

## CRUDE OIL SPECIFICATIONS

### CRUDE OIL TYPE

### Results

#### *RUSSIAN EXPORT BLEND CRUDE OIL (REBCO)*

*Specifications Corresponding to GOST TU 39-1623-93:*

Density API at 30 degrees C	0,870
API Gravity	32.00
Viscosity at 80 C, Max	16.0
Flash Point (in locked cubicle) Max	35 C
Pressure of saturated pours under 38 C kilopascal/mm mercury column	7/50
Paraffin ( contents in % )	6,0 %
Temperature of melting C	--49
<b>Contents,</b>	<b>%</b>
* Sulphur	1,8
* Nitrogen	0,25
* Chamois -acid resins	0,9
* Asphatents	0,9
Salt	100 mg / L
Coking %	2,06
Ash %	0,004
<b>Distillation Vol. recovered</b>	<b>%</b>
0 - 200°C	21.00
300°C	41.00
350°C	50.00
Water and Sediments, Max	1,2

#### *HEAVY CRUDE'S NAPO BLEND CRUDE OIL*

Upgraded to higher API and lower sulphur, any upgrading components to be strictly another crude oil and/or straight run oil products - guaranteed no slops, sludge or cracked oil products used to upgrade.

#### MIN/MAX GUARANTEED SPECS FOLL:

TEST	UNIT	METHOD	GUARANTEED
API gravity at 60degF		astm d5002	19 min
sulfur content	wt%	astm d4294	2.5 max (1.9 typ)
kin visc at 50degC	cst	astm d445	180 max
ash	wt%	astm d482	0.1 max
ashphaltenes	ppm	astm d6560	10 max
acid number	mgKOH/g	astm d664	0.2 max
flash point	degC	astm d93	30 min
pour point	degC	astm d97	- 24 max
iron	ppm	astm 5708	10 max
sodium	ppm	astm d5863	25 max
water & sediment	vol%	astm d473	1 max
h2s	ppm	uop 163	5 max

**NIGERIAN BONNY LIGHT OIL**

Specific Gravity @ 60F/15.55C	0.8397-0.8498
API Specific Gravity @ 60F/15.55C	35.0-37.0
Density at 60F/15.55C-Cg-CM-MAC	0.85Max
Pour Point	<40F/4.44C
Sulfur Content, %Wt	0.14Max
Colour	Dark Brown
Salinity TB at 0.10%/BS&W	47Max
Acid Number	0.39Max
Reid Vapour Pressure	6.52psig Max
Water & Sediment Content, Pct (%)	1.00%Max
Iron Wt, ppm	1.00Max
Nickel Wt, ppm	4.00Max
Vanadium Wt, ppm	2.00Max

**SAUDI LIGHT CRUDE OIL SPECIFICATION**

API GRAVITY	33.34
SEDIMENT CONTENT	0.1
ASTM STABILISED GRAVITY	34.5
WAX - WT PERCENT	2.9
VANADIUM ppm V200	11.0
GROSS HEATING VALUE	19.23
REID VAPOUR PRESSURE	2.0
SALT CONTENT, PPM NaCl	3.8
SULPHUR, WT PERCENT	1.5 MAX
ASH, PPM	100.0
COMP. CARBON RESIDUE, WT PERCENT	3.1
VISCOSITY, CP	55.0
POUR POINT	35.0

**IRANIAN LIGHT**

R.V.P (PS)	7.0
Specific Gravity At 16.6/16.8C	0.5545
A.P.I. Gravity at 15 BC	31-33
Water % Vol	0.02
Water and Sediment	NIL
Hydrogen Sulphide PPM	NIL
Salt NaCL PPM	5.0
Sulphur P% WT	1.5
Asphalt Tense % WT	1.2
Pour Point C	1.2
Wax % WT	27
Concealing Point of Wax C	
Ash P% WT	
KIN VIS AT 80F	0.8
KIN VIS AT 100F	6.94
KIN VIS AT 120F	N.A.
KIN VIS AT 140F	N.A.
Flash Point C	<20
Nitrogen Content (%WT)	0.04
Cross Heating	108.10
Characterization Factor (KUOP)	12.0
Carbon Residue (Corazon WT %)	3.88

**ANACO WAX**

Characteristic	Units	Typical Value
API Gravity	°API	43.3
Sulphur	WT %	0.15
Kinematic Viscosity at 100 °F	CST	1.98
Vanadium	ppm	1.04
Neutralization Number	Mg KOH/gr	.11
Pour Point	°C	70

**MESA**

Characteristic	Units	Typical Value
API Gravity	°API	30.5
Sulphur	WT %	0.85
Kinematic Viscosity at 100 °F	CST	7.29
Vanadium	ppm	38
Neutralization Number	Mg KOH/gr	.03
Pour Point	°C	-46

**MESA 28**

Characteristic	Units	Typical Value
API Gravity	°API	28
Sulphur	WT %	1.18
Kinematic Viscosity at 100 °F	CST	13.3
Vanadium	ppm	69
Neutralization Number	Mg KOH/gr	.014
Pour Point	°C	-29

**LEONA**

Characteristic	Units	Typical Value
API Gravity	°API	25.3
Sulphur	WT %	1.52
Kinematic Viscosity at 100 °F	CST	22.24
Vanadium	ppm	132
Neutralization Number	Mg KOH/gr	.1
Pour Point	°C	-35

**MEREY**

Characteristic	Units	Typical Value
API Gravity	°API	16
Sulphur	WT %	2.45
Kinematic Viscosity at 100 °F	CST	513
Vanadium	ppm	262
Neutralization Number	Mg KOH/gr	.69
Pour Point	°C	-20

**TIA JUANA LIGHT**

Characteristic	Units	Typical Value
API Gravity	°API	31.9
Sulphur	WT %	1.18
Kinematic Viscosity at 100 °F	CST	8.8
Vanadium	ppm	96
Neutralization Number	Mg KOH/gr	.22
Pour Point	°C	-29

**FURRIAL**

Characteristic	Units	Typical Value
API Gravity	°API	28.5
Sulphur	WT %	1.1
Kinematic Viscosity at 100 °F	CST	11.9
Vanadium	ppm	68
Neutralization Number	Mg KOH/gr	.1
Pour Point	°C	-32

**BCF-24**

Characteristic	Units	Typical Value
API Gravity	°API	23.7
Sulphur	WT %	1.88
Kinematic Viscosity at 100 °F	CST	47.5
Vanadium	ppm	225
Neutralization Number	Mg KOH/gr	.77
Pour Point	°C	-32

**BCF-17**

Characteristic	Units	Typical Value
API Gravity	°API	13.5
Sulphur	WT %	2.3
Kinematic Viscosity at 100 °F	CST	1709
Vanadium	ppm	352
Neutralization Number	Mg KOH/gr	2.63
Pour Point	°C	-18

**PILON**

Characteristic	Units	Typical Value
API Gravity	°API	16.2
Sulphur	WT %	2.47
Kinematic Viscosity at 100 °F	CST	509
Vanadium	ppm	184
Neutralization Number	Mg KOH/gr	1.6
Pour Point	°C	0

**MORICHAL**

Characteristic	Units	Typical Value
API Gravity	°API	12.2
Sulphur	WT %	2.78
Kinematic Viscosity at 100 °F	CST	145
Vanadium	ppm	274
Neutralization Number	Mg KOH/gr	2.83
Pour Point	°C	45

**LAGOMEDIO**

Characteristic	Units	Typical Value
API Gravity	°API	31.6
Sulphur	WT %	1.26
Kinematic Viscosity at 100 °F	CST	13.4
Vanadium	ppm	119
Neutralization Number	Mg KOH/gr	.07
Pour Point	°C	-24

**LAGOTRECO**

Characteristic	Units	Typical Value
API Gravity	°API	30.4
Sulphur	WT %	1.28
Kinematic Viscosity at 100 °F	CST	10.69
Vanadium	ppm	129
Neutralization Number	Mg KOH/gr	.33
Pour Point	°C	-26

**MENEMOTA**

Characteristic	Units	Typical Value
API Gravity	°API	20.7
Sulphur	WT %	2.07
Kinematic Viscosity at 100 °F	CST	69.1
Vanadium	ppm	381
Neutralization Number	Mg KOH/gr	.69
Pour Point	°C	<-30

**BACHAQUERO-13**

Characteristic	Units	Typical Value
API Gravity	°API	12.2
Sulphur	WT %	2.8
Kinematic Viscosity at 100 °F	CST	48.6
Vanadium	ppm	442
Neutralization Number	Mg KOH/gr	3.13
Pour Point	°C	-18

**TIA JUANA HEAVY**

Characteristic	Units	Typical Value
API Gravity	°API	12.3
Sulphur	WT %	2.82
Kinematic Viscosity at 100 °F	CST	88.6
Vanadium	ppm	386
Neutralization Number	Mg KOH/gr	3.9
Pour Point	°C	-16

**LAGUNA**

Characteristic	Units	Typical Value
API Gravity	°API	10.9
Sulphur	WT %	2.66
Kinematic Viscosity at 100 °F	CST	6809
Vanadium	ppm	395
Neutralization Number	Mg KOH/gr	2.82
Pour Point	°C	6

**BOSCAN**

Characteristic	Units	Typical Value
API Gravity	°API	10.1
Sulphur	WT %	5.4
Kinematic Viscosity at 100 °F	CST	11233
Vanadium	ppm	11222
Neutralization Number	Mg KOH/gr	.91
Pour Point	°C	7