

CERTIFICATE OF ANALYSIS

CLIENT	GRAHAM TEK SYSTEMS (Pty)		
PRODUCT	MARINE DISTILLATE FUEL		
SOURCE	GRAHAM FUEL TECHNOLOGY		
SAMPLING METHOD	RECEIVED	SAMPLE NUMBERS	01/14/118/01
DATE RECEIVED	22 JANAURY 2014	TIME RECEIVED	11H50
DATE TESTED	22 JANUARY 2014	TIME TESTED	15H30

TEST	METHOD	SPECIFICATION	RESULT
Flash Point: PMCC – °C	ASTM D93	60 min	*37.0
Kinematic Viscosity @ 40°C cSt	ASTM D445	2.0 – 11.0	3.7
Water Content: % mass	ASTM D4928	0.3	0.073
Sulphur % mass	ASTM D4294	2.0	0.673
Density @ 15°C kg/l	ASTM D4052	0.900 max	*0.9222
Density @ 20°C kg/l	ASTM D4052	Report	0.9189
Cold Filter Plugging Point °C	ASTM D6371	Report	+1
Total Contamination, mg/kg	IP 440	24 max	5
Cetane Index	Calculation	35 min	*27.7
Ash % mass	ASTM D482	0.01 max	<0.01
Gross Heating Value	ASTM D4868	Report	44.431
Low Heating Value	ASTM D4868	Report	41.883
Distillation: IBP °C	ASTM D86	Report	100
10 % Vol Rec °C		Report	185
50 % Vol Rec °C		Report	285
90 % Vol Rec °C		Report	375
Distillation: FBP °C		Report	382
Residue % Vol		Report	3.1
Loss % Vol		Report	2.0

REMARKS:*Denote off specification. Product was tested against Distillate Marine Fuel DMB -International Standard ISO/FDIS 8217.

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Date: 22/01/2014

Lab Head: F. Hanslo

Date: 22/01/2014

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The results relate to the sample tested and the most recent methods available with a 95% confidence level

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