EN590 SPECIFICATION

			Min	Max
Aspect	Visual inspection			Clear
Color	ASTM D 1500			2,0
Density @ 15°	EN ISO 3675:98 / EN ISO 12185:96	Kg/m^3	820,0	845,0
	/ C1:2001			
Flash Point	EN ISO 2719:2002	C°	55(1)	
Distillation:				
- Recovered @ 150 °C		% vol		2,0
- Recovered @ 250 °C	EN ISO 3405:2000	% vol		65,0(2)
- Recovered @ 350 °C		% vol	85,0(2)	
- Recovered at 95%		°C		360,0
C.F.P.P. (summer) (3)	EN 116:1997	°C		-2
C.F.P.P. (winter) (3)		°C	50,0	-12
CLOUD Point (summer)	EN 23015:1994	°C	Report	
CLOUD Point (winter)		°C		0
Cetane number	EN ISO 5165:1998	n°	51,0	
Cetane index	EN ISO 4264:1996	Index	46,0	
Viscosity @ 40 °C	EN ISO 3104:1996	mm^2/s	2,00	4,50
Water content	EN ISO 12937:2000	mg/kg		200
Total contamination	EN ISO 12662:2002	mg/kg		15
Sulfur content	EN ISO 20884:2004	mg/kg		10,0
Copper strip corrosion (3 hr at 50 °C)	EN ISO 2160: 1998	Indice	1st Class	
Carbon residue (on 10% distillation residue)	EN ISO 10370:1995	% weight		0,15
Total acidity	ASTM D 974:2002	mgKOH/g		0,3
Ash content	EN ISO 6245:2002	% weight		0,01
Lubricity, correct wear scar	EN ISO 12156-1:2000	µm		460
Oxidation stability	EN ISO 12205:1996	g/m^3	20	
Electrical conductivity (4)	IP 274; ASTM 2624; ISO 6297	pS/m	50	
Polyciclic aromatic hydrocarbons	EN 12916:2001	%m/m		11,0(6)
Biodiesel content (5)	EN 14078:2003	% vol	4,5	7,0

PROPERTY	UNIT	VALUE	Test Method
Cetane Index	Calc.	46 Min	EN ISO 4264
Cetane Number	CN	51 Min	EN ISO 5165 EN 15195
Density 15° C	Kg/M^3	820 - 845 Min/Max	EN ISO 3765 EN ISO 12185
Polycyclic Aromatics	%m/m	8.0 Max	EN 12916
Sulphur Content	mg/kg	10.0 Max	EN ISO 20846 EN ISO 20884
Flash Point	deg. °C	>55 Min	EN ISO 2719
Carbon Residue	% Mass	0.30 Max	EN ISO 10370
Ash Content	% Mass	0.010 Max	EN ISO 6245
Water Content	mg/kg	200 Max	EN ISO 12937
Total Contamination- Particulate Matter	mg/kg	24 Max	EN 12662
Copper Strip Corrosion (3hrs@50 deq. C	Class	1 Max	EN ISO 2160
Oxidation Stability	g/m^3	25 Max	EN ISO 12205
Lubricity	Microns	460 Max	EN ISO 12156-1
Viscosity @ 40° C	cSt.	2.000-4.500 Min/Max	EN ISO 3104
	Distillation:	EN ISO 3405	
% Recovered 250 deg. C	% Vol	65.0 Max	EN ISO 3405
% Recovered 350 deg. C	% Vol	85.0 Min	EN ISO 3405
95% Recovered @	deg. °C	360.0 Max	EN ISO 3405
Fatty Acid Methyl Ester (FAME) Content	% Vol	7.0 Max	EN 14078
Cloud Point	deg. °C	Winter -5 max	EN 23015

Property	**Test method**	**Test Unit**	**Guarantee**	**Limit**
Density at 15 0C		kg/m3		820-845
Polycyclic aromatic hydrocarbons	EN 12916	wt%	B	Max
Flash Point	EN 2719	0 C	>55	
Cold Filter Plugging Point CFPP	EN 116	0 C		
Winter Grade			-15	max
Summer Grade			5	max
Distillation	EN ISO 3405			
Recovered at 250C		Vol%	65	max
Recovered at 350C		Vol%	85	min
95% (Vol/Vol) Recovered at		0 C	360	max
Sulphur	EN ISO 20846 EN ISO 20884	mg/kg	10	max
Carbon Residue (on 10%residue)	EN ISO 10370	wt%	0.30	max
Viscosity at 40C	EN ISO 3104	cst	2.0-4.5	
Copper Strip Corrosion (3h a5 50C)	EN ISO 2160	rating	No.1	max
Fatty acid methyl ester(FAME) content	EN 14078	Vol%	7.0	max
Cetane Number	EN ISO 5161 EN15195		51	min
Cetane Index	EN ISO 4264	calculated	46	min
Water	EN ISO 12937	mg/kg	200	max
Particulate Matter	EN 12662	mg/kg	24	max
Oxidation Stability	EN ISO 12205 EN 15751	g/m3 h	25 20	max min
Lubricity (wsd1,4) at 60C	EN ISO 12156/1	um	450	max

TEST	UNITS	LIMITS	METHOD
Density15°C*	kglm^3	820.0 - 860.0	ASTM 04052
ASTM Color*		2.0Max.	ASTM 06045
Flash Point P.M.C.C*	OC	60 Min.	ASTM O93A
Total Sulphur	mg/kg	10Max.	ASTM 02622
Copper Corrosion,3hrsal I00°C		1.0 Max.	ASTM 0130
KinematicViscosityat40°C	CST	2.0-4.5	ASTM 0445
Pour Point*	OC	+6 Max.	ASTM 05950
Ash Content	wt%	0.01 fax.	ASTMD482
Water Content	mg/kg	200 Max.	ASTM 06304
Sediments by Centrifuge	VOl%	0.01Max.	ASTM 02709
Derived Cetane Number		51Min.	ASTM 06890
Cetane Index		46Min.	ASTM O4737A
FAME Content	VOl%	7.0Max.	EN 14078
Lubricity(HFRR)(WSD)t m 60°C		460 Max.	EN 12156-1
Distillation			
50 % Recovery	oc	Report	ASTM D86
90% Recovery	oc	Report	
95% Recovery	oc	360 Max.	
F.B.P	oc	Report	

TEST	UNITS	SPECIFICATIONS	METHODS
Total Acid, Max	mgKOH / g	0.10	D3242
Aromatic Content, Max	vol %	25	D1319
Naphtalenes, Max	vol%	3	D1840
Mercaptan Sulfur, Max	wt%	0.003	D3227
Total Sulfur, Max	wt%	0.30	D4294
Initial Boiling Point	Celsius	Report	D86
10% Recovery Point, max	Celsius	205 (401)	D86
20% Recovery Point	Celsius	Report	D86
50% Recovery Point	Celsius	Report	D86
90% Recovery Point	Celsius	Report	D86
Final Boiling Point max	Celsius	300(572)	D86
Residual, Max	vol%	1.5	D86
Loss, Max	vol%	1.5	D86
Flash Point, Min	Celsius	38.0 (100)	D56
Viscosity @ -20C, Max	cSt	8.0	D445
Gravity	API	37-51	D4052
Density @ 15C	Kg/m3	775-840	D4052
Freeze Point, Max	Celsius	-47 (-53	D5972
Heat Content, Min	Btu/1b	18.400	D3338
Net Heat Combustion, Min	MJ/kg	42.8	D3338
Smoke Point, Min	mm	18.00	D1322
Copper Corrosion, Max	Code	1	D130
Stability, P, Max @260C	mm HG	25	D3241
Preheat Code, Max	Code	3	D3241
Existent Gum, Max	Mg/ 100ml	7	Ip540
Water Separation	MSEP	85	D3948