

Reference: DOMSW22Y
Crude: Domestic Sweet



Crude Summary Report

General Information		Molecules (%wt on crude)				Whole Crude Properties			
Reference:	DOMSW22Y	methane + ethane	0.00	Density @ 15°C (g/cc)	0.8110				
Name:	Domestic Sweet	propane	0.25	API Gravity	42.9				
Origin:	Texas	isobutane	0.26	Total Sulfur (% wt)	0.43				
Assay Date:	6/17/2022	n-butane	1.22	Pour Point (°C)	-54				
Comments:		isopentane	1.40	Viscosity @ 20°C (cSt)	4.2				
		n-pentane	2.09	Viscosity @ 40°C (cSt)	2.4				
		cyclopentane	0.18	Nickel (ppm)	3.2				
		C6 paraffins	3.82	Vanadium (ppm)	10.5				
		C6 naphthenes	1.87	Total Nitrogen (ppm)	610				
		benzene	0.23	Total Acid Number (mgKOH/g)	0.10				
		C7 paraffins	3.73	Mercaptan Sulfur (ppm)	32.9				
		C7 naphthenes	3.47	Hydrogen Sulfide (ppm)	0.0				
		toluene	0.79	Reid Vapor Pressure (kPa)	56.3				

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)		6.1	9.2	13.4	10.7	9.2	9.0	8.3	3.1	29.4	11.0	5.5	4.3	8.7	
Yield (% vol)		7.6	10.3	14.3	11.0	9.1	8.7	7.9	2.9	25.9	10.0	4.9	3.8	7.2	
Cumulative Yield (% wt)		1.6	7.7	16.9	30.3	41.0	50.2	59.2	67.5	70.6	70.6	81.5	87.0	91.3	
Volume Average B.P. (°C)	258	43.0	83	124	174	225	275	324	360	501	409	474	524	637	
Density @ 15°C (g/cc)	0.8110	0.6483	0.7236	0.7569	0.7853	0.8118	0.8329	0.8487	0.8672	0.9181	0.8866	0.9060	0.9144	0.9722	
API Gravity	42.9	86.8	64.0	55.4	48.6	42.7	38.3	35.2	31.6	22.5	28.0	24.6	23.2	14.0	
UOPK	12.14			11.81	11.84	11.87	11.94	12.07	12.04	12.16	12.07	12.18	12.33	12.12	
Molecular Weight (g/mol)				109	138	172	211	259	295	492	350	453	577	978	
Total Sulfur (% wt)	0.43	0.004	0.009	0.019	0.039	0.078	0.216	0.472	0.63	1.14	0.75	0.82	1.02	1.91	
Mercaptan Sulfur (ppm)	32.9	5.9	26.8	72.7	98.4	62.5	28.5								
Total Nitrogen (ppm)	610					2	9	88	257	2016	597	1264	1710	4441	
Basic Nitrogen (ppm)	160					1	5	37	92	523	192	349	447	1091	
Total Acid Number (mgKOH/g)	0.10	0.00	0.00	0.01	0.02	0.02	0.05	0.13	0.17	0.25	0.18	0.21	0.25	0.37	
Viscosity @ 20°C (cSt)	4.25				1.31										
Viscosity @ 40°C (cSt)	2.40				1.01	1.59	2.85	5.92	11.0						
Viscosity @ 50°C (cSt)	1.91					1.38	2.38	4.66	8.19	132	19.1	61.5	146		
Viscosity @ 60°C (cSt)										79.8	13.7	39.8	87.7		
Viscosity @ 100°C (cSt)										18.1	5.11	11.1	19.5	439	
Viscosity @ 130°C (cSt)														109	
Viscosity @ 150°C (cSt)														53.4	
RON (Clear)		75.2	41.1	58.2	30.9										
MON (Clear)		72.8	57.4	56.8	29.6										
Paraffins (% wt)	42.2	96.7	62.6	37.7	50.7										
Naphthenes (%wt)	34.5	3.3	34.9	48.2	35.2										
Aromatics (% wt)	22.8	0.0	2.5	14.1	13.9										
Pour Point (°C)	-54						-46	-24	-1	12	44	27	43	50	51
Cloud Point (°C)							-44	-21	1						
Freeze Point (°C)							-54	-40	-16						
Smoke Point (mm)							26	23	19						
Cetane Index (D4737A)							40	49	57	66	69				
Naphthalenes (% vol)							0.0	1.7	5.1	6.5					
Aniline Point (°C)				53.2	58.3	66.1	74.0	80.6	84.2		90.7	99.6	104.1		
Hydrogen (% wt)	14.0	16.6	15.3	14.2	14.3	13.9	13.8	13.7	13.4		13.1	13.0	13.0		
Total Wax (% wt)	10.1									11.3	16.0	15.5	12.4	2.2	
C7 Asphaltenes (% wt)	0.5									1.7	0.0	0.0	5.8		
Micro Carbon Residue (% wt)	1.2									4.0	0.0	0.7	13.2		
Vanadium (ppm)	10.5									35.8	0.0	0.0	121.7		
Nickel (ppm)	3.2									11.0	0.0	0.0	37.3		
Iron (ppm)	1.1									3.7	0.0	0.0	12.6		
Sodium (ppm)	1.4														
Mercury (ppb)	1.0														
Arsenic (ppb)	22														

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