Platform Gail

Origin: California, USA

			Reference ID
API Gravity			
		20.6	ESD 99
Equation(s) for Predicting Evaporation			
%Ev = (1.68 + 0.045T)ln(t)			
Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)			
			ESD 99
Sulphur (weight %)			
Evaporation (weight %)			
0		4.08	ESD 99
7		4.27	
13		4.42	
21		4.56	
Water Content (weight %)			
Evaporation (weight %)			
0		1.3	ESD 99
7		0.3	
13		0.1	
21		<0.1	
Flash Point (°C)			
Evaporation (weight %)			
0		-25	ESD 99
7		32	
13		73	
21		>100	
Density (g/mL)			
Evaporation (weight %)	Temperature (°C)		
0	0	0.9404	ESD 99
	15	0.9297	
	25	0.9224	
7	0	0.9600	
	15	0.9489	
	25	0.9422	
13	0	0.9760	
	15	0.9645	
	25	0.9585	
21	0	0.9920	
	15	0.9810	
	25	0.9752	
Pour Point (°C)			
Evaporation (weight %)			
0		-20	ESD 99
7		-12	
13		-1	
21		13	

Copyright Environment Canada, Emergencies Science and Technology Division

Platform Gail

			Reference ID
Dynamic Viscosity (mPa s or cP)			
Evaporation (weight %)	Temperature (°C)		
0	0	1393	ESD 99
	15	406	
	25	196	
7	0	6622	
	15	1450	
	25	604	
13	0	53015	
	15	7092	
	25	2723	
21	0	NM	
	15	161500	
	25	36340	
Emulsion Formation			
Evaporation (weight%)			
0	Visual stability	stable	ESD 99
	Viscosity (mPa·s)	35820	
	Complex modulus (Pa)	120	
	Water content (wt %)	76	
7	Visual stability	stable	
	Viscosity (mPa·s)	69520	
	Complex modulus (Pa)	202	
	Water content (wt %)	75	
13	Visual stability	stable	
	Viscosity (mPa·s)	112800	
	Complex modulus (Pa)	338	
	Water content (wt %)	67	
21	Visual stability	entrained	
	Viscosity (mPa·s)	398200	
	Complex modulus (Pa)	1210	
	Water content (wt %)	44	
Chemical Dispersibility (volume %)			
Evaporation (weight %)			
0	Corexit 9500	22	ESD 99
7		4	
13		0	
21		0	
Hydrocarbon Groups (weight %)			
Evaporation (weight %)			
0	Saturates	39	ESD 00
	Aromatics	28	
	Resins	21	
	Asphaltenes	12	
	Waxes	1.5	ESTD 02
7	Saturates	35	ESD 00
	Aromatics	31	
	Resins	21	
	Asphaltenes	13	
	Waxes	1.6	ESTD 02
13	Saturates	32	ESD 00

Copyright Environment Canada, Emergencies Science and Technology Division

Platform Gail

				Reference ID
Hydrocarbon Groups (weight %)				
Evaporation (weight %)				
13	Aromatics	28		ESD 00
	Resins	25		
	Asphaltenes	15		
	Waxes	1.6		ESTD 02
21	Saturates	27		ESD 00
	Aromatics	29		
	Resins	25		
	Asphaltenes	19		
	Waxes	2.2		ESTD 02
Adhesion (g/m²)				
Evaporation (weight %)				
0		65	SD = 4	ESD 00
7		69	SD = 2	
13		82	SD = 11	
21		280	SD = 24	
Volatile Organic Compounds (ppm)				
Evaporation (weight %)				
0	Benzene	685		ESD 99
	Toluene	1364		
	Ethylbenzene	957		
	Xylenes	3546		
	C3-benzenes	4883		
	Total BTEX	6552		
	Total VOCs	11435		
7	Benzene	316		
	Toluene	1074		
	Ethylbenzene	1052		
	Xylenes	4177		
	C3-benzenes	6051		
	Total BTEX	6619		
	Total VOCs	12670		
13	Benzene	7		
	Toluene	83		
	Ethylbenzene	320		
	Xylenes	1614		
	C3-benzenes	4367		
	Total BTEX	2024		
	Total VOCs	6391		
21	Benzene	6		
	Toluene	1		
	Ethylbenzene	0		
	Xylenes	1		
	C3-benzenes	48		
	Total BTEX	8		
	Total VOCs	57		
Surface Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	28.6		ESD 00
	15	27.8		

Copyright Environment Canada, Emergencies Science and Technology Division

Platform Gail

			Reference ID
Surface Tension (mN/m or dynes/cm)			
Evaporation (weight %)	Temperature (°C)		
0	25	27.7	ESD 00
7	0	30.0	
	15	29.0	
	25	28.9	
13	0	NM	
	15	30.5	
	25	29.4	
21	0	NM	
	15	NM	
	25	NM	
Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)			
Evaporation (weight %)	Temperature (°C)		
0	0	NM	ESD 00
	15	NM	
	25	7.5	
7	0	NM	
	15	NM	
	25	NM	
13	0	NM	
	15	NM	
	25	NM	
21	0	NM	
	15	NM	
	25	NM	
Oil/Fresh Water Interfacial Tension (mN/m or			
Evaporation (weight %)	Temperature (°C)		
0	0	NM	ESD 00
	15	NM	
	25	9.3	
7	0	NM	
	15	NM	
	25	NM	
13	0	NM	
	15	NM	
	25	NM	
21	0	NM	
	15	NM	
	25	NM	
Boiling Point Distribution (BP vs weight %)			
Evaporation (weight %)	Boiling Point (°C)	Weight %	
0	40	1.3	ESTD 02
	60	1.9	
	80	3.2	
	100	5.2	
	120	7.1	
	140	9	
	160	11.2	
	180	13.4	
	200	15.4	

Copyright Environment Canada, Emergencies Science and Technology Division

Platform Gail

Boiling Point Distribution (BP vs weight %)

Evaporation (weight %)	Boiling Point (°C)	Weight %	Reference ID
0	250	21.4	ESTD 02
	300	27.5	
	350	34.1	
	400	40.3	
	450	47.3	
	500	54.5	
	550	62.2	
	600	68.8	
	650	74.6	
7	40	0.1	
	60	0.6	
	80	1	
	100	1.9	
	120	3.1	
	140	4.7	
	160	6.7	
	180	8.8	
	200	10.9	
	250	17.2	
	300	23.7	
	350	30.6	
	400	37.3	
	450	44.7	
	500	52.4	
	550	60.6	
	600	67.6	
	650	73.8	
13	40	0.2	
	60	0.6	
	80	0.7	
	100	0.8	
	120	0.8	
	140	1.2	
	160	2.2	
	180	3.9	
	200	5.9	
	250	12.5	
	300	19.5	
	350	26.9	
	400	34	
	450	42	
	500	50.1	
	550	58.9	
	600	66.3	
	650	73	
21	40	0.2	
	60	0.7	
	80	0.9	
	100	0.9	
	120	0.9	
	140	0.9	
	160	0.9	
	180	0.9	

Copyright Environment Canada, Emergencies Science and Technology Division

Platform Gail

Boiling Point Distribution (BP vs weight %)

Evaporation (weight %)	Boiling Point (°C)	Weight %	Reference ID
21	200	1.2	ESTD 02
	250	5.7	
	300	12.7	
	350	20.7	
	400	28.4	
	450	37.2	
	500	46.6	
	550	57	
	600	65.7	
	650	73.2	

Copyright Environment Canada, Emergencies Science and Technology Division