




















CERTIFICATE OF ANALYSIS

N° 68180806

Operation : Testing Oil Product : Marine Diesel Oil Client : XBEE DISTRIBUTION NETWORK Contract Ref. : 797225/180704-0037 Rev0 Grade : DMA ISO 8217:2017	Sample origin : Bunkering Zone : Med. Sampling date : 27/07/2018 Sample type : Genuine prior additivation Bureau Veritas Ref. : 8139722
---	--

Tests	Methods	Units	Results	Limits	Status
Density @ 15°C	ISO 12185	Kg/m3	846,1	890,0 max	
Appearance	Visual	-	Clear & Bright	Clear & Bright	
Sulfur Content	ASTM D-4294-16	% wt	0,049	1,00 max	
C.F.P.P	EN 116:2015	Deg C	-2	-	
Water content	EN ISO 12937	% Vol	<0,05	-	
Ash	ISO 6245:2002	w wt	<0,005	0,01 max	
Total sediments by hot filtration	ISO 10307-1	% wt	<0,01	-	
Pour Point	ISO 3016:1994	Deg C	-15	0 max	
Cetane Index	EN ISO 4264:1997	Index	50,9	40 min	
Acidity	ASTM D-974-14	mgKOH/g	0,08	0,5 max	
Cloud Point	ISO 3015:1992	Deg C	+4	-	
Lubricity, wsd at 1,4 KPa, 60°C	ISO 12156-1-2007	µm	392	520 max	
Flash Point	EN ISO 2719	Deg C	67,0	60,0 min	
Oxydation stability	ISO 12205:1996	g/m ³	21	25 max	
Viscosity @40°C	ISO 3104:1994	mm ² /s	3,401	2,000 - 6,000	
Fame Content	EN 14078:2010	% Vol	<0,05	-	
Carbon Residue (on 10%dist. Residue)	EN ISO 10370	% wt	0,050	0,30 max	
H2S in liquid	IP-570-14	mg/kg	<0,60	2,00 max	

Comments
All results matching specification limits.

Certificate of analysis issued
<p>On : 08/08/2018</p> <p>Tested on : 08/08/2018</p> <p style="text-align: right;">Adèle Bruntz</p> 

CERTIFICATE OF ANALYSIS

N° 68180808

Operation : Testing Oil Product : Marine Diesel Oil Client : XBEE DISTRIBUTION NETWORK Contract Ref. : 797225/180704-0037 Rev0 Grade : DMA ISO 8217:2017	Sample origin : Bunkering Zone : Med. Sampling date : 27/07/2018 Sample type : After hand-blend Bureau Veritas Ref. : 8139722
---	--

Tests	Methods	Units	Results	Limits	Status
Density @ 15°C	ISO 12185	Kg/m ³	846,1	890,0 max	
Appearance	Visual	-	Clear & Bright	Clear & Bright	
Sulfur Content	ASTM D-4294-16	% wt	0,049	1,00 max	
C.F.P.P	EN 116:2015	Deg C	-4	-	
Water content	EN ISO 12937	% Vol	<0,05	-	
Ash	ISO 6245:2002	w wt	<0,005	0,01 max	
Total sediments by hot filtration	ISO 10307-1	% wt	<0,01	-	
Pour Point	ISO 3016:1994	Deg C	-15	0 max	
Cetane Index	EN ISO 4264:1997	Index	50,9	40 min	
Acidity	ASTM D-974-14	mgKOH/g	0,08	0,5 max	
Cloud Point	ISO 3015:1992	Deg C	+4	-	
Lubricity, wsd at 1,4 KPa, 60°C	ISO 12156-1-2007	µm	390	520 max	
Flash Point	EN ISO 2719	Deg C	66,0	60,0 min	
Oxydation stability	ISO 12205:1996	g/m ³	23	25 max	
Viscosity @40°C	ISO 3104:1994	mm ² /s	3,389	2,000 - 6,000	
Fame Content	EN 14078:2010	% Vol	<0,05	-	
Carbon Residue (on 10%dist. Residue)	EN ISO 10370	% wt	0,070	0,30 max	
H2S in liquid	IP-570-14	mg/kg	<0,60	2,00 max	

Comments

Testing was performed after laboratory hand-blend at 1/4000 Xbee additive doping rate, followed by two week retention period at constant temperature. The tested sample, blended with Xbee technology copes with the specification limits of DMA grade specifications according to ISO 8217:2017 standard.

Certificate of analysis issued

On : 17/08/2018

Adèle Bruntz

Tested on : 16/08/2018



BUREAU VERITAS EXPLOITATION

info@fr.bureauveritas.com

66 rue de Villiers 92300 Levallois-Perret

Tél : + 33 (0)1 55 24 80 89

SAS au capital social de 36 315 050 € - RCS Nanterre 790 184 675

www.bureauveritas.fr