		Data	Notes	Reference ID
Origin: Trinidad				
Synonyms: Trinidad Blend				
Data from OGJ 99 were originally published in 1983 as part of a series entitled "Guide to Export Crudes for the '80s".				Ross 93
API Gravity				
		32.8		OGJ 99
		31.4		Ross 93
Sulphur (weight %)				
		0.27		OGJ 99
Flash Point (°C)				
		34		Ross 93
Reid Vapour Pressure (kPa)				
		14		OGJ 99
Density (g/mL)				
	Temperature (°C)			
	27	0.8625		Ross 93
Pour Point (°C)				
		-21		OGJ 99
		-9		Ross 93
Dynamic Viscosity (mPa·s or cP)				
	Temperature (°C)			
	16	8		Ross 93
	27	5		Ross 93
Kinematic Viscosity (mm²/s or cSt)				
	Temperature (°C)			
	38	4		OGJ 99
Surface Tension (mN/m or dynes/cm)				
	Temperature (°C)			
	16	30.0		Ross 93
Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)				
	Temperature (°C)			
	16	27.0		Ross 93
Yield on Crude (volume %)				
	Boiling Range (°C)			
	C1-C4	1		OGJ 99
	Naphtha (C5-93)	4		OGJ 99
	Heavy naphtha (93-160)	9		OGJ 99
	Kerosene (160-271)	29		OGJ 99
	Gas oil (271-343)	26		OGJ 99
	Gas oil (343-454)	20		OGJ 99

Galeota Mix

		Data	Notes	Reference ID
Metals (ppm)				
	Nickel	1		OGJ 99
	Vanadium	0		OGJ 99

		Data	Notes	Reference ID
Origin: Gabon				
Data from OGJ 99 were originally published in 1983 as part of a series entitled "Guide to Export Crudes for the '80s".				
API Gravity				
		31.8		OGJ 99
Sulphur (weight %)				
		0.11		OGJ 99
Pour Point (°C)				
		23		OGJ 99
Kinematic Viscosity (mm²/s or cSt)				
	Temperature (°C)			
	38	37		OGJ 99
Yield on Crude (volume %)				
	Boiling Range (°C)			
	C1-C5	1		OGJ 99
	Gasoline (C5-80)	1		OGJ 99
	Heavy naphtha (80-160)	5		OGJ 99
	Kerosene (160-250)	12		OGJ 99
	Gas oil (250-350)	19		OGJ 99
	Residue (>350)	62		OGJ 99

Garden Banks Block 387

Origin: Gulf of Mexico, USA		**Data**	**Notes**	**Reference ID**
API Gravity				
		29.5		ESD 98
Equation(s) for Predicting Evaporation				
%Ev = (1.84 + 0.045T)ln(t) Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)				ESD 99
Sulphur (weight %)				
Evaporation (weight %)				
0		1.52		ESD 99
7		1.45		ESD 99
15		1.55		ESD 99
23		1.68		ESD 99
Water Content (weight %)				
Evaporation (weight %)				
0		1.0		ESD 98
7		0.4		ESD 98
15		< 0.1		ESD 98
23		< 0.1		ESD 98
Flash Point (°C)				
Evaporation (weight %)				
0		-28		ESD 98
7		33		ESD 98
15		80		ESD 98
23		> 95		ESD 98
Density (g/mL)				
Evaporation (weight %)	Temperature (°C)			
0	0	0.8891		ESD 98
	15	0.8782		ESD 98
	25	0.8704		ESD 98
7	0	0.9082		ESD 98
	15	0.8979		ESD 98
	25	0.8911		ESD 98
15	0	0.9243		ESD 98
	15	0.9144		ESD 98
	25	0.9077		ESD 98
23	0	0.9386		ESD 98
	15	0.9287		ESD 98
	25	0.9217		ESD 98

		Data	Notes	Reference ID
Pour Point (°C)				
Evaporation (weight %)				
0		-39		ESD 98
7		-34		ESD 98
15		-29		ESD 98
23		-25		ESD 98
Dynamic Viscosity (mPa s or cP)				
Evaporation (weight %)	Temperature (°C)			
0	0	58		ESD 98
	15	29		ESD 98
	25	19		ESD 98
7	0	151		ESD 98
	15	64		ESD 98
	25	39		ESD 98
15	0	538		ESD 98
	15	181		ESD 98
	25	97		ESD 98
23	0	2,317		ESD 98
	15	579		ESD 98
	25	271		ESD 98
Emulsion Formation				
Evaporation (weight%)				
0	Visual stability	none		ESD 99
7		none		ESD 99
15		none		ESD 99
23		meso		ESD 99
	Viscosity (mPa·s)	6,835		ESD 99
	Complex modulus (mPa)	8,150		ESD 99
	Water content (wt %)	37		ESD 99
Chemical Dispersibility (volume %)				
Evaporation (weight %)				
0	Corexit 9500	27		ESD 99
7		30		ESD 99
15		17		ESD 99
23		0		ESD 99

		Data	Notes	Reference ID
Hydrocarbon Groups (weight %)				
Evaporation (weight %)				
0	Saturates	53		ESD 98
	Aromatics	36		ESD 98
	Resins	10		ESD 98
	Asphaltenes	1		ESD 98
7	Saturates	51		ESD 98
	Aromatics	38		ESD 98
	Resins	11		ESD 98
	Asphaltenes	1		ESD 98
15	Saturates	51		ESD 98
	Aromatics	37		ESD 98
	Resins	11		ESD 98
	Asphaltenes	1		ESD 98
23	Saturates	46		ESD 98
	Aromatics	40		ESD 98
	Resins	13		ESD 98
	Asphaltenes	2		ESD 98
Adhesion (g/m²)				
Evaporation (weight %)				
0		22	*SD = 1*	ESD 98
7		37	*SD = 4*	ESD 98
15		33	*SD = 1*	ESD 98
23		27	*SD = 5*	ESD 98

		Data	Notes	Reference ID
Volatile Organic Compounds (ppm)				
Evaporation (weight %)				
0	Benzene	258		ESD 98
	Toluene	1,589		ESD 98
	Ethylbenzene	487		ESD 98
	Xylenes	3,000		ESD 98
	C3-benzenes	4,902		ESD 98
	Total BTEX	5,333		ESD 98
	Total VOCs	10,235		ESD 98
7	Benzene	34		ESD 98
	Toluene	707		ESD 98
	Ethylbenzene	453		ESD 98
	Xylenes	2,824		ESD 98
	C3-benzenes	5,272		ESD 98
	Total BTEX	4,017		ESD 98
	Total VOCs	9,289		ESD 98
15	Benzene	0		ESD 98
	Toluene	11		ESD 98
	Ethylbenzene	79		ESD 98
	Xylenes	678		ESD 98
	C3-benzenes	3,225		ESD 98
	Total BTEX	768		ESD 98
	Total VOCs	3,992		ESD 98
23	Benzene	0		ESD 98
	Toluene	1		ESD 98
	Ethylbenzene	1		ESD 98
	Xylenes	2		ESD 98
	C3-benzenes	12		ESD 98
	Total BTEX	2		ESD 98
	Total VOCs	14		ESD 98

		Data	Notes	Reference ID
Surface Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	27.6		ESD 98
	15	27.5		ESD 98
	25	26.3		ESD 98
7	0	29.2		ESD 98
	15	28.7		ESD 98
	25	27.6		ESD 98
15	0	30.3		ESD 98
	15	30.1		ESD 98
	25	28.9		ESD 98
23	0	33.8		ESD 98
	15	31.0		ESD 98
	25	29.7		ESD 98
Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	23.5		ESD 98
	15	22.9		ESD 98
	25	22.3		ESD 98
7	0	23.7		ESD 98
	15	23.2		ESD 98
	25	21.6		ESD 98
15	0	24.0		ESD 98
	15	22.9		ESD 98
	25	23.1		ESD 98
23	0	NM		ESD 98
	15	18.6		ESD 98
	25	19.5		ESD 98
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	26.2		ESD 98
	15	25.0		ESD 98
	25	24.6		ESD 98
7	0	26.4		ESD 98
	15	24.4		ESD 98
	25	24.7		ESD 98
15	0	27.0		ESD 98
	15	25.9		ESD 98
	25	27.1		ESD 98
23	0	NM		ESD 98
	15	22.3		ESD 98
	25	22.7		ESD 98

		Data	Notes	Reference ID
Boiling Point Distribution (weight %)				
Evaporation (weight %)	Boiling Point (°C)			
0	40	2		ESD 99
	60	2		ESD 99
	80	2		ESD 99
	100	4		ESD 99
	120	6		ESD 99
	140	9		ESD 99
	160	11		ESD 99
	180	14		ESD 99
	200	17		ESD 99
	250	24		ESD 99
	300	33		ESD 99
	350	43		ESD 99
	400	52		ESD 99
	450	62		ESD 99
	500	70		ESD 99
	550	77		ESD 99
	600	83		ESD 99
	650	88		ESD 99
	700	92		ESD 99
7	100	1		ESD 99
	120	3		ESD 99
	140	5		ESD 99
	160	7		ESD 99
	180	10		ESD 99
	200	13		ESD 99
	250	21		ESD 99
	300	31		ESD 99
	350	41		ESD 99
	400	51		ESD 99
	450	61		ESD 99
	500	70		ESD 99
	550	78		ESD 99
	600	84		ESD 99
	650	89		ESD 99
	700	93		ESD 99
15	160	1		ESD 99
	180	3		ESD 99
	200	6		ESD 99
	250	14		ESD 99
	300	25		ESD 99
	350	36		ESD 99

		Data	Notes	Reference ID
Boiling Point Distribution (weight %)				
Evaporation (weight %)	Boiling Point (°C)			
15	400	47		ESD 99
	450	58		ESD 99
	500	67		ESD 99
	550	76		ESD 99
	600	83		ESD 99
	650	88		ESD 99
	700	93		ESD 99
23	250	6		ESD 99
	300	16		ESD 99
	350	29		ESD 99
	400	41		ESD 99
	450	53		ESD 99
	500	64		ESD 99
	550	73		ESD 99
	600	81		ESD 99
	650	87		ESD 99
	700	92		ESD 99

Origin: Gulf of Mexico, USA		**Data**	**Notes**	**Reference ID**
Equation(s) for Predicting Evaporation				
%Ev = (3.44 + 0.045T)ln(t) Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)				ESD 99
Sulphur (weight %)				
Evaporation (weight %)				
0		0.94		ESD 99
12		0.76		ESD 99
25		1.06		ESD 99
38		1.17		ESD 99
Water Content (weight %)				
Evaporation (weight %)				
0		0.8		ESD 98
12		< 0.1		ESD 98
25		< 0.1		ESD 98
38		< 0.1		ESD 98
Flash Point (°C)				
Evaporation (weight %)				
0		-24		ESD 98
12		24		ESD 98
25		68		ESD 98
38		> 95		ESD 98
Density (g/mL)				
Evaporation (weight %)	Temperature (°C)			
0	0	0.8396		ESD 98
	15	0.8285		ESD 98
	25	0.8212		ESD 98
12	0	0.8674		ESD 98
	15	0.8561		ESD 98
	25	0.8492		ESD 98
25	0	0.8898		ESD 98
	15	0.8779		ESD 98
	25	0.8709		ESD 98
38	0	0.9108		ESD 98
	15	0.8993		ESD 98
	25	0.8921		ESD 98

		Data	Notes	Reference ID
Pour Point (°C)				
Evaporation (weight %)				
0		-22		ESD 98
12		-7		ESD 98
25		-2		ESD 98
38		6		ESD 98
Dynamic Viscosity (mPa s or cP)				
Evaporation (weight %)	Temperature (°C)			
0	0	9		ESD 98
	15	6		ESD 98
	25	5		ESD 98
12	0	26		ESD 98
	15	13		ESD 98
	25	9		ESD 98
25	0	100	*(a)*	ESD 98
	15	34		ESD 98
	25	21		ESD 98
38	0	828	*(a)*	ESD 98
	15	136		ESD 98
	25	67		ESD 98
(a) slightly non-newtonian				
Emulsion Formation				
Evaporation (weight%)				
0	Visual stability	none		ESD 99
12		none		ESD 99
25		none		ESD 99
38		stable		ESD 99
	Viscosity (mPa·s)	9,159		ESD 99
	Complex modulus (mPa)	79,500		ESD 99
	Water content (wt %)	65		ESD 99
Chemical Dispersibility (volume %)				
Evaporation (weight %)				
0	Corexit 9500	43		ESD 99
12		22		ESD 99
25		16		ESD 99
38		18		ESD 99

		Data	Notes	Reference ID
Hydrocarbon Groups (weight %)				
Evaporation (weight %)				
0	Saturates	70		ESD 99
	Aromatics	24		ESD 99
	Resins	5		ESD 99
	Asphaltenes	1		ESD 99
12	Saturates	61		ESD 99
	Aromatics	30		ESD 99
	Resins	8		ESD 99
	Asphaltenes	1		ESD 99
25	Saturates	62		ESD 98
	Aromatics	28		ESD 98
	Resins	8		ESD 98
	Asphaltenes	2		ESD 98
38	Saturates	56		ESD 98
	Aromatics	32		ESD 98
	Resins	10		ESD 98
	Asphaltenes	3		ESD 98
Adhesion (g/m²)				
Evaporation (weight %)				
0		13	*SD = 1*	ESD 98
12		18	*SD = 3*	ESD 98
25		37	*SD = 5*	ESD 98
38		39	*SD = 3*	ESD 98

		Data	Notes	Reference ID
Volatile Organic Compounds (ppm)				
Evaporation (weight %)				
0	Benzene	1,487		ESD 98
	Toluene	4,743		ESD 98
	Ethylbenzene	926		ESD 98
	Xylenes	7,154		ESD 98
	C3-benzenes	10,307		ESD 98
	Total BTEX	14,311		ESD 98
	Total VOCs	24,618		ESD 98
12	Benzene	334		ESD 98
	Toluene	4,300		ESD 98
	Ethylbenzene	1,043		ESD 98
	Xylenes	7,929		ESD 98
	C3-benzenes	11,276		ESD 98
	Total BTEX	13,606		ESD 98
	Total VOCs	24,881		ESD 98
25	Benzene	0		ESD 98
	Toluene	29		ESD 98
	Ethylbenzene	179		ESD 98
	Xylenes	1,994		ESD 98
	C3-benzenes	7,137		ESD 98
	Total BTEX	2,202		ESD 98
	Total VOCs	9,339		ESD 98
38	Benzene	0		ESD 98
	Toluene	2		ESD 98
	Ethylbenzene	0		ESD 98
	Xylenes	2		ESD 98
	C3-benzenes	16		ESD 98
	Total BTEX	3		ESD 98
	Total VOCs	19		ESD 98

		Data	Notes	Reference ID
Surface Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	26.1		ESD 98
	15	23.3		ESD 98
	25	22.0		ESD 98
12	0	29.0		ESD 98
	15	26.3		ESD 98
	25	25.0		ESD 98
25	0	30.8		ESD 98
	15	28.2		ESD 98
	25	27.4		ESD 98
38	0	DNF		ESD 98
	15	30.1		ESD 98
	25	28.5		ESD 98
Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	27.1		ESD 98
	15	23.2		ESD 98
	25	23.9		ESD 98
12	0	29.1		ESD 98
	15	26.6		ESD 98
	25	26.7		ESD 98
25	0	28.6		ESD 98
	15	25.2		ESD 98
	25	26.5		ESD 98
38	0	DNF		ESD 98
	15	21.8		ESD 98
	25	21.6		ESD 98
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	27.7		ESD 98
	15	24.7		ESD 98
	25	25.2		ESD 98
12	0	29.8		ESD 98
	15	26.8		ESD 98
	25	27.4		ESD 98
25	0	30.7		ESD 98
	15	26.7		ESD 98
	25	27.3		ESD 98
38	0	DNF		ESD 98
	15	24.1		ESD 98
	25	23.5		ESD 98

		Data	Notes	Reference ID
Boiling Point Distribution (weight %)				
Evaporation (weight %)	Boiling Point (°C)			
0	40	3		ESD 99
	60	3		ESD 99
	80	4		ESD 99
	100	8		ESD 99
	120	12		ESD 99
	140	16		ESD 99
	160	20		ESD 99
	180	25		ESD 99
	200	29		ESD 99
	250	39		ESD 99
	300	49		ESD 99
	350	59		ESD 99
	400	67		ESD 99
	450	75		ESD 99
	500	81		ESD 99
	550	86		ESD 99
	600	90		ESD 99
	650	93		ESD 99
	700	95		ESD 99
12	100	3		ESD 99
	120	5		ESD 99
	140	9		ESD 99
	160	14		ESD 99
	180	18		ESD 99
	200	22		ESD 99
	250	33		ESD 99
	300	44		ESD 99
	350	54		ESD 99
	400	63		ESD 99
	450	72		ESD 99
	500	79		ESD 99
	550	84		ESD 99
	600	88		ESD 99
	650	92		ESD 99
	700	94		ESD 99
25	140	1		ESD 99
	160	3		ESD 99
	180	7		ESD 99
	200	11		ESD 99
	250	24		ESD 99
	300	36		ESD 99

		Data	Notes	Reference ID
Boiling Point Distribution (weight %)				
Evaporation (weight %)	Boiling Point (°C)			
25	350	49		ESD 99
	400	60		ESD 99
	450	70		ESD 99
	500	78		ESD 99
	550	84		ESD 99
	600	89		ESD 99
	650	93		ESD 99
	700	96		ESD 99
38	200	1		ESD 99
	250	9		ESD 99
	300	23		ESD 99
	350	38		ESD 99
	400	51		ESD 99
	450	63		ESD 99
	500	73		ESD 99
	550	81		ESD 99
	600	87		ESD 99
	650	92		ESD 99
	700	95		ESD 99

Gas Oil (Cracked)

		Data	Notes	Reference ID
Colour				
		Colourless		CHRIS 91
Flash Point (°C)				
		66		CHRIS 91
Flammability Limits in Air (volume %)				
		6 to 13.5		CHRIS 91
Ignition Temperature (°C)				
		338		CHRIS 91
Odour Threshold (ppm)				
		0.25		CHRIS 91
Density (g/mL)				
	Temperature (°C)			
	0	0.8628		CHRIS 91
	15	0.8529		CHRIS 91
	25	0.8374		CHRIS 91
Dynamic Viscosity (mPa·s or cP)				
	Temperature (°C)			
	38	3		CHRIS 91
Toxicity (mg/L)				
	Test Organism			
24h TLm	American shad juveniles	90	*(a)*	CHRIS 91
		91	*(b)*	CHRIS 91
(a) fresh water; (b) salt water				
Biological Oxygen Demand (%)				
	Time (days)			
	5	8		CHRIS 91

		Data	Notes	Reference ID
Grade 1-GT: Light distillates including some gas oil fractions. Grade 2-GT: Heavier distillates than Grade 1-GT. Similar to No.2 fuel oil. Grade 3-GT: Residual fuel that meets low ash requirements. Grade 4-GT: Similar to Grade 3-GT but with no ash restrictions. For additional fuel specifications refer to ASTM D2880.				
Water Content (volume %)				
1-GT		max 0.1	*(a)*	ASTM D 2880
2-GT		max 0.1	*(a)*	ASTM D 2880
3-GT		max 1.0	*(a)*	ASTM D 2880
4-GT		max 1.0	*(a)*	ASTM D 2880
(a) water and sediment				
Flash Point (°C)				
	1-GT	min 38		ASTM D 2880
	2-GT	min 38		ASTM D 2880
	3-GT	min 55		ASTM D 2880
	4-GT	min 66		ASTM D 2880
Density (g/mL)				
	Temperature (°C)			
1-GT	15	max 0.8500		ASTM D 2880
2-GT		max 0.8760		ASTM D 2880
Pour Point (°C)				
	1-GT	max -18		ASTM D 2880
	2-GT	max -6		ASTM D 2880
Kinematic Viscosity (mm²/s or cSt)				
	Temperature (°C)			
1-GT	40	1.3 to 2.4		ASTM D 2880
2-GT		1.9 to 4.1		ASTM D 2880
3-GT		min 6		ASTM D 2880
	100	50		ASTM D 2880
4-GT	40	min 6		ASTM D 2880
	100	50		ASTM D 2880
Distillation (°C)				
	Total Distillate (volume %)			
1-GT	90	max 288		ASTM D 2880
2-GT		282 to 338		ASTM D 2880

Gasoline (Casinghead)

Synonyms: Natural Gasoline

		Data	Notes	Reference ID
Colour				
		Colourless		CHRIS 91
Flash Point (°C)				
		< -18	*(a)*	CHRIS 91
(a) open cup				
Flammability Limits in Air (volume %)				
		1.3 to 7.1		CHRIS 91
Odour Threshold (ppm)				
		0.25		CHRIS 91
Density (g/mL)				
	Temperature (°C)			
	0	0.6855		CHRIS 91
	15	0.6730		CHRIS 91
	38	0.6530		CHRIS 91
Dynamic Viscosity (mPa·s or cP)				
	Temperature (°C)			
	0	1		CHRIS 91
	15	0		CHRIS 91
	38	0		CHRIS 91
Surface Tension (mN/m or dynes/cm)				
	Temperature (°C)			
	20	19 to 23		CHRIS 91
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
	Temperature (°C)			
	20	49 to 51		CHRIS 91
Toxicity (mg/L)				
	Test Organism			
24h TLm	American shad juveniles	90	*(a)*	CHRIS 91
		91	*(b)*	CHRIS 91
(a) fresh water; (b) salt water				
Biological Oxygen Demand (%)				
	Time (days)			
	5	8		CHRIS 91
Threshold Limit Values (ppm)				
	TWA	300		ACGIH 99
	STEL	500		ACGIH 99

		Data	Notes	Reference ID
Synonyms:	Automotive Fuel Petrol			
For additional fuel specifications refer to ASTM D 4814.				
API Gravity				
		62.4		EETD 84
Sulphur (weight %)				
		0.07		EETD 84
Density (g/mL)				
	Temperature (°C)			
	0	0.7460		EETD 84
	5	0.7501		Maijanen 84
	15	0.7290		EETD 84
	20	0.7340		Maijanen 84
Dynamic Viscosity (mPa·s or cP)				
	Temperature (°C)			
	0	1		EETD 85
	5	1		Maijanen 84
	15	1		EETD 85
	20	1		Maijanen 84
Surface Tension (mN/m or dynes/cm)				
	Temperature (°C)			
	0	20.9		EETD 84
	15	19.8		EETD 84
Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)				
	Temperature (°C)			
	0	19.8		EETD 84
	15	18.6		EETD 85
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
	Temperature (°C)			
	0	19.7		EETD 84
	15	18.0		EETD 84

Gasoline (Leaded)

		Data	Notes	Reference ID
Metals (ppm)				
	Barium	< 0.3		Cao 92
	Chromium	< 2		Cao 92
	Copper	< 0.6		Cao 92
	Iron	< 3		Cao 92
	Lead	1,750		Cao 92
	Magnesium	< 1		Cao 92
	Molybdenum	< 0.6		Cao 92
	Nickel	< 1		Cao 92
	Titanium	0.5		Cao 92
	Vanadium	< 0.6		Cao 92
	Zinc	0.5		Cao 92
Aqueous Solubility (mg/L)				
	Temperature (°C)			
	20 (approx.)	169	*(a)*	MacLean 89
	22	240	*(a)*	Suntio 86
	20 (approx.)	132	*(b)*	MacLean 89
	22	98	*(c) (d)*	Maijanen 84
	Unknown	187	*(c) (e)*	Murray 84
(a) fresh water; (b) salt water; (c) distilled water				
(d) summer gasoline; (e) regular gasoline				
Acute Toxicity of Water Soluble Fraction (mg/L)				
	Test Organism			
48h EC50	Daphnia magna	6	*(a)*	MacLean 89
		9	*(b)*	EETD 89
	Artemia spp.	19	*(a)*	MacLean 89
		28	*(b)*	EETD 89
48h LC50	Daphnia magna	14	*(a)*	MacLean 89
		19	*(b)*	EETD 89
	Artemia spp.	21	*(a)*	MacLean 89
		31	*(b)*	EETD 89
(a) results based on fluorescence spectroscopy; (b) results based on GC purge-and-trap analysis; (c) fresh water; (d) salt water				
Threshold Limit Values (ppm)				
	TWA	300		ACGIH 99
	STEL	500		ACGIH 99

		Data	Notes	Reference ID
Colour				
		Colourless		CHRIS 91
Flash Point (°C)				
		-18 to 23		CHRIS 91
Flammability Limits in Air (volume %)				
		1.3 to 7.1		CHRIS 91
Odour Threshold (ppm)				
		0.25		CHRIS 91
Density (g/mL)				
	Temperature (°C)			
	15	0.7090		CHRIS 91
	38	0.6890		CHRIS 91
Surface Tension (mN/m or dynes/cm)				
	Temperature (°C)			
	20	19 to 23		CHRIS 91
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
	Temperature (°C)			
	20	49 to 51		CHRIS 91
Toxicity (mg/L)				
	Test Organism			
24h TLm	American shad juveniles	90	*(a)*	CHRIS 91
		91	*(b)*	CHRIS 91
(a) fresh water; (b) salt water				
Biological Oxygen Demand (%)				
	Time (days)			
	5	8		CHRIS 91
Threshold Limit Values (ppm)				
	TWA	300		ACGIH 99
	STEL	500		ACGIH 99

Gasoline (Unleaded)

		Data	Notes	Reference ID
Synonyms:	Automotive Fuel Petrol			

For additional fuel specifications refer to ASTM D 4814.

Data from Shell 1999 were taken from MSDS Number 211-100.

Equation(s) for Predicting Evaporation

$\%Ev = (13.2 + 0.21T)\ln(t)$ — ESD 96

Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)

Flash Point (°C)

-30			Shell 99a

Flammability Limits in Air (volume %)

1.4 to 7.6			Shell 99a

Ignition Temperature (°C)

280			Shell 99a

Odour Threshold (ppm)

< 0.25			Shell 99a

Density (g/mL)

Temperature (°C)			
15	0.750 to 0.850		Shell 99a

Kinematic Viscosity (mm²/s or cSt)

Temperature (°C)			
38	< 1		Shell 99a

Boiling Point Distribution (weight %)

Boiling Point (°C)			
40	26		ESD 94
60	30		ESD 94
80	44		ESD 94
100	70		ESD 94
120	84		ESD 94
140	85		ESD 94
160	88		ESD 94
180	95		ESD 94
200	98		ESD 94

Boiling Range (°C)

35 to 220			Shell 99a

Aqueous Solubility (mg/L)

Temperature (°C)			
20 (approx.)	307	*(a)*	MacLean 89
22	112	*(a)*	Suntio 86
20 (approx.)	261	*(b)*	MacLean 89

(a) fresh water; (b) salt water

		Data	Notes	Reference ID
Acute Toxicity of Water Soluble Fraction (mg/L)				
	Test Organism			
48h EC50	Daphnia magna	5	*(a)*	MacLean 89
		2	*(b)*	EETD 89
	Artemia spp.	25	*(a)*	MacLean 89
		9	*(b)*	EETD 89
48h LC50	Daphnia magna	50	*(a)*	MacLean 89
		18	*(b)*	EETD 89
	Artemia spp.	51	*(a)*	MacLean 89
		18	*(b)*	EETD 89
	Rainbow trout larvae	7	*(c)*	Lockhart 87
		5	*(d)*	Lockhart 87
(a) results based on fluorescence spectroscopy; (b) results based on GC purge-and-trap analysis; (c) closed container; (d) open container				
Threshold Limit Values (ppm)				
	TWA	300		ACGIH 99
	STEL	500		ACGIH 99

Gasoline Blending Stocks (Alkylates)

		Data	Notes	Reference ID
Colour				
		Colourless		CHRIS 91
Flash Point (°C)				
		<-18 to 23		CHRIS 91
Flammability Limits in Air (volume %)				
		1.1 to 8.7		CHRIS 91
Odour Threshold (ppm)				
		0.25		CHRIS 91
Density (g/mL)				
	Temperature (°C)			
	15	0.7090		CHRIS 91
	38	0.6890		CHRIS 91
Dynamic Viscosity (mPa·s or cP)				
	Temperature (°C)			
	15	1		CHRIS 91
Surface Tension (mN/m or dynes/cm)				
	Temperature (°C)			
	20	19 to 23		CHRIS 91
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
	Temperature (°C)			
	20	49 to 51		CHRIS 91
Toxicity (mg/L)				
	Test Organism			
24h TLm	American shad juveniles	90	*(a)*	CHRIS 91
		91	*(b)*	CHRIS 91
(a) fresh water; (b) salt water				
Biological Oxygen Demand (%)				
	Time (days)			
	5	8		CHRIS 91
Threshold Limit Values (ppm)				
	TWA	300		ACGIH 99
	STEL	500		ACGIH 99

		Data	Notes	Reference ID
Colour				
		Colourless		CHRIS 91
Flash Point (°C)				
		< -18 to 23		CHRIS 91
Flammability Limits in Air (volume %)				
		1.1 to 8.7		CHRIS 91
Odour Threshold (ppm)				
		0.25		CHRIS 91
Density (g/mL)				
	Temperature (°C)			
	15	0.7952		CHRIS 91
	38	0.7792		CHRIS 91
Dynamic Viscosity (mPa·s or cP)				
	Temperature (°C)			
	15	1		CHRIS 91
Surface Tension (mN/m or dynes/cm)				
	Temperature (°C)			
	20	19 to 23		CHRIS 91
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
	Temperature (°C)			
	20	49 to 51		CHRIS 91
Toxicity (mg/L)				
	Test Organism			
24h TLm	American shad juveniles	90	*(a)*	CHRIS 91
		91	*(b)*	CHRIS 91
(a) fresh water; (b) salt water				
Biological Oxygen Demand (%)				
	Time (days)			
	5	8		CHRIS 91
Threshold Limit Values (ppm)				
	TWA	300		ACGIH 99
	STEL	500		ACGIH 99

Genesis

Origin: Gulf of Mexico, USA		**Data**	**Notes**	**Reference ID**
API Gravity				
		28.4		ESD 99
Equation(s) for Predicting Evaporation				
%Ev = (2.12 + 0.045T)ln(t) Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)				ESD 99
Sulphur (weight %)				
Evaporation (weight %)				
0		1.38		ESD 99
8		1.36		ESD 99
15		1.51		ESD 99
23		1.73		ESD 99
Water Content (weight %)				
Evaporation (weight %)				
0		0.4		ESD 99
8		< 0.1		ESD 99
15		< 0.1		ESD 99
23		< 0.1		ESD 99
Flash Point (°C)				
Evaporation (weight %)				
0		-22		ESD 99
8		35		ESD 99
15		71		ESD 99
23		> 100		ESD 99
Density (g/mL)				
Evaporation (weight %)	Temperature (°C)			
0	0	0.8948		ESD 99
	15	0.8841		ESD 99
	25	0.8769		ESD 99
8	0	0.9179		ESD 99
	15	0.9074		ESD 99
	25	0.9006		ESD 99
15	0	0.9323		ESD 99
	15	0.9223		ESD 99
	25	0.9152		ESD 99
23	0	0.9468		ESD 99
	15	0.9364		ESD 99
	25	0.9301		ESD 99

		Data	Notes	Reference ID
Pour Point (°C)				
Evaporation (weight %)				
0		-62		ESD 99
8		-41		ESD 99
15		-26		ESD 99
23		-24		ESD 99
Dynamic Viscosity (mPa s or cP)				
Evaporation (weight %)	Temperature (°C)			
0	0	48		ESD 99
	15	26		ESD 99
	25	18		ESD 99
8	0	148		ESD 99
	15	66		ESD 99
	25	40		ESD 99
15	0	533		ESD 99
	15	157		ESD 99
	25	90		ESD 99
23	0	2,121		ESD 99
	15	543		ESD 99
	25	255		ESD 99
Emulsion Formation				
Evaporation (weight%)				
0	Visual stability	none		ESD 99
8		none		ESD 99
15		none		ESD 99
23		meso		ESD 99
	Viscosity (mPa·s)	10,510		ESD 99
	Complex modulus (mPa)	26,450		ESD 99
	Water content (wt %)	62		ESD 99
Chemical Dispersibility (volume %)				
Evaporation (weight %)				
0	Corexit 9500	23		ESD 99
8		13		ESD 99
15		24		ESD 99
23		19		ESD 99

		Data	Notes	Reference ID
Hydrocarbon Groups (weight %)				
Evaporation (weight %)				
0	Saturates	51		ESD 99
	Aromatics	39		ESD 99
	Resins	9		ESD 99
	Asphaltenes	1		ESD 99
8	Saturates	45		ESD 99
	Aromatics	43		ESD 99
	Resins	12		ESD 99
	Asphaltenes	1		ESD 99
15	Saturates	44		ESD 99
	Aromatics	43		ESD 99
	Resins	11		ESD 99
	Asphaltenes	1		ESD 99
23	Saturates	41		ESD 99
	Aromatics	44		ESD 99
	Resins	14		ESD 99
	Asphaltenes	1		ESD 99
Adhesion (g/m²)				
Evaporation (weight %)				
0		31	*SD = 3*	ESD 99
8		33	*SD = 1*	ESD 99
15		22	*SD = 3*	ESD 99
23		24	*SD = 4*	ESD 99

		Data	Notes	Reference ID
Volatile Organic Compounds (ppm)				
Evaporation (weight %)				
0	Benzene	1,051		ESD 99
	Toluene	2,665		ESD 99
	Ethylbenzene	574		ESD 99
	Xylenes	3,348		ESD 99
	C3-benzenes	6,907		ESD 99
	Total BTEX	7,638		ESD 99
	Total VOCs	14,545		ESD 99
8	Benzene	500		ESD 99
	Toluene	2,464		ESD 99
	Ethylbenzene	500		ESD 99
	Xylenes	3,143		ESD 99
	C3-benzenes	6,989		ESD 99
	Total BTEX	6,605		ESD 99
	Total VOCs	13,594		ESD 99
15	Benzene	14		ESD 99
	Toluene	136		ESD 99
	Ethylbenzene	144		ESD 99
	Xylenes	1,169		ESD 99
	C3-benzenes	5,531		ESD 99
	Total BTEX	1,462		ESD 99
	Total VOCs	6,993		ESD 99
23	Benzene	9		ESD 99
	Toluene	3		ESD 99
	Ethylbenzene	0		ESD 99
	Xylenes	1		ESD 99
	C3-benzenes	159		ESD 99
	Total BTEX	14		ESD 99
	Total VOCs	172		ESD 99

		Data	Notes	Reference ID
Surface Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	27.8		ESD 00
	15	26.8		ESD 00
	25	26.4		ESD 00
8	0	29.1		ESD 00
	15	28.5		ESD 00
	25	28.1		ESD 00
15	0	30.3		ESD 00
	15	28.9		ESD 00
	25	29.3		ESD 00
23	0	31.3		ESD 00
	15	30.6		ESD 00
	25	30.3		ESD 00
Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	18.1		ESD 00
	15	22.9		ESD 00
	25	18.9		ESD 00
8	0	18.4		ESD 00
	15	21.5		ESD 00
	25	19.1		ESD 00
15	0	15.1		ESD 00
	15	21.2		ESD 00
	25	17.9		ESD 00
23	0	NM		ESD 00
	15	16.4		ESD 00
	25	13.4		ESD 00
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	23.9		ESD 00
	15	23.4		ESD 00
	25	20.9		ESD 00
8	0	17.1		ESD 00
	15	24.2		ESD 00
	25	22.0		ESD 00
15	0	15.2		ESD 00
	15	22.8		ESD 00
	25	21.0		ESD 00
23	0	NM		ESD 00
	15	19.1		ESD 00
	25	17.2		ESD 00

		Data	Notes	Reference ID
Origin: Australia				
Synonyms: Bass Strait				
Data from OGJ 99 were originally published in 1994.				
API Gravity				
		47.0		OGJ 99
Sulphur (weight %)				
		0.09		OGJ 99
Water Content (volume %)				
		< 0.0		OGJ 99
Reid Vapour Pressure (kPa)				
		35		OGJ 99
Density (g/mL)				
	Temperature (°C)			
	15	0.7923		OGJ 99
Pour Point (°C)				
		9		OGJ 99
Kinematic Viscosity (mm²/s or cSt)				
	Temperature (°C)			
	20	3		OGJ 99
	40	2		OGJ 99
Hydrocarbon Groups (weight %)				
	Asphaltenes	0		OGJ 99
	Waxes	8		OGJ 99
Yield on Crude (volume %)				
	Boiling Range (°C)			
	Naphtha (18-70)	11		OGJ 99
	Naphtha (70-190)	32		OGJ 99
	Kerosene (190-230)	7		OGJ 99
	Gas oil (230-360)	28		OGJ 99
	Vacuum gas oil (360-530)	18		OGJ 99
	Residue (>530)	2		OGJ 99
Metals (ppm)				
	Copper	< 1		OGJ 99
	Iron	< 1		OGJ 99
	Nickel	< 0.5		OGJ 99
	Sodium	1		OGJ 99
	Vanadium	< 0.5		OGJ 99
Other Elements (weight %)				
	Nitrogen	0.01		OGJ 99

Gorm

		Data	Notes	Reference ID
Origin: North Sea, Denmark				
Data from OGJ 99 were originally published in 1983 as part of a series entitled "Guide to Export Crudes for the '80s".				
API Gravity				
		33.9		OGJ 99
Sulphur (weight %)				
		0.23		OGJ 99
Density (g/mL)				
	Temperature (°C)			
	15	0.8550		OGJ 99
Pour Point (°C)				
		-37		OGJ 99
Kinematic Viscosity (mm²/s or cSt)				
	Temperature (°C)			
	40	5		OGJ 99
Yield on Crude (volume %)				
	Boiling Range (°C)			
	C1-C4	2		OGJ 99
	Light gasoline (C5-149)	20		OGJ 99
	Naphtha (149-204)	10		OGJ 99
	Kerosene (204-260)	12		OGJ 99
	Diesel (260-343)	16		OGJ 99
	Gas oil (343-435)	15		OGJ 99
	Heavy gas oil (435-538)	11		OGJ 99
	Residue (>538)	15		OGJ 99

		Data	Notes	Reference ID
Origin: Cook Inlet, Alaska, USA				
Synonyms: Cook Inlet				
This oil was analyzed as part of a project entitled "Assessment of the Freshwater Biodegradation Potential of Oils Commonly Transported in Alaska". The sample was collected at the Granite Point tank farm, West Forelands, Cook Inlet.				Blenkinsopp 97
API Gravity				
		39.0		ESD 96
Equation(s) for Predicting Evaporation				
%Ev = (4.54 + 0.045T)ln(t) Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)				ESD 96
Sulphur (weight %)				
Evaporation (weight %)				
0		0.06		ESD 97
45		0.08		ESD 97
Water Content (weight %)				
Evaporation (weight %)				
0		< 0.1		ESD 98
45		< 0.1		ESD 98
Flash Point (°C)				
Evaporation (weight %)				
0		-23		ESD 96
45		> 95		ESD 96
Density (g/mL)				
Evaporation (weight %)	Temperature (°C)			
0	0	0.8408		ESD 96
	15	0.8293		ESD 96
45	0	0.9149		ESD 96
	15	0.9028		ESD 96
Pour Point (°C)				
Evaporation (weight %)				
0		-37		ESD 96
45		2		ESD 96
Dynamic Viscosity (mPa·s or cP)				
Evaporation (weight %)	Temperature (°C)			
0	0	7		ESD 96
	15	4		ESD 96
45	0	1,039	*(a)*	ESD 96
		4,119	*(b)*	ESD 96
		42,101	*(c)*	ESD 96
	15	75	*(d)*	ESD 96

Shear rate = (a) 100/s; (b) 10/s; (c) 1/s
(d) slightly non-newtonian

Granite Point

		Data	Notes	Reference ID
Emulsion Formation				
Evaporation (weight%)				
0	Visual stability	none		ESD 98
45		meso		ESD 98
	Viscosity (mPa·s)	16,000		ESD 98
	Complex modulus (mPa)	340,000		ESD 98
	Water content (wt %)	83		ESD 98
Chemical Dispersibility (volume %)				
Evaporation (weight %)				
0	Corexit 9500	41		ESD 98
	Corexit 9527	87		ESD 97
	Dasic LTS	9		ESD 97
	Enersperse 700	27		ESD 97
45	Corexit 9500	14		ESD 98
Hydrocarbon Groups (weight %)				
Evaporation (weight %)				
0	Saturates	72		ESD 97
	Aromatics	22		ESD 97
	Resins	5		ESD 97
	Asphaltenes	1		ESD 97
45	Saturates	62		ESD 97
	Aromatics	28		ESD 97
	Resins	7		ESD 97
	Asphaltenes	3		ESD 97
Adhesion (g/m²)				
Evaporation (weight %)				
0		8	*SD = 2*	ESD 96
45		39	*SD = 2*	ESD 96

		Data	Notes	Reference ID
Volatile Organic Compounds (ppm)				
Evaporation (weight %)				
0	Benzene	1,353		ESD 97
	Toluene	3,729		ESD 97
	Ethylbenzene	1,285		ESD 97
	Xylenes	7,230		ESD 97
	C3-benzenes	8,327		ESD 97
	Total BTEX	13,597		ESD 97
	Total VOCs	21,923		ESD 97
45	Benzene	25		ESD 97
	Toluene	2		ESD 97
	Ethylbenzene	2		ESD 97
	Xylenes	1		ESD 97
	C3-benzenes	3		ESD 97
	Total BTEX	31		ESD 97
	Total VOCs	34		ESD 97
Surface Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	26.2		ESD 96
	15	25.6		ESD 96
45	0	DNF		ESD 96
	15	30.7		ESD 96
Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	18.0		ESD 96
	15	20.7		ESD 96
45	0	DNF		ESD 96
	15	14.6		ESD 96
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	21.4		ESD 96
	15	21.6		ESD 96
45	0	DNF		ESD 96
	15	19.5		ESD 96

		Data	Notes	Reference ID
Boiling Point Distribution (weight %)				
Evaporation (weight %)	Boiling Point (°C)			
0	40	4		ESD 96
	60	4		ESD 96
	80	7		ESD 96
	100	12		ESD 96
	120	17		ESD 96
	140	22		ESD 96
	160	27		ESD 96
	180	31		ESD 96
	200	36		ESD 96
	250	47		ESD 96
	300	58		ESD 96
	350	68		ESD 96
	400	77		ESD 96
	450	84		ESD 96
	500	90		ESD 96
	550	93		ESD 96
	600	96		ESD 96
	650	98		ESD 96
	700	99		ESD 96
45	250	9		ESD 96
	300	26		ESD 96
	350	44		ESD 96
	400	59		ESD 96
	450	72		ESD 96
	500	82		ESD 96
	550	89		ESD 96
	600	93		ESD 96
	650	96		ESD 96
	700	98		ESD 96

Origin: Gulf of Mexico, USA		**Data**	**Notes**	**Reference ID**
API Gravity				
		27.0		ESD 94
Equation(s) for Predicting Evaporation				
%Ev = (1.58 + 0.045T)ln(t) Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)				ESD 96
Sulphur (weight %)				
Evaporation (weight %)				
0		1.89		ESD 94
8		1.92		ESD 94
14		1.92		ESD 94
22		2.07		ESD 94
Water Content (weight %)				
		0.4		ESD 94
Flash Point (°C)				
Evaporation (weight %)				
0		0		ESD 94
8		59		ESD 94
14		> 95		ESD 94
22		> 95		ESD 94
Density (g/mL)				
Evaporation (weight %)	Temperature (°C)			
0	0	0.9025		ESD 94
	15	0.8921		ESD 94
	25	0.8852		ESD 94
8	0	0.9203		ESD 94
	15	0.9101		ESD 94
	25	0.9033		ESD 94
14	0	0.9317		ESD 94
	15	0.9218		ESD 94
	25	0.9151		ESD 94
22	0	0.9446		ESD 94
	15	0.9341		ESD 94
	25	0.9271		ESD 94
Pour Point (°C)				
Evaporation (weight %)				
0		-36		ESD 94
8		-27		ESD 94
14		-21		ESD 94
22		-16		ESD 94

		Data	Notes	Reference ID
Dynamic Viscosity (mPa·s or cP)				
Evaporation (weight %)	Temperature (°C)			
0	0	89		ESD 94
	15	39		ESD 94
	25	25		ESD 94
8	0	263		ESD 94
	15	98		ESD 94
	25	56		ESD 94
14	0	715		ESD 94
	15	225		ESD 94
	25	117		ESD 94
22	0	2,530		ESD 94
	15	690		ESD 94
	25	321		ESD 94
Chemical Dispersibility (volume %)				
	Corexit 9500	20	*(a)*	ESD 95
	Corexit 9527	5		ESD 94
	Dasic LTS	10		ESD 94
	Enersperse 700	5		ESD 94
(a) UV/VIS quantitation				
Hydrocarbon Groups (weight %)				
Evaporation (weight %)				
0	Saturates	51		ESD 95
	Aromatics	39		ESD 95
	Resins	9		ESD 95
	Asphaltenes	1		ESD 95
	Waxes	2		ESD 98
8	Saturates	46		ESD 95
	Aromatics	43		ESD 95
	Resins	10		ESD 95
	Asphaltenes	1		ESD 95
	Waxes	2		ESD 98
14	Saturates	44		ESD 95
	Aromatics	44		ESD 95
	Resins	11		ESD 95
	Asphaltenes	1		ESD 95
	Waxes	2		ESD 98
22	Saturates	42		ESD 95
	Aromatics	43		ESD 95
	Resins	14		ESD 95
	Asphaltenes	1		ESD 95
	Waxes	2		ESD 98

		Data	Notes	Reference ID
Adhesion (g/m²)				
Evaporation (weight %)				
0		23	*SD = 4*	ESD 95
8		25	*SD = 5*	ESD 95
14		27	*SD = 5*	ESD 95
22		34	*SD = 5*	ESD 95
Volatile Organic Compounds (ppm)				
Evaporation (weight %)				
0	Benzene	240		ESD 94
	Toluene	950		ESD 94
	Ethylbenzene	380		ESD 94
	Xylenes	1,900		ESD 94
	C3-benzenes	2,700		ESD 94
	Total BTEX	3,460		ESD 94
	Total VOCs	6,160		ESD 94
8	Benzene	90		ESD 94
	Toluene	370		ESD 94
	Ethylbenzene	280		ESD 94
	Xylenes	1,470		ESD 94
	C3-benzenes	3,000		ESD 94
	Total BTEX	2,210		ESD 94
	Total VOCs	5,210		ESD 94
14	Benzene	0		ESD 94
	Toluene	0		ESD 94
	Ethylbenzene	0		ESD 94
	Xylenes	100		ESD 94
	C3-benzenes	1,080		ESD 94
	Total BTEX	100		ESD 94
	Total VOCs	1,180		ESD 94
22	Benzene	0		ESD 94
	Toluene	0		ESD 94
	Ethylbenzene	0		ESD 94
	Xylenes	0		ESD 94
	C3-benzenes	0		ESD 94
	Total BTEX	0		ESD 94
	Total VOCs	0		ESD 94

		Data	Notes	Reference ID
Surface Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	29.1		ESD 94
	15	28.0		ESD 94
	25	27.8		ESD 94
8	0	30.2		ESD 94
	15	29.7		ESD 94
	25	28.9		ESD 94
14	0	31.3		ESD 94
	15	30.7		ESD 94
	25	29.9		ESD 94
22	0	32.0		ESD 94
	15	31.2		ESD 94
	25	30.6		ESD 94
Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	20.0		ESD 94
	15	21.5		ESD 94
	25	16.6		ESD 94
8	0	22.7		ESD 94
	15	22.8		ESD 94
	25	19.1		ESD 94
14	0	20.5		ESD 94
	15	21.1		ESD 94
	25	19.7		ESD 94
22	0	NM		ESD 94
	15	16.1		ESD 94
	25	8.9		ESD 94
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	21.1		ESD 94
	15	23.5		ESD 94
	25	20.7		ESD 94
8	0	22.3		ESD 94
	15	25.7		ESD 94
	25	23.3		ESD 94
14	0	23.0		ESD 94
	15	23.7		ESD 94
	25	20.9		ESD 94
22	0	NM		ESD 94
	15	18.5		ESD 94
	25	16.3		ESD 94

		Data	Notes	Reference ID
Boiling Point Distribution (weight %)				
Evaporation (weight %)	Boiling Point (°C)			
0	100	1		ESD 94
	120	1		ESD 94
	140	2		ESD 94
	160	7		ESD 94
	180	12		ESD 94
	200	15		ESD 94
	250	22		ESD 94
	300	30		ESD 94
	350	39		ESD 94
	400	48		ESD 94
	450	57		ESD 94
	500	66		ESD 94
	550	73		ESD 94
	600	79		ESD 94
	650	84		ESD 94
	700	88		ESD 94
8	120	1		ESD 95
	140	2		ESD 95
	160	4		ESD 95
	180	6		ESD 95
	200	9		ESD 95
	250	17		ESD 95
	300	27		ESD 95
	350	38		ESD 95
	400	48		ESD 95
	450	58		ESD 95
	500	68		ESD 95
	550	76		ESD 95
	600	83		ESD 95
	650	89		ESD 95
	700	94		ESD 95
14	180	1		ESD 95
	200	3		ESD 95
	250	11		ESD 95
	300	22		ESD 95
	350	33		ESD 95
	400	44		ESD 95
	450	55		ESD 95
	500	65		ESD 95
	550	74		ESD 95
	600	82		ESD 95

		Data	Notes	Reference ID
Boiling Point Distribution (weight %)				
Evaporation (weight %)	Boiling Point (°C)			
14	650	88		ESD 95
	700	93		ESD 95
22	250	3		ESD 95
	300	13		ESD 95
	350	26		ESD 95
	400	38		ESD 95
	450	50		ESD 95
	500	61		ESD 95
	550	71		ESD 95
	600	80		ESD 95
	650	87		ESD 95
	700	92		ESD 95

Origin: Gulf of Mexico, USA		**Data**	**Notes**	**Reference ID**
API Gravity				
		39.4		ESD 98
Equation(s) for Predicting Evaporation				
%Ev = (3.55 + 0.045T)ln(t) Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)				ESD 99
Sulphur (weight %)				
Evaporation (weight %)				
0		0.94		ESD 99
12		1.00		ESD 99
26		1.15		ESD 99
38		1.32		ESD 99
Water Content (weight %)				
Evaporation (weight %)				
0		1.2		ESD 98
12		< 0.1		ESD 98
26		< 0.1		ESD 98
38		< 0.1		ESD 98
Flash Point (°C)				
Evaporation (weight %)				
0		-18		ESD 98
12		18		ESD 98
26		67		ESD 98
38		> 95		ESD 98
Density (g/mL)				
Evaporation (weight %)	Temperature (°C)			
0	0	0.8433		ESD 98
	15	0.8314		ESD 98
	25	0.8229		ESD 98
12	0	0.8684		ESD 98
	15	0.8575		ESD 98
	25	0.8505		ESD 98
26	0	0.8934		ESD 98
	15	0.8824		ESD 98
	25	0.8756		ESD 98
38	0	0.9150		ESD 98
	15	0.9043		ESD 98
	25	0.8969		ESD 98

		Data	Notes	Reference ID
Pour Point (°C)				
Evaporation (weight %)				
0		-44		ESD 98
12		-35		ESD 98
26		-28		ESD 98
38		-25		ESD 98
Dynamic Viscosity (mPa s or cP)				
Evaporation (weight %)	Temperature (°C)			
0	0	9		ESD 98
	15	5		ESD 98
	25	4		ESD 98
12	0	20		ESD 98
	15	11		ESD 98
	25	7		ESD 98
26	0	72		ESD 98
	15	31		ESD 98
	25	20		ESD 98
38	0	425	*(a)*	ESD 98
	15	117		ESD 98
	25	63		ESD 98
(a) slightly non-newtonian				
Emulsion Formation				
Evaporation (weight%)				
0	Visual stability	none		ESD 99
12		none		ESD 99
26		none		ESD 99
38		meso		ESD 99
	Viscosity (mPa·s)	8,255		ESD 99
	Complex modulus (mPa)	21,750		ESD 99
	Water content (wt %)	69		ESD 99
Chemical Dispersibility (volume %)				
Evaporation (weight %)				
0	Corexit 9500	47		ESD 99
12		33		ESD 99
26		25		ESD 99
38		22		ESD 99

		Data	Notes	Reference ID
Hydrocarbon Groups (weight %)				
Evaporation (weight %)				
0	Saturates	69		ESD 99
	Aromatics	24		ESD 99
	Resins	6		ESD 99
	Asphaltenes	1		ESD 99
12	Saturates	61		ESD 98
	Aromatics	30		ESD 98
	Resins	8		ESD 98
	Asphaltenes	1		ESD 98
26	Saturates	58		ESD 98
	Aromatics	33		ESD 98
	Resins	8		ESD 98
	Asphaltenes	1		ESD 98
38	Saturates	54		ESD 98
	Aromatics	34		ESD 98
	Resins	11		ESD 98
	Asphaltenes	1		ESD 98
Adhesion (g/m²)				
Evaporation (weight %)				
0		6	*SD = 1*	ESD 98
12		7	*SD = 1*	ESD 98
26		19	*SD = 1*	ESD 98
38		21	*SD = 2*	ESD 98

		Data	Notes	Reference ID
Volatile Organic Compounds (ppm)				
Evaporation (weight %)				
0	Benzene	1,246		ESD 98
	Toluene	4,423		ESD 98
	Ethylbenzene	1,134		ESD 98
	Xylenes	8,283		ESD 98
	C3-benzenes	11,553		ESD 98
	Total BTEX	15,086		ESD 98
	Total VOCs	26,640		ESD 98
12	Benzene	333		ESD 98
	Toluene	4,387		ESD 98
	Ethylbenzene	1,135		ESD 98
	Xylenes	8,445		ESD 98
	C3-benzenes	12,427		ESD 98
	Total BTEX	14,300		ESD 98
	Total VOCs	26,727		ESD 98
26	Benzene	0		ESD 98
	Toluene	115		ESD 98
	Ethylbenzene	247		ESD 98
	Xylenes	2,531		ESD 98
	C3-benzenes	8,868		ESD 98
	Total BTEX	2,893		ESD 98
	Total VOCs	11,761		ESD 98
38	Benzene	0		ESD 98
	Toluene	1		ESD 98
	Ethylbenzene	0		ESD 98
	Xylenes	0		ESD 98
	C3-benzenes	32		ESD 98
	Total BTEX	2		ESD 98
	Total VOCs	33		ESD 98

		Data	Notes	Reference ID
Surface Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	25.2		ESD 98
	15	25.0		ESD 98
	25	23.9		ESD 98
12	0	27.4		ESD 98
	15	27.0		ESD 98
	25	25.9		ESD 98
26	0	29.2		ESD 98
	15	28.9		ESD 98
	25	27.7		ESD 98
38	0	30.6		ESD 98
	15	30.2		ESD 98
	25	29.2		ESD 98
Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	25.2		ESD 98
	15	23.3		ESD 98
	25	23.3		ESD 98
12	0	23.6		ESD 98
	15	23.2		ESD 98
	25	23.2		ESD 98
26	0	26.0		ESD 98
	15	25.2		ESD 98
	25	23.1		ESD 98
38	0	18.6		ESD 98
	15	19.3		ESD 98
	25	18.0		ESD 98
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	24.1		ESD 98
	15	23.7		ESD 98
	25	24.0		ESD 98
12	0	24.9		ESD 98
	15	24.2		ESD 98
	25	24.3		ESD 98
26	0	26.2		ESD 98
	15	25.0		ESD 98
	25	24.7		ESD 98
38	0	20.7		ESD 98
	15	20.5		ESD 98
	25	20.1		ESD 98

		Data	Notes	Reference ID
Boiling Point Distribution (weight %)				
Evaporation (weight %)	Boiling Point (°C)			
0	40	2		ESD 99
	60	3		ESD 99
	80	4		ESD 99
	100	8		ESD 99
	120	12		ESD 99
	140	16		ESD 99
	160	21		ESD 99
	180	25		ESD 99
	200	29		ESD 99
	250	39		ESD 99
	300	48		ESD 99
	350	58		ESD 99
	400	66		ESD 99
	450	74		ESD 99
	500	81		ESD 99
	550	86		ESD 99
	600	90		ESD 99
	650	93		ESD 99
	700	95		ESD 99
12	100	3		ESD 99
	120	6		ESD 99
	140	10		ESD 99
	160	15		ESD 99
	180	20		ESD 99
	200	24		ESD 99
	250	34		ESD 99
	300	45		ESD 99
	350	55		ESD 99
	400	65		ESD 99
	450	73		ESD 99
	500	80		ESD 99
	550	86		ESD 99
	600	90		ESD 99
	650	94		ESD 99
	700	96		ESD 99
26	140	1		ESD 99
	160	3		ESD 99
	180	7		ESD 99
	200	12		ESD 99
	250	24		ESD 99
	300	36		ESD 99

		Data	Notes	Reference ID
Boiling Point Distribution (weight %)				
Evaporation (weight %)	Boiling Point (°C)			
26	350	48		ESD 99
	400	59		ESD 99
	450	69		ESD 99
	500	77		ESD 99
	550	84		ESD 99
	600	89		ESD 99
	650	93		ESD 99
	700	96		ESD 99
38	200	1		ESD 99
	250	10		ESD 99
	300	24		ESD 99
	350	38		ESD 99
	400	51		ESD 99
	450	63		ESD 99
	500	73		ESD 99
	550	81		ESD 99
	600	88		ESD 99
	650	92		ESD 99
	700	96		ESD 99

Green Canyon Block 65

		Data	Notes	Reference ID
Origin: Gulf of Mexico, USA				
High water content. Oil tested as received, unless noted otherwise.				ESD 94
API Gravity				
		19.5		ESD 94
Equation(s) for Predicting Evaporation				
%Ev = (1.56 + 0.045T)ln(t) Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)				ESD 96
Sulphur (weight %)				
Evaporation (weight %)				
0		1.87		ESD 94
8		2.32		ESD 94
13		2.15		ESD 94
23		2.68		ESD 94
Water Content (weight %)				
Evaporation (weight %)				
0		7.1		ESD 94
8		4.4		ESD 95
13		1.5		ESD 95
23		0.1		ESD 95
Flash Point (°C)				
Evaporation (weight %)				
0		-4		ESD 94
8		59		ESD 94
13		82		ESD 94
23		> 95		ESD 94
Density (g/mL)				
Evaporation (weight %)	Temperature (°C)			
0	0	0.9465		ESD 94
	15	0.9365		ESD 94
	25	0.9277		ESD 94
8	0	0.9608		ESD 94
	15	0.9509		ESD 94
	25	0.9446		ESD 94
13	0	0.9653		ESD 94
	15	0.9559		ESD 94
	25	0.9488		ESD 94
23	0	0.9811		ESD 94
	15	0.9716		ESD 94
	25	0.9650		ESD 94

		Data	Notes	Reference ID
Pour Point (°C)				
Evaporation (weight %)				
0		-28		ESD 94
8		-17		ESD 94
13		-17		ESD 94
23		-6		ESD 94
Dynamic Viscosity (mPa·s or cP)				
Evaporation (weight %)	Temperature (°C)			
0	0	514		ESD 94
	15	177		ESD 94
	25	102		ESD 94
8	0	1,580		ESD 94
	15	457		ESD 94
	25	208		ESD 94
13	0	2,840		ESD 94
	15	800		ESD 94
	25	356		ESD 94
23	0	22,100		ESD 94
	15	4,250		ESD 94
	25	1,680		ESD 94
Chemical Dispersibility (volume %)				
	Corexit 9500	15	*(a)*	ESD 95
	Corexit 9527	5	*(a)*	ESD 95
	Dasic LTS	5	*(a)*	ESD 95
	Enersperse 700	10	*(a)*	ESD 95

(a) UV/VIS quantitation

		Data	Notes	Reference ID
Hydrocarbon Groups (weight %)				
Evaporation (weight %)				
0	Saturates	38	*(a)*	ESD 95
	Aromatics	40	*(a)*	ESD 95
	Resins	14	*(a)*	ESD 95
	Asphaltenes	8	*(a)*	ESD 95
	Waxes	1		ESD 97
8	Saturates	38		ESD 95
	Aromatics	42		ESD 95
	Resins	15		ESD 95
	Asphaltenes	5		ESD 95
	Waxes	1		ESD 98
13	Saturates	36		ESD 95
	Aromatics	44		ESD 95
	Resins	15		ESD 95
	Asphaltenes	4		ESD 95
	Waxes	1		ESD 98
23	Saturates	32		ESD 95
	Aromatics	45		ESD 95
	Resins	16		ESD 95
	Asphaltenes	8		ESD 95
	Waxes	1		ESD 98
(a) approximate: corrected for initial water content of oil				
Adhesion (g/m²)				
Evaporation (weight %)				
0		41	*SD = 23*	ESD 95
8		35	*SD = 4*	ESD 95
13		40	*SD = 10*	ESD 95
23		77	*SD = 8*	ESD 95

		Data	Notes	Reference ID
Volatile Organic Compounds (ppm)				
Evaporation (weight %)				
0	Benzene	140		ESD 94
	Toluene	420		ESD 94
	Ethylbenzene	190		ESD 94
	Xylenes	980		ESD 94
	C3-benzenes	1,580		ESD 94
	Total BTEX	1,720		ESD 94
	Total VOCs	3,300		ESD 94
8	Benzene	100		ESD 94
	Toluene	190		ESD 94
	Ethylbenzene	190		ESD 94
	Xylenes	1,010		ESD 94
	C3-benzenes	2,020		ESD 94
	Total BTEX	1,490		ESD 94
	Total VOCs	3,510		ESD 94
13	Benzene	40		ESD 94
	Toluene	40		ESD 94
	Ethylbenzene	80		ESD 94
	Xylenes	490		ESD 94
	C3-benzenes	1,500		ESD 94
	Total BTEX	650		ESD 94
	Total VOCs	2,150		ESD 94
23	Benzene	0		ESD 94
	Toluene	0		ESD 94
	Ethylbenzene	0		ESD 94
	Xylenes	0		ESD 94
	C3-benzenes	0		ESD 94
	Total BTEX	0		ESD 94
	Total VOCs	0		ESD 94

		Data	Notes	Reference ID
Surface Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	30.2		ESD 94
	15	29.4		ESD 94
	25	28.6		ESD 94
8	0	31.3		ESD 94
	15	30.4		ESD 94
	25	30.0		ESD 94
13	0	31.6		ESD 94
	15	30.8		ESD 94
	25	30.5		ESD 94
23	0	NM		ESD 94
	15	31.8		ESD 94
	25	31.5		ESD 94
Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	19.4		ESD 94
	15	23.9		ESD 94
	25	18.3		ESD 94
8	0	19.6		ESD 94
	15	22.7		ESD 94
	25	18.4		ESD 94
13	0	NM		ESD 94
	15	20.6		ESD 94
	25	16.9		ESD 94
23	0	NM		ESD 94
	15	22.9		ESD 94
	25	NM		ESD 94
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	22.2		ESD 94
	15	27.6		ESD 94
	25	21.6		ESD 94
8	0	NM		ESD 94
	15	26.1		ESD 94
	25	23.9		ESD 94
13	0	NM		ESD 94
	15	27.7		ESD 94
	25	19.3		ESD 94
23	0	NM		ESD 94
	15	NM		ESD 94
	25	NM		ESD 94

		Data	Notes	Reference ID
Boiling Point Distribution (weight %)				
Evaporation (weight %)	Boiling Point (°C)			
0	60	1		ESD 94
	80	1		ESD 94
	100	3		ESD 94
	120	4		ESD 94
	140	5		ESD 94
	160	7		ESD 94
	180	9		ESD 94
	200	11		ESD 94
	250	18		ESD 94
	300	26		ESD 94
	350	34		ESD 94
	400	43		ESD 94
	450	52		ESD 94
	500	61		ESD 94
	550	69		ESD 94
	600	76		ESD 94
	650	82		ESD 94
	700	88		ESD 94
8	120	1		ESD 95
	140	2		ESD 95
	160	3		ESD 95
	180	5		ESD 95
	200	7		ESD 95
	250	13		ESD 95
	300	21		ESD 95
	350	30		ESD 95
	400	39		ESD 95
	450	48		ESD 95
	500	56		ESD 95
	550	65		ESD 95
	600	72		ESD 95
	650	79		ESD 95
	700	85		ESD 95
13	160	1		ESD 95
	180	3		ESD 95
	200	5		ESD 95
	250	11		ESD 95
	300	20		ESD 95
	350	29		ESD 95
	400	38		ESD 95
	450	48		ESD 95

		Data	Notes	Reference ID
Boiling Point Distribution (weight %)				
Evaporation (weight %)	Boiling Point (°C)			
13	500	57		ESD 95
	550	66		ESD 95
	600	74		ESD 95
	650	81		ESD 95
	700	88		ESD 95
23	250	3		ESD 95
	300	12		ESD 95
	350	22		ESD 95
	400	32		ESD 95
	450	43		ESD 95
	500	53		ESD 95
	550	63		ESD 95
	600	72		ESD 95
	650	80		ESD 95
	700	87		ESD 95

		Data	Notes	Reference ID
Origin: Australia				
Data from OGJ 99 were originally published sometime between 1984 and 1992.				OGJ 94
API Gravity				
		55.0		OGJ 94
Sulphur (weight %)				
		0.03		OGJ 94
Water Content (volume %)				
		< 0.0		OGJ 94
Reid Vapour Pressure (kPa)				
		37		OGJ 94
Density (g/mL)				
	Temperature (°C)			
	15	0.7583		OGJ 94
Pour Point (°C)				
		-48		OGJ 94
Kinematic Viscosity (mm²/s or cSt)				
	Temperature (°C)			
	20	1		OGJ 94
Hydrocarbon Groups (weight %)				
	Waxes	1		OGJ 94
Yield on Crude (volume %)				
	Boiling Range (°C)			
	Light ends (C2-C5)	7		OGJ 94
	Light naphtha (21-70)	9		OGJ 94
	Heavy naphtha (70-135)	30		OGJ 94
	Kerosene (135-270)	40		OGJ 94
	Gas oil (270-360)	12		OGJ 94
	Vacuum gas oil (360-400)	3		OGJ 94
	Residue (>400)	4		OGJ 94
Metals (ppm)				
	Nickel	< 0.5		OGJ 94
	Vanadium	< 0.5		OGJ 94
Other Elements (weight %)				
	Nitrogen	0.00		OGJ 94

Gulf Alberta Light and Medium

		Data	Notes	Reference ID
Origin: Alberta, Canada				
Data from OGJ 99 were originally published in 1983 as part of a series entitled "Guide to Export Crudes for the '80s".				
API Gravity				
		35.1		OGJ 99
Sulphur (weight %)				
		0.98		OGJ 99
Reid Vapour Pressure (kPa)				
		36		OGJ 99
Hydrogen Sulphide (ppm)				
		58		OGJ 99
Pour Point (°C)				
		-28		OGJ 99
Kinematic Viscosity (mm²/s or cSt)				
	Temperature (°C)			
	40	5		OGJ 99
Yield on Crude (volume %)				
	Boiling Range (°C)			
	Naphtha (C5-190)	31		OGJ 99
	Kerosene (190-277)	14		OGJ 99
	Distillate (277-343)	9		OGJ 99
	Gas oil (343-565)	32		OGJ 99
	Residue (>565)	15		OGJ 99
Metals (ppm)				
	Nickel	10		OGJ 99
	Vanadium	9		OGJ 99

		Data	Notes	Reference ID
Origin: Egypt				
Data from OGJ 99 were originally published in 1983 as part of a series entitled "Guide to Export Crudes for the '80s".				
API Gravity				
		31.9		OGJ 99
Sulphur (weight %)				
		1.52		OGJ 99
Reid Vapour Pressure (kPa)				
		57		OGJ 99
Pour Point (°C)				
		2		OGJ 99
Kinematic Viscosity (mm²/s or cSt)				
	Temperature (°C)			
	38	9		OGJ 99
Yield on Crude (volume %)				
	Boiling Range (°C)			
	C1-C5	5		OGJ 99
	Naphtha (C5-93)	8		OGJ 99
	Naphtha (93-160)	10		OGJ 99
	Kerosene (160-271)	18		OGJ 99
	Gas oil (271-343)	11		OGJ 99
	Residue (>343)	51		OGJ 99
Metals (ppm)				
	Nickel	25		OGJ 99
	Vanadium	41		OGJ 99

Gullfaks

Origin: North Sea, Norway

Data from OGJ 99 were originally published in 1990.

	Data	Notes	Reference ID
API Gravity			
	29.3		OGJ 99
	31.0		ESD 93
Equation(s) for Predicting Evaporation			
%Ev = (2.29 + 0.034T)ln(t) Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)			ESD 96
Sulphur (weight %)			
Evaporation (weight %)			
0	0.30		ESD 97
	0.44		OGJ 99
10	0.41		ESD 97
19	0.48		ESD 97
30	0.49		ESD 97
Water Content (volume %)			
	< 0.1		OGJ 99
Flash Point (°C)			
Evaporation (weight %)			
0	-8		ESD 94
7	32		Daling 91
10	50		ESD 95
16	71		Daling 91
19	92		ESD 95
25	106		Daling 91
30	> 95		ESD 95

Density (g/mL)

Evaporation (weight %)	Temperature (°C)		
0	0	0.8810	ESD 93
	15	0.8701	ESD 93
10	0	0.9000	ESD 94
	15	0.8891	ESD 94
19	0	0.9125	ESD 95
	15	0.9017	ESD 95
30	0	0.9235	ESD 94
	15	0.9129	ESD 94

		Data	Notes	Reference ID
Pour Point (°C)				
Evaporation (weight %)				
0		-32		ESD 93
		< -30		Daling 91
		-57		OGJ 99
7		-30		Daling 91
10		-32		ESD 95
16		-9		Daling 91
19		-27		ESD 95
25		0		Daling 91
30		-15		ESD 95
Dynamic Viscosity (mPa·s or cP)				
Evaporation (weight %)	Temperature (°C)			
0	0	25		ESD 93
	13	20		Daling 91
	15	13		ESD 93
7	13	33		Daling 91
10	0	76		ESD 94
	15	31		ESD 94
16	13	72		Daling 91
19	0	240		ESD 95
	15	91		ESD 95
25	13	241		Daling 91
30	0	849		ESD 94
	15	202		ESD 94
Kinematic Viscosity (mm²/s or cSt)				
	Temperature (°C)			
	20	17		OGJ 99
Chemical Dispersibility (volume %)				
Relatively high dispersibility with Finasol OSR-5. (Daling 91)				
	Corexit 9500	25		ESD 94
	Corexit 9527	20		ESD 93
	Dasic LTS	10		ESD 93
	Enersperse 700	10		ESD 93

Gullfaks

		Data	Notes	Reference ID
Hydrocarbon Groups (weight %)				
Evaporation (weight %)				
0	Saturates	60		ESD 94
	Aromatics	35		ESD 94
	Resins	5		ESD 94
	Asphaltenes	1		ESD 94
	Waxes	4		ESD 98
		2		Daling 91
10	Saturates	59		ESD 95
	Aromatics	34		ESD 95
	Resins	6		ESD 95
	Asphaltenes	1		ESD 95
19	Saturates	50		ESD 96
	Aromatics	38		ESD 96
	Resins	11		ESD 96
	Asphaltenes	1		ESD 96
	Waxes	3		ESD 98
25	Saturates	39		Daling 91
	Aromatics	53		Daling 91
	Resins	7		Daling 91
	Asphaltenes	1		Daling 91
	Waxes	2		Daling 91
30	Saturates	46		ESD 96
	Aromatics	42		ESD 96
	Resins	12		ESD 96
	Asphaltenes	1		ESD 96
	Waxes	4		ESD 98
Adhesion (g/m²)				
Evaporation (weight %)				
0		23	*SD = 2*	ESD 95
10		35	*SD = 3*	ESD 95
19		31	*SD = 6*	ESD 95
30		33	*SD = 10*	ESD 95

		Data	Notes	Reference ID
Volatile Organic Compounds (ppm)				
Evaporation (weight %)				
0	Benzene	820		ESD 94
	Toluene	5,480		ESD 94
	Ethylbenzene	1,200		ESD 94
	Xylenes	5,960		ESD 94
	C3-benzenes	6,390		ESD 94
	Total BTEX	13,460		ESD 94
	Total VOCs	19,860		ESD 94
10	Benzene	100		ESD 95
	Toluene	1,120		ESD 95
	Ethylbenzene	1,220		ESD 95
	Xylenes	6,190		ESD 95
	C3-benzenes	8,840		ESD 95
	Total BTEX	8,630		ESD 95
	Total VOCs	17,480		ESD 95
19	Benzene	0		ESD 96
	Toluene	0		ESD 96
	Ethylbenzene	30		ESD 96
	Xylenes	300		ESD 96
	C3-benzenes	2,420		ESD 96
	Total BTEX	330		ESD 96
	Total VOCs	2,750		ESD 96
30	Benzene	0		ESD 96
	Toluene	0		ESD 96
	Ethylbenzene	0		ESD 96
	Xylenes	0		ESD 96
	C3-benzenes	0		ESD 96
	Total BTEX	0		ESD 96
	Total VOCs	0		ESD 96
Surface Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	28.8		ESD 94
	15	27.7		ESD 94
10	0	30.3		ESD 95
	15	29.5		ESD 95
19	0	31.2		ESD 95
	15	30.5		ESD 95
30	0	32.1		ESD 95
	15	31.4		ESD 95

Gullfaks

		Data	Notes	Reference ID
Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	23.0		ESD 94
	13	13.0		Daling 91
	15	25.4		ESD 94
7	13	13.0		Daling 91
10	0	21.6		ESD 95
	15	23.3		ESD 95
16	13	15.0		Daling 91
19	0	21.4		ESD 95
	15	21.8		ESD 95
25	13	17.0		Daling 91
30	0	20.2		ESD 95
	15	19.2		ESD 95
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
Evaporation (weight %)	Temperature (°C)			
0	0	22.7		ESD 94
	15	25.9		ESD 94
10	0	24.5		ESD 95
	15	24.1		ESD 95
19	0	22.5		ESD 95
	15	23.7		ESD 95
30	0	21.5		ESD 95
	15	21.4		ESD 95

		Data	Notes	Reference ID
Boiling Point Distribution (weight %)				
Evaporation (weight %)	Boiling Point (°C)			
0	40	1		ESD 96
	60	1		ESD 96
	80	1		ESD 96
	100	2		ESD 96
	120	9		ESD 96
	140	12		ESD 96
	160	15		ESD 96
	180	18		ESD 96
	200	21		ESD 96
	250	31		ESD 96
	300	41		ESD 96
	350	52		ESD 96
	400	61		ESD 96
	450	71		ESD 96
	500	79		ESD 96
	550	85		ESD 96
	600	90		ESD 96
	650	94		ESD 96
	700	97		ESD 96
10	60	1		ESD 95
	80	1		ESD 95
	100	1		ESD 95
	120	2		ESD 95
	140	4		ESD 95
	160	7		ESD 95
	180	11		ESD 95
	200	14		ESD 95
	250	25		ESD 95
	300	37		ESD 95
	350	49		ESD 95
	400	59		ESD 95
	450	69		ESD 95
	500	78		ESD 95
	550	86		ESD 95
	600	91		ESD 95
	650	95		ESD 95
	700	98		ESD 95
19	60	1		ESD 95
	80	1		ESD 95
	100	1		ESD 95
	120	1		ESD 95

		Data	Notes	Reference ID
Boiling Point Distribution (weight %)				
Evaporation (weight %)	Boiling Point (°C)			
19	140	1		ESD 95
	160	1		ESD 95
	180	3		ESD 95
	200	5		ESD 95
	250	17		ESD 95
	300	30		ESD 95
	350	43		ESD 95
	400	54		ESD 95
	450	66		ESD 95
	500	76		ESD 95
	550	84		ESD 95
	600	90		ESD 95
	650	95		ESD 95
	700	98		ESD 95
30	60	1		ESD 95
	80	1		ESD 95
	100	1		ESD 95
	120	1		ESD 95
	140	1		ESD 95
	160	1		ESD 95
	180	1		ESD 95
	200	1		ESD 95
	250	6		ESD 95
	300	20		ESD 95
	350	34		ESD 95
	400	47		ESD 95
	450	61		ESD 95
	500	72		ESD 95
	550	81		ESD 95
	600	89		ESD 95
	650	94		ESD 95
	700	97		ESD 95

		Data	Notes	Reference ID
Yield on Crude (volume %)				
	Boiling Range (°C)			
	Gasoline (C5-65)	1		OGJ 99
	Light naphtha (65-90)	2		OGJ 99
	Naphtha (90-150)	9		OGJ 99
	Naphtha (150-180)	5		OGJ 99
	Heavy naphtha (180-240)	11		OGJ 99
	Heavy naphtha (240-320)	17		OGJ 99
	Gas oil (320-375)	11		OGJ 99
	Gas oil (375-420)	4		OGJ 99
	Heavy gas oil (420-525)	21		OGJ 99
	Heavy gas oil (525-565)	5		OGJ 99
	Residue (> 565)	13		OGJ 99
Metals (ppm)				
	Nickel	1		OGJ 99
	Vanadium	2		OGJ 99