

EXXONMOBIL ASIA PACIFIC PTE LTD
1 HARBOURFRONT PLACE, RU 4733
#06-00 HABOURFRONT TOWER ONE
098633, SINGAPORE
Singapore



Attention of : ExxonMobil Distillate Supply Operations
Your reference : INTB009FIN-2101-0546 / NK 5264815

Certificate of Analysis

Report number : 12003/00046027.1/L/21 Composite prep date : 31-01-2021
Main Object : Lobelia Place of sampling : Koole Tankstorage Botlek
Report Date : 31-01-2021 Date received : 31-01-2021
Date of issue : 31-01-2021 Date completed : 31-01-2021
Sample object : Lobelia Sample number : 11125451
Sample type : Composite
Sample submitted as : FAME -10
Marked : Barge Lobelia multiple tank composite prepared from running samples ex C1 , C2 , C4 , C6 , C8 after loading from Shore tank 535, Shore tank 536

NAME	METHOD	UNIT	SPECS		RESULT
			Min	Max	
Appearance ¹	Visual	-			Bright & Clear
FAME content	EN 14103	mass %	96.5		98.9
Density at 15 °C	ISO 12185	kg/m ³	860.0	900.0	882.8
Kinematic Viscosity at 40°C	EN ISO 3104-2004	mm ² /s	3.500	5.000	4.435
Flash point (rapid equilibrium)	ISO 3679	°C	101		> 140
Cetane Number	EN 15195	-	51.0		52.4
Copper Corrosion (3 hrs / 50 °C)	EN ISO 2160	-		Class 1	1A
Oxidation stability (110°C)	EN 14112	hours	8.0		> 11
Acid Number	EN 14104	mg KOH/g		0.50	0.32
Iodine value	EN 14111	gI ₂ /100g		120	108
Linolenic acid methyl ester	EN 14103	mass %		12.0	7.6
Polyunsaturated methyl esters (>= 4 double bounds)	EN 15779	mass %		1.0	< 0.10
Methanol	EN 14110	mass %		0.20	0.04
Glyceride content	EN 14105				
Mono-glyceride		mass %		0.70	0.38
Di-glyceride		mass %		0.20	0.12
Tri-glyceride		mass %		0.20	0.10
Free glycerol		mass %		0.02	< 0.010
Total glycerol		mass %		0.25	0.131
Water Karl Fischer	EN ISO 12937	mg/kg		500	260
Contamination	EN 12662:1998	mg/kg		24	11
Sulphated ash	ISO 3987	mass %		0.02	< 0.005
Sulphur (S)	EN ISO 20846	mg/kg		10.0	4.3
Group I metals (Na+K)	EN 14538	mg/kg		5.0	< 2.0
Group II metals (Ca+Mg)	EN 14538	mg/kg		5.0	< 2.0
Phosphorus content	EN 14107	mg/kg		4.0	< 4.0
Cold Filter Plugging Point	EN 116	°C		-10	-11
Cloud Point	EN ISO 3015	°C		-3	-5

All results in this report refer to the sample(s) tested as taken or submitted like specified in this Analysis report. Uncertainties, available on request, apply in the evaluation of the test results. All tests are conducted according to the latest version of the methods, unless another version is specifically indicated. Where available and for convenience purposes, the tested sample has been checked for compliance with supplied specifications, without accepting any liability. In case of dispute or concern, we refer to the interpretation of test results as defined in ASTM D3244, IP 367, ISO 4259 or GOST 33701. This report shall not be partially copied and reproduced without the written permission of the laboratory.

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NAME	METHOD	UNIT	SPECS		RESULT
			Min	Max	
BHT content	GC	mg/kg			900

Remarks:
1 Bright & Clear

Signed by: Akash Gadjradj - Account Manager
Issued by: Saybolt Nederland BV
Place and date of issue: Rotterdam-Botlek - 31-01-2021

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