XBEE
Natural Fuel Additive

Intertek

CSR 500 Bunker fuel

ISO 8217-2005

Intertek Caleb Brett

As per some **Xbee** users' request, it has been decided to compare a bunker fuel in compliance with the norm CSR 500* to the same fuel treated with **Xbee** enzyme biotechnology at a ratio of 4000:1.

**The CSR 500 norm uses the same testing ISO methods as the international norm ISO 8217-2005.*

Tests	Methods	Results			Units	Limits
		w/o	w/o aft. 1 month	w/aft. 1 month		
Density at 15°C	NF EN ISO 12185	986.9	987.9	987.5	Kg/m3	
Viscosity at 50°C	NF EN ISO 3104	369.0	375.0	375.3	cSt	
Viscosity at 100°C	NF EN ISO 3104	36.48	37.05	38.29	cSt	< 40
Flash Point PM	NF EN ISO 2719	86.0	88.0	86.0	°C	70 min.
Water	ASTM D 95	0.20	< 0.10	< 0.10	% (v/v)	0.6 max.
Sulfur	ASTM D 2622	1.80	1.87	1.87	% (m/m)	4.0 max.
Flow Point	NF EN ISO 3016	-3	-3	-3	°C	
Carbon residue	NF EN ISO 10370	12.7	13.1	13.1	% (m/m)	
Acid Index	NF ISO 6618	nul	nul	nul	Mg KOH/g	
Total Acid Index	ASTM D 664	0.50	0.50	0.54	Mg KOH/g	
Cinders	NF EN ISO 6245	0.03	0.03	0.04	% (m/m)	
Existing Sediment	IP 375	< 0.02	< 0.02	< 0.02	% (m/m)	0.25 max.
Potential Sediment	IP 390	< 0.02	< 0.02	< 0.02	% (m/m)	
ICP	ICP				mg/kg	
Vanadium	"	78	77	88	"	
Aluminum	"	< 5	< 5	< 5	"	
Silicon	"	< 10	< 10	< 10	"	

Certification

AFAQ ISO 9001 VERSION 2000

www.afaq.org

ISO 9001:2000

ISO International Organization for Standardization

www.iso.org

Accreditation

cofrac ESSAIS

www.cofrac.fr

(Program 73 and 74)
NF EN ISO/CEI 17025

This measures concern an IFO 380 bunker fuel taken in the car ferry *Mont Saint-Michel* of the company **Brittany Ferries** (www.brittany-ferries.fr).
During the storage of the fuel, the samples have been kept at 50°C to imitate real conditions of storage.

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