

3FUEL SPECIFICATIONS IN NIGERIA

PRESENTED AT 3RD STEERING COMMITTEE

MEETING OF THE WORLD BANK “CLEAN

AIR INITIATIVE IN SUB-SAHARAN AFRICAN CITIES”

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BY

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PRODUCT SPECIFICATION

PREMIUM MOTOR SPIRIT (PMS)

PARAMETER	TEST METHOD	LIMIT	ACTUAL
Specific gravity 15/15 °C	D1298	-	0.7679
Distillation :	D86		
10%		70 Max	62
50%		125 max	104
90%		180 max	162
FBP		205 max	189
Residue % Vol.		2 max	1.0
Odour	BP71	Merchantable	Merchantable
Copper Corrosion (3 hr 50 °C)	D130	No. 1 Strip Max	1A
Vapour Pressure Kg/cm ²	D323	0.6 max	0.48
Knock rating (RON)	D2699		90 min
Colour		Yellow	Yellow
Lead alkyl (Pbmg/l)	D 526	Nil	Nil

PRODUCT SPECIFICATION
AUTOMOTIVE GAS OIL – AGO
(DIESEL)

PARAMETER	TEST MOTHOD IP ASTM	LIMIT	ACTUAL
Specific gravity 15/15 °C	160/D 1298	0.820min	0.8710
Distillation : Recovered @ 357 °C %Vol. EBP °C	123/D86	90 min. 385 max.	>90 358
Colour (ASTM)	D 15000	3 max.	1.5
Flash Point °C	34/D93	65 min.	100
Total sulphur, %wt	x-ray	0.5max*	0.133
Copper Corrosion (3 hr@ 100 °C)	154/D 130	No. 1 Strip Max	1A
Kinematic Viscosity @ 38 °C, Cst	71/D445	1.6 -5.5	5.1
Cloud Point, °C	219/D 2500	4.0 max	+3
Carbon Residue, % wt.	D 189	0.15max	<0.10
Strong Acid Number (mg KOH/gm)	139/D 974	Nil	Nil
Strong Acid Number (mg KOH/gm)	139/D 974	0.50max	0.20
Ash Content, % wt.	D 482	0.01 max	<0.01
Water by Distillation	74/D 95	0.05 % vol. Max	<0.05
Diesel Index	IP 21	47 min.	50

****0.3max. %wt.(June,05)***

PRODUCT SPECIFICATION

LOW POUR FUEL OIL – LPFO

PARAMETER	TEST MOTHOD	LIMIT	ACTUAL
Specific gravity 15/15 °C	D1298	0.995max	0.9069
Flash point °C	D93	65 min	100
Total Sulphur %wt	D 1552 x-ray	0.37 max	0.226
Kinematic Viscosity at 82 °C (Cst)	D445	29 max	6.70
Redwood No.1 Viscosity at 38 °C (secs)	Calculated	1500 max	42.40
Pour Point °C	D97	21 max	15
Carbon Residue (Conradson) %wt	D189	15 max	< 15
Ash Content %wt	D482	0.1 max	<0.1
Water by Distillation % vol.	D473	0.5 max	<0.05

PRODUCT SPECIFICATION

HIGH POUR FUEL OIL - HPFO

PARAMETER	TEST METHOD	LIMIT	ACTUAL
	IP ASTM		
Specific gravity 15/15 °C	D 1298	0.995max	0.9304
Flash point °C	D93	65 min	104
Total Sulphur %wt	D1552 x-ray	0.37 max	0.291
Kinematic Viscosity at 82 °C (Cst)	D445	26 max	16.90
Redwood No.1 Viscosity at 38 °C (secs)	Calculated	1000 max	74.65
Pour Point °C	D97	46 max	30
Carbon Residue (Conradson) %wt	D189	15 max	<15
Ash Content %wt	D482	0.1 max	<0.1
Water by Distillation % vol.	D95	0.5 max	<0.05

CONSTRAINTS FOR DEVELOPING FUEL HARMONIZATION GUIDELINES

- Lack of sufficient political will
- Poor public awareness
- Petroleum products Scarcity
 - Poor State of Local Refineries
 - Partial Market Deregulation
 - Insufficient Refining Capacity
 - Poor State of Distribution Network
- Lack of organized stakeholders' forum.

SUGGESTIONS TOWARDS DEVELOPMENT OF FUEL HARMONIZATION GUIDELINES

- Increased Production Capacity in the Region
 - Improved efficiency and availability of the local refineries.
 - Construction of additional refineries to encourage competition
- Establishment of strong stakeholders' forum (Refiners, NGOs, Government agencies etc)
- Improvement on the government political will.
- Continuous untiring support by the World Bank, UNEP, WHO, relevant NGOs etc.