

Client:	DEF Products, LLC
Contact	Joe Servin, General Manager
Address	422 East Barioni Blvd Imperial, CA 02251
Email	defproducts@gmail.com
Phone	760 355 7997

Enalytic ID	E2005037-001
Batch Number	305182020M
Train Number	GATX220491
Sample ID	DEF 32.5%
Date Sampled	5/18/2020
Date Received	5/19/2020
Report Date	5/21/2020

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: **32.5% DEF Batch# 305182020M Train# GATX220491**

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.4	32.4	BDK	5/21/2020	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3828	BDK	5/21/2020	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	<0.01	BDK	5/21/2020	Pass
Biuret	%	22241-2 Annex E	<0.3	0.18	BDK	5/21/2020	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	BDK	5/20/2020	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	BDK	5/21/2020	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	CLB	5/20/2020	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.08	CLB	5/20/2020	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	5/20/2020	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	5/20/2020	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	5/20/2020	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	5/20/2020	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	5/20/2020	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	5/20/2020	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	5/20/2020	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	5/20/2020	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	5/20/2020	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached)	Spectra	22241-2 Annex J	Control Match	Match	BDK	5/21/2020	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0905	BDK	5/21/2020	---

Note 1: All ISO standards are up to date with the latest revisions.

Note 2: The acceptable values are based on the standard 32.5% unless otherwise stated, and are less than or equal to the values shown.

"The undersigned certifies that the value(s) reported have met the highest analytical quality control standards."

Certification Approval 
Laboratory Director: Anthony J Scala

Date: 5/21/2020

Client:	DEF Products, LLC
Contact	Joe Servin, General Manager
Address	422 East Barioni Blvd Imperial, CA 02251
Email	defproducts@gmail.com
Phone	760 355 7997

Enalytic ID	E2005061-001
Batch Number	305262020L
Train Number	TILX265635
Sample ID	DEF 32.5%
Date Sampled	5/26/2020
Date Received	5/27/2020
Report Date	6/1/2020

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.5% DEF Batch# 305262020L Train# TILX265635

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.4	32.5	BDK	6/1/2020	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3829	BDK	6/1/2020	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	<0.01	BDK	6/1/2020	Pass
Biuret	%	22241-2 Annex E	<0.3	0.16	BDK	6/1/2020	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	BDK	6/1/2020	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	BDK	6/1/2020	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	CLB	6/1/2020	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	6/1/2020	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	6/1/2020	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	6/1/2020	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	6/1/2020	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached)	Spectra	22241-2 Annex J	Control Match	Match	BDK	6/1/2020	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0910	BDK	6/1/2020	---

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Certification Approval 
Laboratory Director: Anthony J Scala

Date: 6/1/2020

Client:	DEF Products, LLC
Contact	Joe Servin, General Manager
Address	422 East Barioni Blvd Imperial, CA 02251
Email	defproducts@gmail.com
Phone	760 355 7997

Enalytic ID	E2005061-002
Batch Number	305262020M
Train Number	GATX224285
Sample ID	DEF 32.5%
Date Sampled	5/26/2020
Date Received	5/27/2020
Report Date	6/1/2020

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.5% DEF Batch# 305262020M Train# GATX224285

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.4	32.5	BDK	6/1/2020	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3829	BDK	6/1/2020	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	<0.01	BDK	6/1/2020	Pass
Biuret	%	22241-2 Annex E	<0.3	0.17	BDK	6/1/2020	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	BDK	6/1/2020	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	BDK	6/1/2020	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	CLB	6/1/2020	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	6/1/2020	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	6/1/2020	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	6/1/2020	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	6/1/2020	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached)	Spectra	22241-2 Annex J	Control Match	Match	BDK	6/1/2020	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0910	BDK	6/1/2020	---

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Certification Approval 
Laboratory Director: Anthony J Scala

Date: 6/1/2020

Client:	DEF Products, LLC
Contact	Joe Servin, General Manager
Address	422 East Barioni Blvd Imperial, CA 02251
Email	defproducts@gmail.com
Phone	760 355 7997

Enalytic ID	E2005072-001
Batch Number	305272020M
Train Number	TILX265597
Sample ID	DEF 32.5%
Date Sampled	5/27/2020
Date Received	5/29/2020
Report Date	6/3/2020

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.5% DEF Batch# 305272020M Train# TILX265597

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.4	32.3	BDK	6/1/2020	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3826	BDK	6/1/2020	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	<0.01	BDK	6/3/2020	Pass
Biuret	%	22241-2 Annex E	<0.3	0.17	BDK	6/1/2020	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	BDK	6/2/2020	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	BDK	6/3/2020	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	CLB	6/1/2020	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	6/1/2020	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	6/1/2020	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	6/1/2020	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	6/1/2020	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached)	Spectra	22241-2 Annex J	Control Match	Match	BDK	6/3/2020	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0905	BDK	6/1/2020	---

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Certification Approval 
Laboratory Director: Anthony J Scala

Date: 6/3/2020

Client:	DEF Products, LLC
Contact	Joe Servin, General Manager
Address	422 East Barioni Blvd Imperial, CA 02251
Email	defproducts@gmail.com
Phone	760 355 7997

Enalytic ID	E2005073-001
Batch Number	305272020M
Train Number	UTLX648004
Sample ID	DEF 32.5%
Date Sampled	5/27/2020
Date Received	5/29/2020
Report Date	6/3/2020

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.5% DEF Batch# 305272020M Train# UTLX648004

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.4	32.4	BDK	6/1/2020	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3827	BDK	6/1/2020	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	<0.01	BDK	6/3/2020	Pass
Biuret	%	22241-2 Annex E	<0.3	0.16	BDK	6/1/2020	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	BDK	6/2/2020	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	BDK	6/3/2020	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	CLB	6/1/2020	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	6/1/2020	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	6/1/2020	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	6/1/2020	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	6/1/2020	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	6/1/2020	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached)	Spectra	22241-2 Annex J	Control Match	Match	BDK	6/3/2020	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0905	BDK	6/1/2020	---

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Date: 6/3/2020