

		Data	Notes	Reference ID
Origin: Zaire				
Data from OGJ 99 were originally published in 1983 as part of a series entitled "Guide to Export Crudes for the '80s".				
API Gravity				
		30.7		ESD 93
		31.7		OGJ 99
Equation(s) for Predicting Evaporation				
%Ev = (1.36 + 0.045T)ln(t) Where %Ev = weight percent evaporated; T = surface temperature (°C); t = time (minutes)				ESD 98
Sulphur (weight %)				
Evaporation (weight %)				
0		0.16		ESD 97
		0.13		OGJ 99
6		0.16		ESD 97
14		0.13		ESD 97
23		0.00		ESD 97
Flash Point (°C)				
Evaporation (weight %)				
0		-3		ESD 94
6		31		ESD 95
14		85		ESD 95
23		> 95		ESD 95
Reid Vapour Pressure (kPa)				
		15		OGJ 99
Density (g/mL)				
Evaporation (weight %)	Temperature (°C)			
0	0	0.8855		ESD 93
	15	0.8720		ESD 93
6	0	0.8999	(a)	ESD 95
	15	0.8872		ESD 95
14	0	0.9130	(a)	ESD 95
	15	0.9015		ESD 95
23	0	0.9047	(a)	ESD 95
	15	0.9020		ESD 95

(a) The high wax content of this oil makes it solidify in the density meter tube. Cracks form in the solidified oil allowing air pockets. This oil is poorly suited to measurement in a digital density meter.

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Pour Point (°C)				
<u>Evaporation (weight %)</u>				
0		25		ESD 93
		27		OGJ 99
6		29		ESD 95
14		32		ESD 95
23		34		ESD 95
Dynamic Viscosity (mPa·s or cP)				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	19,200	(b)	ESD 93
		127,000	(c)	ESD 93
	15	362	(a)	ESD 93
		2,070	(b)	ESD 93
		15,100	(c)	ESD 93
6	0	455,700	(c)	ESD 95
	15	6,761	(b)	ESD 95
		52,800	(c)	ESD 95
14	0	NM		ESD 95
	15	17,240	(b)	ESD 95
		94,560	(c)	ESD 95
23	0	NM		ESD 95
	15	81,680	(b)	ESD 95
		533,100	(c)	ESD 95
<i>Shear rate = (a) 100/s; (b) 10/s; (c) 1/s</i>				
Saybolt Viscosity (SUS)				
	<u>Temperature (°C)</u>			
	38	98		OGJ 99
Chemical Dispersibility (volume %)				
	Corexit 9500	0		ESD 94
	Corexit 9527	5		ESD 92
	Dasic LTS	0		ESD 92
	Enersperse 700	5		ESD 92

		Data	Notes	Reference ID
Hydrocarbon Groups (weight %)				
<u>Evaporation (weight %)</u>				
0	Saturates	64		ESD 96
	Aromatics	22		ESD 96
	Resins	9		ESD 96
	Asphaltenes	5		ESD 96
	Waxes	20		ESD 94
6	Saturates	61		ESD 96
	Aromatics	24		ESD 96
	Resins	9		ESD 96
	Asphaltenes	5		ESD 96
	Waxes	11		ESD 98
14	Saturates	59		ESD 96
	Aromatics	26		ESD 96
	Resins	10		ESD 96
	Asphaltenes	5		ESD 96
	Waxes	12		ESD 98
23	Saturates	53		ESD 96
	Aromatics	28		ESD 96
	Resins	16		ESD 96
	Asphaltenes	5		ESD 96
	Waxes	13		ESD 98
Adhesion (g/m²)				
<u>Evaporation (weight %)</u>				
0		58	<i>SD = 0</i>	ESD 95
6		92	<i>SD = 19</i>	ESD 95
14		161	<i>SD = 40</i>	ESD 95
23		333	<i>SD = 56</i>	ESD 95

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		Data	Notes	Reference ID
Volatile Organic Compounds (ppm)				
<u>Evaporation (weight %)</u>				
0	Benzene	548		ESD 97
	Toluene	1,161		ESD 97
	Ethylbenzene	416		ESD 97
	Xylenes	2,952		ESD 97
	C3-benzenes	5,416		ESD 97
	Total BTEX	5,077		ESD 97
	Total VOCs	10,492		ESD 97
6	Benzene	179		ESD 97
	Toluene	782		ESD 97
	Ethylbenzene	361		ESD 97
	Xylenes	2,660		ESD 97
	C3-benzenes	5,422		ESD 97
	Total BTEX	3,981		ESD 97
	Total VOCs	9,403		ESD 97
14	Benzene	0		ESD 96
	Toluene	20		ESD 96
	Ethylbenzene	30		ESD 96
	Xylenes	350		ESD 96
	C3-benzenes	1,820		ESD 96
	Total BTEX	390		ESD 96
	Total VOCs	2,210		ESD 96
23	Benzene	0		ESD 96
	Toluene	10		ESD 96
	Ethylbenzene	0		ESD 96
	Xylenes	0		ESD 96
	C3-benzenes	0		ESD 96
	Total BTEX	10		ESD 96
	Total VOCs	10		ESD 96
Surface Tension (mN/m or dynes/cm)				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	DNF		ESD 95
	15	DNF		ESD 95
6	0	DNF		ESD 95
	15	DNF		ESD 95
14	0	DNF		ESD 95
	15	DNF		ESD 95
23	0	DNF		ESD 95
	15	DNF		ESD 95

		Data	Notes	Reference ID
Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	DNF		ESD 95
	15	DNF		ESD 95
6	0	DNF		ESD 95
	15	DNF		ESD 95
14	0	DNF		ESD 95
	15	DNF		ESD 95
23	0	DNF		ESD 95
	15	DNF		ESD 95
Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				
<u>Evaporation (weight %)</u>	<u>Temperature (°C)</u>			
0	0	DNF		ESD 95
	15	DNF		ESD 95
6	0	DNF		ESD 95
	15	DNF		ESD 95
14	0	DNF		ESD 95
	15	DNF		ESD 95
23	0	DNF		ESD 95
	15	DNF		ESD 95

Zaire

		Data	Notes	Reference ID
Boiling Point Distribution (weight %)				
<u>Evaporation (weight %)</u>	<u>Boiling Point (°C)</u>			
0	80	2		ESD 94
	100	5		ESD 94
	120	6		ESD 94
	140	8		ESD 94
	160	11		ESD 94
	180	13		ESD 94
	200	15		ESD 94
	250	22		ESD 94
	300	29		ESD 94
	350	37		ESD 94
	400	45		ESD 94
	450	54		ESD 94
	500	61		ESD 94
	550	68		ESD 94
	600	74		ESD 94
	650	79		ESD 94
	700	84		ESD 94
6	100	1		ESD 95
	120	3		ESD 95
	140	5		ESD 95
	160	7		ESD 95
	180	10		ESD 95
	200	12		ESD 95
	250	20		ESD 95
	300	28		ESD 95
	350	38		ESD 95
	400	46		ESD 95
	450	57		ESD 95
	500	66		ESD 95
	550	73		ESD 95
	600	81		ESD 95
	650	86		ESD 95
	700	91		ESD 95
14	160	1		ESD 95
	180	3		ESD 95
	200	5		ESD 95
	250	13		ESD 95
	300	22		ESD 95
	350	32		ESD 95
	400	41		ESD 95
	450	53		ESD 95

		Data	Notes	Reference ID
Boiling Point Distribution (weight %)				
<u>Evaporation (weight %)</u>	<u>Boiling Point (°C)</u>			
14	500	63		ESD 95
	550	71		ESD 95
	600	78		ESD 95
	650	85		ESD 95
	700	90		ESD 95
23	250	4		ESD 95
	300	12		ESD 95
	350	23		ESD 95
	400	34		ESD 95
	450	47		ESD 95
	500	58		ESD 95
	550	68		ESD 95
	600	76		ESD 95
	650	83		ESD 95
	700	88		ESD 95
Yield on Crude (volume %)				
	<u>Boiling Range (°C)</u>			
	C1-C4	1		OGJ 99
	Light naphtha (IBP-60)	2		OGJ 99
	Light naphtha (60-77)	1		OGJ 99
	Heavy naphtha (77-154)	9		OGJ 99
	Kerosene (154-271)	16		OGJ 99
	Light gas oil (271-360)	15		OGJ 99
	Heavy gas oil (360-538)	31		OGJ 99
	Residue (>360)	56		OGJ 99
Metals (ppm)				
	Nickel	18		OGJ 99
	Vanadium	2		OGJ 99

Zakum

	Data	Notes	Reference ID
Origin: United Arab Emirates			
Synonyms: Abu Dhabi Marine Lower Zakum			
Data from OGJ 99 were originally published in 1983 as part of a series entitled "Guide to Export Crudes for the '80s".			
API Gravity	40.6		OGJ 99
Sulphur (weight %)	1.05		OGJ 99
Reid Vapour Pressure (kPa)	58		OGJ 99
Pour Point (°C)	-21		OGJ 99
Kinematic Viscosity (mm²/s or cSt)			
Temperature (°C)			
20	4		OGJ 99
Hydrocarbon Groups (weight %)			
Asphaltenes	0		OGJ 99
Yield on Crude (volume %)			
Boiling Range (°C)			
Light straight run (C5-80)	9		OGJ 99
Naphtha (C5-160)	26		OGJ 99
Kerosene (160-250)	19		OGJ 99
Diesel (190-343)	29		OGJ 99
Residue (>350)	34		OGJ 99
Residue (>550)	10		OGJ 99

	Data	Notes	Reference ID
Origin: Algeria			
Synonyms: El Borma			
Data from OGJ 99 were originally published in 1983 as part of a series entitled "Guide to Export Crudes for the '80s".			
API Gravity	43.0		OGJ 99
Sulphur (weight %)	0.07		OGJ 99
Reid Vapour Pressure (kPa)	59		OGJ 99
Pour Point (°C)	-12		OGJ 99
Kinematic Viscosity (mm²/s or cSt)			
Temperature (°C)			
10	7		OGJ 99
Hydrocarbon Groups (weight %)			
Waxes	5		OGJ 99
Yield on Crude (volume %)			
Boiling Range (°C)			
C1-C5	7		OGJ 99
Light naphtha (C5-80)	9		OGJ 99
Heavy naphtha (80-145)	15		OGJ 99
Kerosene (145-225)	17		OGJ 99
Gas oil (225-290)	13		OGJ 99
Gas oil (290-350)	11		OGJ 99
Residue (> 350)	32		OGJ 99
Metals (ppm)			
Nickel	3		OGJ 99
Vanadium	1		OGJ 99

Zueitina

	Data	Notes	Reference ID
Origin: Libya			
Data from OGJ 99 were originally published in 1983 as part of a series entitled "Guide to Export Crudes for the '80s".			
API Gravity	41.3		OGJ 99
Sulphur (weight %)	0.28		OGJ 99
Reid Vapour Pressure (kPa)	32		OGJ 99
Pour Point (°C)	7		OGJ 99
Saybolt Viscosity (SUS)			
	<u>Temperature (°C)</u>		
	16	199	OGJ 99
Yield on Crude (volume %)			
	<u>Boiling Range (°C)</u>		
	Light ends (IBP-45)	6	OGJ 99
	Light naphtha (45-104)	9	OGJ 99
	Naphtha (104-199)	21	OGJ 99
	Kerosene (157-260)	22	OGJ 99
	Light distillate (199-288)	18	OGJ 99
	Light gas oil (232-343)	21	OGJ 99
	Heavy gas oil (343-538)	24	OGJ 99
	Vacuum residue (>538)	10	OGJ 99

	Data	Notes	Reference ID
Origin: Saudi Arabia			
Synonyms: Arabian Medium			
Data from OGJ 99 were originally published in 1983 as part of a series entitled "Guide to Export Crudes for the '80s".			
API Gravity	31.1		OGJ 99
Sulphur (weight %)	2.48		OGJ 99
Reid Vapour Pressure (kPa)	58		OGJ 99
Pour Point (°C)	-29		OGJ 99
Kinematic Viscosity (mm²/s or cSt)			
Temperature (°C)			
21	19		OGJ 99
38	11		OGJ 99
Yield on Crude			
Boiling Range (°C)			
Light naphtha (20-100)	9		OGJ 99
Heavy naphtha (100-150)	8		OGJ 99
Kerosene (150-235)	14		OGJ 99
Light gas oil (235-343)	18		OGJ 99
Heavy gas oil (343-565)	28		OGJ 99
Residual oil (>565)	20		OGJ 99