

ANALYTICAL REPORT

Report issue date:	22/07/2022	Sample ID:	642-22-05047-001
Customer name:	ESPA, Tallinn, Estonia	Our Ref number:	AM22278
Port / Origin:	Teboil, Kemi, Finland	Your Ref number:	FIN 2022
Product:	ULSD	Seal number:	Not sealed
Sample source:	Shore tank 405	Sample received date:	17/07/2022
Sample type:	Shore tank U/M/L composite	Analyses commenced:	17/07/2022
Sampling date:	08/07/2022	Analyses completed:	22/07/2022
Notes:	Final COA		

TEST	UNITS	METHOD	LIMITS	RESULT
Appearance		visual	C&B	C&B
Density at 15 deg C	kg/m ³	EN ISO 12185	800.0 - 845.0	811,4
Colour	rate	ASTM D1500	2.0 max	L 0,5
Strong smell	-		Typic/atypic	Typical
Water	mg/kg	EN ISO 12937	200 max	28
Flash Point,	deg C	EN ISO 2719	55 – 100	56,0
Viscosity at 40 deg C	mm2/s	EN ISO 3104	1.50 - 4.00	1,891
Distillation		EN ISO 3405		
Recovered at 250°C	%vol		65 max	59,3
Recovered at 350°C	%vol		85 - 98	98
Recovered at 370°C	%vol		-	98
85%	deg C		250 – 350	302,1
90%	deg C		280 – 350	315,3
95%	deg C		300 – 360	335,3
FBP	deg C		280 – 380	348,1
Cloud Point	deg C	EN 23015	-3 max	- 15
CFPP	deg C	EN 116	-10 max	- 38
Cetane number	-	EN ISO 5165	Min 51	52,5
Lubricity	µm	EN ISO 12156-1	300 – 460	390
Carbon Residue (10% bottom)	%mass	EN ISO 10370	0.30 max	0,02
Sulphur	mg/kg	EN ISO 20846	10 max	5,4
TUV ESSO ageing	mg/100ml	ESSO	-	6,2
UV ageing 72h	Delta-scale	EBV D 1500	-	0,5
Total Contamination	mg/kg	EN 12662	24 max	3,1
Oxidation Stability	g/m ³	EN ISO 12205	25 max	0,8
Thermal stability	mg/kg	DIN 51371	-	1
Oxidation Stability RANCI	hours	DIN EN 15751	Min 20	22,1
Total Acid Number	mgKOH/g	ASTM D664	0.08 max	0,04
Bromine Number	gBr/100g	EN ISO 3839	4 max	0,5

OPS MANAGER: Andres Petuhov

This report reflects our findings at place and time of our intervention only and does not relieve any party from their contractual responsibilities. The laboratory is not responsible of the information provided by the customer, sample owner or the taker. The test results shown on this report affect only to the samples received in this laboratory, and not necessarily to the whole from which these samples were drawn. Precision parameters apply in the determination of above test results. Also refer to ASTM D3244, IP 367 for analyses and testing for utilization of test data to determine conformance with specifications. ** Analyses in this report are performed at ISO /IEC 17025 accredited laboratory. 'Analyses in this report are performed at 3rd laboratory.



ANALYTICAL REPORT

Report issue date:	22/07/2022	Sample ID:	642-22-05047-002
Customer name:	ESPA, Tallinn, Estonia	Our Ref number:	AM22278
Port / Origin:	Teboil, Kemi, Finland	Your Ref number:	FIN 2022
Product:	ULSD	Seal number:	Not sealed
Sample source:	Shore tank 409	Sample received date:	17/07/2022
Sample type:	Shore tank U/M/L composite	Analyses commenced:	17/07/2022
Sampling date:	08/07/2022	Analyses completed:	22/07/2022
Notes:	Final COA		

TEST	UNITS	METHOD	LIMITS	RESULT
Appearance		visual	C&B	C&B
Density at 15 deg C	kg/m ³	EN ISO 12185	800.0 - 845.0	811,3
Colour	rate	ASTM D1500	2.0 max	L 0,5
Strong smell	-		Typic/atypic	Typical
Water	mg/kg	EN ISO 12937	200 max	30
Flash Point,	deg C	EN ISO 2719	55 – 100	56,0
Viscosity at 40 deg C	mm2/s	EN ISO 3104	1.50 - 4.00	1,890
Distillation		EN ISO 3405		
Recovered at 250°C	%vol		65 max	59,9
Recovered at 350°C	%vol		85 - 98	98
Recovered at 370°C	%vol		-	98
85%	deg C		250 – 350	300,7
90%	deg C		280 – 350	313,4
95%	deg C		300 – 360	331,7
FBP	deg C		280 – 380	348,6
Cloud Point	deg C	EN 23015	-3 max	- 13
CFPP	deg C	EN 116	-10 max	- 38
Cetane number	-	EN ISO 5165	Min 51	52,2
Lubricity	µm	EN ISO 12156-1	300 – 460	390
Carbon Residue (10% bottom)	%mass	EN ISO 10370	0.30 max	0,02
Sulphur	mg/kg	EN ISO 20846	10 max	5,4
TUV ESSO ageing	mg/100ml	ESSO	-	6,4
UV ageing 72h	Delta-scale	EBV D 1500	-	0,5
Total Contamination	mg/kg	EN 12662	24 max	4,1
Oxidation Stability	g/m ³	EN ISO 12205	25 max	0,8
Thermal stability	mg/kg	DIN 51371	-	1
Oxidation Stability RANCI	hours	DIN EN 15751	Min 20	20,4
Total Acid Number	mgKOH/g	ASTM D664	0.08 max	0,04
Bromine Number	gBr/100g	EN ISO 3839	4 max	0,6

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ANALYTICAL REPORT

Report issue date:	22/07/2022	Sample ID:	642-22-05047-003
Customer name:	ESPA, Tallinn, Estonia	Our Ref number:	AM22278
Port / Origin:	Teboil, Kemi, Finland	Your Ref number:	FIN 2022
Product:	ULSD	Seal number:	Not sealed
Sample source:	Shore tank 425	Sample received date:	17/07/2022
Sample type:	Shore tank U/M/L composite	Analyses commenced:	17/07/2022
Sampling date:	08/07/2022	Analyses completed:	22/07/2022
Notes:	Final COA		

TEST	UNITS	METHOD	LIMITS	RESULT
Appearance		visual	C&B	C&B
Density at 15 deg C	kg/m ³	EN ISO 12185	800.0 - 845.0	811,4
Colour	rate	ASTM D1500	2.0 max	L 0,5
Strong smell	-		Typic/atypic	Typical
Water	mg/kg	EN ISO 12937	200 max	27
Flash Point,	deg C	EN ISO 2719	55 – 100	56,0
Viscosity at 40 deg C	mm ² /s	EN ISO 3104	1.50 - 4.00	1,891
Distillation		EN ISO 3405		
Recovered at 250°C	%vol		65 max	59,4
Recovered at 350°C	%vol		85 - 98	98
Recovered at 370°C	%vol		-	98
85%	deg C		250 – 350	301,8
90%	deg C		280 – 350	314,7
95%	deg C		300 – 360	334,7
FBP	deg C		280 – 380	348,1
Cloud Point	deg C	EN 23015	-3 max	- 14
CFPP	deg C	EN 116	-10 max	- 38
Cetane number	-	EN ISO 5165	Min 51	53,9
Lubricity	µm	EN ISO 12156-1	300 – 460	380
Carbon Residue (10% bottom)	%mass	EN ISO 10370	0.30 max	0,02
Sulphur	mg/kg	EN ISO 20846	10 max	5,4
TUV ESSO ageing	mg/100ml	ESSO	-	6,4
UV ageing 72h	Delta-scale	EBV D 1500	-	0,6
Total Contamination	mg/kg	EN 12662	24 max	4,6
Oxidation Stability	g/m ³	EN ISO 12205	25 max	0,8
Thermal stability	mg/kg	DIN 51371	-	1
Oxidation Stability RANCI	hours	DIN EN 15751	Min 20	20,9
Total Acid Number	mgKOH/g	ASTM D664	0.08 max	0,04
Bromine Number	gBr/100g	EN ISO 3839	4 max	0,6



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