

Clear mXt certified to Australian standards

Analytics carried out by :



Intertek

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Introduction

Intertek is a leading provider of laboratory testing, research, inspection and consulting services for global industry, markets and institutions. Intertek operates a global network of offices and analytical testing laboratories serving a wide range of industries.

Intertek were commissioned by TK Fuels Australia to test the diesel liquid catalyst product Clear mXt for meeting Australian fuel standards.

The test used a mixture of Clear mXt and regular mineral diesel from Caltex. The fuel was mixed at the normal ratio of Clear mXt to diesel of 1:16,000. The mixture was tested to current Australian fuel standards as published by the Australian government, which is the standard that all fuel suppliers in Australia are required to adhere to. The bulk of testing for Shell and BP is carried out by Intertek, the company that tested our samples at their facility in Rosehill, NSW.

For full details of the current Australian diesel fuel standard see the following link :

<http://www.environment.gov.au/atmosphere/fuelquality/standards/diesel/index.html>

The report from the test results is shown on pages 3 and 4 of this PDF. The results show that Clear mXt exceeds current standards for diesel fuel in Australia. The limits column refers to the Australian standard that should be either exceeded (max) or meet (min). The results column shows the test results for Clear mXt and in every instance exceeds the Australian standard.

Amended Analytical Report

This report replaces CLM03634 issued on 11/02/2009.

TK Fuels
3 Spring Street
SYDNEY NSW 2000

Attn:

Report Date 12 February 2009

Lab Report No. CLM03634

Intertek Sample No. C09/00374 **Client reference** 1/16000 Clear mXT/Diesel blend

Product Clear mXT/Diesel blend

Date submitted 10/02/2009

Date sampled 10/02/2009

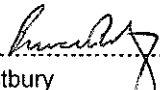
This sample was tested as received and the following results obtained.

Test	Method	Limits	Units	Results	In Spec
Copper corrosion (2 hrs @ 100°C)	ASTM D130	Class 1 max	...	1A	
Oxidation stability	ASTM D2274	25 max	mg/100ml	0.4	
Cloud point	ASTM D2500	Seasonal	°C	0	
Conductivity @ 22°C	ASTM D2624	50 min	pS/m	133	
Water and sediment	ASTM D2709	0.050 max	vol %	<0.005	
Appearance Diesel fuel rating	ASTM D4176	Report	...	1	
Sediment by extraction	ASTM D473	Report	mass %	<0.01	
Calc. Cetane index (Proc. A)	ASTM D4737	46.0 min	...	52.3	
Ash and suspended solids	ASTM D482	0.010 max	mass %	<0.001	
Sulfur	ASTM D5453	10 max	mg/kg	4.7	
Flash point	ASTM D93	61.5 min	°C	68.0	
Acid number	ASTM D974	Report	mg KOH/g	0.02	
Water content (Coulometric Karl Fischer Titration)	ASTM E1064	0.050 max	mass %	0.017	
Cold filter plugging point	IP 309	Report	°C	-1.0	
Filter blocking tendency	IP 387	2.0 max	...	1.02	
Lubricity	IP 450	460 max	microns	387	
Particulates contamination	ASTM D5452	Report	mg/L	32.3	
Colour	ASTM D1500	2 max	...	1.5	
Density @ 15°C	ASTM D4052	820 - 850	kg/m ³	842.6	
Distillation IBP	ASTM D86	Report	°C	157.7	
Distillation 10% recovered	ASTM D86	Report	°C	226.4	
Distillation 50% recovered	ASTM D86	Report	°C	276.3	
Distillation 90% recovered	ASTM D86	Report	°C	330.8	
Distillation 95% recovered	ASTM D86	360 max	°C	346.4	
Distillation FBP	ASTM D86	Report	°C	350.5	

Polycyclic aromatic hydrocarbons	IP 391	11 max	mass %	6.36
Total aromatic hydrocarbons	IP 391	Report	mass %	30.34
Viscosity @ 40°C	ASTM D445	2.0 - 4.5	mm ² /s	2.934
Carbon residue - 10% distillation residue	ASTM D4530	0.2 max	mass %	<0.1

Sample meets specifications where tested.

Limits quoted are as per the "Fuel Standard (Automotive Diesel) Determination 2001 as amended".


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B. Astbury
Laboratory Supervisor

Sample retention period (except by prior arrangement):

Aviation fuel - 6 months, Water - 3 weeks, Gas - not retained, Other sample types - 3 months