

Saharan Blend

Reference ID

Origin: Algeria

Data from OGJ 99 were originally published in 1983 as part of a series entitled "Guide to Export Crudes for the '80s".

The sample analyzed by ESD was received in 1997 and was identified as 'Sahara Blend'.

API Gravity

45.5	OGJ 99
43.6	ESD 97

Equation(s) for Predicting Evaporation

Short term (<5 days): %Ev = (0.001 + 0.013T) \sqrt{t}

Long term: %Ev = (1.09 + 0.045T)ln(t)

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

ESD 98

Sulphur (weight %)

Evaporation
(weight %)

0	0.05	OGJ 99
	0.10	ESD 97
14	0.09	
28	0.09	
42	0.10	

Flash Point (°C)

Evaporation
(weight %)

0	-24	ESD 97
14	28	
28	75	
42	>95	

Reid Vapour Pressure (kPa)

60	OGJ 99
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Density (g/mL)

Evaporation
(weight %)

Temperature
(°C)

0	0	0.8192	ESD 97
	15	0.8078	
	25	0.8029	ESD 98
14	0	0.8454	ESD 97
	15	0.8336	
	25	0.8271	ESD 98
28	0	0.8654	ESD 97
	15	0.8528	
	25	0.8461	ESD 98
42	0	0.8805	ESD 97
	15	0.8678	
	25	0.8607	ESD 98

Pour Point (°C)

Evaporation
(weight %)

0	<-29	OGJ 99
	-8	ESD 97
14	-9	

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				Reference ID
Pour Point (°C)				
Evaporation (weight %)				
28		0		ESD 97
42		10		
Dynamic Viscosity (mPa s or cP)				
Evaporation (weight %)		Temperature (°C)		
0		0	9	ESD 97
		15	4	
		25	3	ESD 98
14		0	19	ESD 97
		15	7	
		25	5	ESD 98
28		0	70	ESD 97
		15	19	
		25	13	ESD 98
42		0	230 (a)	ESD 97
		15	53	
		25	28	ESD 98
(a) slightly non-newtonian				
Saybolt Viscosity (SUS)				
		Temperature (°C)		
		21	37	OGJ 99
Hydrocarbon Groups (weight %)				
Evaporation (weight %)				
0	Saturates	76		ESD 98
	Aromatics	21		
	Resins	3		
	Asphaltenes	1		
14	Saturates	77		
	Aromatics	20		
	Resins	3		
	Asphaltenes	1		
28	Saturates	72		
	Aromatics	23		
	Resins	4		
	Asphaltenes	1		
42	Saturates	69		
	Aromatics	24		
	Resins	6		
	Asphaltenes	1		
Adhesion (g/m²)				
Evaporation (weight %)				
0		2	SD = 2	ESD 97
14		5	SD = 0	
28		12	SD = 1	
42		22	SD = 2	

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Volatil Organic Compounds (ppm)

Evaporation
(weight %)

0

Benzene 2360
Toluene 4257
Ethylbenzene 674
Xylenes 6076
C3-benzenes 10079
Total BTEX 13367
Total VOCs 23446

ESD 97

14

Benzene 849
Toluene 3957
Ethylbenzene 661
Xylenes 5872
C3-benzenes 11134
Total BTEX 11339
Total VOCs 22474

28

Benzene 30
Toluene 45
Ethylbenzene 98
Xylenes 1314
C3-benzenes 7481
Total BTEX 1486
Total VOCs 8968

42

Benzene 0
Toluene 2
Ethylbenzene 1
Xylenes 3
C3-benzenes 9
Total BTEX 5
Total VOCs 16

Surface Tension (mN/m or dynes/cm)

Evaporation
(weight %)

0

Temperature
(°C)

0

26.1

ESD 97

15

24.8

25

24.3

ESD 00

14

0

28.0

ESD 97

15

26.8

25

26.2

ESD 00

28

0

29.4

ESD 97

15

27.5

25

27.8

ESD 00

42

0

50.3

ESD 97

15

28.6

25

28.9

ESD 00

Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)

Evaporation
(weight %)

0

Temperature
(°C)

0

23.6

ESD 97

15

20.5

25

7.8

ESD 00

14

0

25.3

ESD 97

15

22.4

25

8.7

ESD 00

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Oil/Salt Water Interfacial Tension (mN/m or dynes/cm)				Reference ID
Evaporation (weight %)	Temperature (°C)			
28	0	24.4		ESD 97
	15	19.1		
	25	9.9		ESD 00
42	0	NM		ESD 97
	15	19.1		
	25	6.1		ESD 00

Oil/Fresh Water Interfacial Tension (mN/m or dynes/cm)				Reference ID
Evaporation (weight %)	Temperature (°C)			
0	0	25.7		ESD 97
	15	22.8		
	25	10.9		ESD 00
14	0	27.0		ESD 97
	15	24.8		
	25	12.7		ESD 00
28	0	27.2		ESD 97
	15	22.3		
	25	13.2		ESD 00
42	0	NM		ESD 97
	15	22.4		
	25	12.0		ESD 00

Boiling Point Distribution (weight %)				Reference ID
Evaporation (weight %)	Boiling Point (°C)	Weight %		
0	40	8		ESD 97
	60	10		
	80	15		
	100	19		
	120	20		
	140	23		
	160	27		
	180	32		
	200	36		
	250	47		
	300	57		
	350	67		
	400	76		
	450	83		
	500	88		
	550	93		
	600	96		
650	98			
700	99			
14	60	1		
	80	4		
	100	6		
	120	7		
	140	10		
	160	15		
	180	21		
	200	26		
250	38			

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Reference ID

Boiling Point Distribution (weight %)

Evaporation
(weight %)

Boiling Point
(°C)

Weight %

14

300

51

ESD 97

350

63

400

72

450

81

500

87

550

92

600

96

650

98

690

100

28

140

1

160

3

180

7

200

12

250

26

300

41

350

55

400

66

450

76

500

84

550

90

600

95

650

98

42

250

10

300

27

350

45

400

59

450

71

500

81

550

88

600

93

650

97

700

99

Boiling Point Distribution (°C)

Evaporation
(weight %)

Weight %

Boiling Point
(°C)

0

10

ESD 97

15

20

25

30

35

40

45

50

55

60

65

70

75

80

85

90

95

Saharan Blend

Reference ID

Boiling Point Distribution (°C)

Evaporation
(weight %)

Weight %

Boiling Point
(°C)

ESD 97

14

5

10

15

20

25

30

35

40

45

50

55

60

65

70

75

80

85

90

95

28

5

10

15

20

25

30

35

40

45

50

55

60

65

70

75

80

85

90

95

42

5

10

15

20

25

30

35

40

45

50

55

60

65

70

75

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Boiling Point Distribution (°C)			Reference ID
Evaporation (weight %)	Weight %	Boiling Point (°C)	
42	80		ESD 97
	85		
	90		
	95		

Yield on Crude (volume %)	Boiling Range (°C)		
	Light ends (IBP-71)	10	OGJ 99
	Light naphtha (71-143)	18	
	Heavy naphtha (143-199)	14	
	Kerosene (199-260)	14	
	Diesel (260-335)	13	
	Light gas oil (335-413)	9	
	Heavy gas oil (513-500)	12	
	Residue (>500)	10	