular Weight (g/mol)				107	135	171	209	258	305	609	338	541	653	952	
Total Sulfur (% wt)	0.00	0.000	0.000	0.000	0.004	0.012	0.026	0.045	0.060	0.132	0.067	0.100	0.124	0.181	
Mercaptan Sulfur (ppm)	3.0	0.1	0.4	1.3	2.0	1.2	0.6								
Total Nitrogen (ppm)	2					4	19	51	83	359	114	254	317	548	
Basic Nitrogen (ppm)	1					2	13	31	45	130	54	78	89	223	
Total Acid Number (mgKOH/g)	0.01	0.01	0.01	0.01	0.01	0.02	0.05	0.12	0.16	0.27	0.19	0.26	0.28	0.31	
Viscosity @ 20°C (cSt)	0.53				1.21										
Viscosity @ 40°C (cSt)	0.45				0.94	1.61	2.86	5.37	9.06						
Viscosity @ 50°C (cSt)	0.42					1.39	2.36	4.19	6.75	103	8.77	26.4	61.0		
Viscosity @ 60°C (cSt)										63.6	6.63	18.4	39.6		
Viscosity @ 100°C (cSt)										15.3	2.86	6.32	11.1	109	
Viscosity @ 130°C (cSt)														36.1	
Viscosity @ 150°C (cSt)														20.6	
RON (Clear)		76.7	44.7	71.1	39.1										
MON (Clear)		74.0	60.4	65.6	38.2										
Paraffins (% wt)	68.8	97.9	62.8	29.5	52.9										
Naphthenes (%wt)	20.4	2.1	32.8	43.0	21.3										
Aromatics (% wt)	10.8	0.0	4.4	27.5	25.9										
Pour Point (°C)	-36						-37	-17	3	17	36	26	45	49	47
Cloud Point (°C)								-35	-14	5					
Freeze Point (°C)															
Smoke Point (mm)															
Cetane Index (D4737A)															
Naphthalenes (% vol)															
Aniline Point (°C)															
Hydrogen (% wt)	15.2	16.6	15.2	13.4	13.8	13.9	14.0	14.2	14.1		80.5	90.0	91.7		
Total Wax (% wt)	2.3									22.2	13.5	14.1	14.6	19.8	
C7 Asphaltenes (% wt)	0.0									0.1	0.0	0.0	0.2		
Micro Carbon Residue (% wt)	0.0									1.1	0.4	0.8	2.2		
Vanadium (ppm)	0.5									143.1	0.0	0.0	394.3		
Nickel (ppm)	0.5									143.1	0.0	0.0	394.4		
Iron (ppm)	1.0									286.4	0.0	0.0	789.4		
Sodium (ppm)	0.0														
Mercury (ppb)	11.6														
Arsenic (ppb)	5														

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