



Client:	DEF Products, LLC
Contact	Sharon Stegmuller
Address	422 East Barioni Blvd Imperial, CA 02251
Email	defproducts@gmail.com
Phone	760 355 7997
Report Date	2/13/2025

Enalytic ID	E2502012-001
SOLUTIONIZE	TANK: 11 & 10
TRC #	302052025P
T #	1&2
Sample ID	DEF 32.8%
Date Sampled	2/5/2025
Date Received	2/11/2025
ISO 17025	Certificate Number: L24-103

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.8% DEF SOLUTIONIZE TANK: 11 & 10 T # 1&2 TRC # 302052025P

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.4	SPT	2/13/2025	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3829	MDC	2/13/2025	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.13	MDC	2/13/2025	Pass
Biuret	%	22241-2 Annex E	<0.3	0.19	NAC	2/12/2025	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MFB	2/11/2025	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	6.2	MFB	2/12/2025	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	2/11/2025	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	2/11/2025	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	2/11/2025	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	2/11/2025	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	2/11/2025	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	2/11/2025	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	2/11/2025	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.46	BDK	2/11/2025	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	2/11/2025	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	2/11/2025	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	2/11/2025	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	---	---	---	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0904	MFB	2/13/2025	---

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.

Note 3: ISO 17025 accreditation not applied for.

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Certification Approval _____

Laboratory Director: Anthony J Scala

Date: 2/13/2025

Client:	DEF Products, LLC
Contact	Sharon Stegmuller
Address	422 East Barioni Blvd Imperial, CA 02251
Email	defproducts@gmail.com
Phone	760 355 7997
Report Date	2/26/2025

Enalytic ID	E2502036-001
TRAIN #	GBRX711553
TRC #	302182025T
T #	1&2
Sample ID	DEF 32.9%
Date Sampled	2/18/2025
Date Received	2/20/2025
ISO 17025	Certificate Number: L24-103

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.9% DEF TRAIN # GBRX711553 T # 1&2 TRC # 302182025T

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.3	SPT	2/25/2025	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3827	MDC	2/24/2025	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.02	MDC	2/25/2025	Pass
Biuret	%	22241-2 Annex E	<0.3	0.16	MDC	2/24/2025	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MFB	2/24/2025	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.5	MFB	2/25/2025	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	2/24/2025	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	2/24/2025	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	2/24/2025	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	2/24/2025	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	2/24/2025	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	2/24/2025	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	2/24/2025	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.46	BDK	2/24/2025	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	2/24/2025	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	2/24/2025	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	2/24/2025	Pass

Miscellaneous Secondary Unregulated Quality Standards

Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	---	---	---	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0904	MFB	2/25/2025	---

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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.

Note 3: ISO 17025 accreditation not applied for.

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Certification Approval _____

Laboratory Director: Anthony J Scala

Date: 2/26/2025

Client:	DEF Products, LLC
Contact	Sharon Stegmuller
Address	422 East Barioni Blvd Imperial, CA 02251
Email	defproducts@gmail.com
Phone	760 355 7997
Report Date	2/26/2025

Enalytic ID	E2502039-001
TRC #	GATX235278
T #	302192025T
Sample ID	3/8
Date Sampled	DEF 33%
Date Received	2/19/2025
ISO 17025	2/24/2025
	Certificate Number: L24-103

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 33% DEF GATX235278 T # 3/8 TRC # 302192025T

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.5	SPT	2/26/2025	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3830	MDC	2/26/2025	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.02	MDC	2/25/2025	Pass
Biuret	%	22241-2 Annex E	<0.3	0.16	MDC	2/26/2025	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MFB	2/26/2025	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.5	MFB	2/25/2025	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	2/26/2025	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	2/26/2025	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	2/26/2025	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.074	BDK	2/26/2025	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	2/26/2025	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	2/26/2025	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	2/26/2025	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.46	BDK	2/26/2025	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	2/26/2025	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.21	BDK	2/26/2025	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	2/26/2025	Pass

Miscellaneous Secondary Unregulated Quality Standards

Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	---	---	---	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0899	MDC	2/26/2025	---

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Certification Approval _____

Laboratory Director: Anthony J Scala

Date: 2/26/2025

Client:	DEF Products, LLC
Contact	Sharon Stegmuller
Address	422 East Barioni Blvd Imperial, CA 02251
Email	defproducts@gmail.com
Phone	760 355 7997
Report Date	1/29/2025

Enalytic ID	E2501056-001
TRC #	GATX235307
T #	301232025T
Sample ID	2/3
Date Sampled	DEF 32.5%
Date Received	1/23/2025
ISO 17025	1/27/2025
	Certificate Number: L24-103

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.5% DEF GATX235307 T # 2/3 TRC # 301232025T

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.1	SPT	1/29/2025	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3824	NAC	1/28/2025	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.02	MDC	1/28/2025	Pass
Biuret	%	22241-2 Annex E	<0.3	0.18	NAC	1/28/2025	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	1.5	MFB	1/28/2025	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	6.1	MFB	1/28/2025	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	1/28/2025	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	1/28/2025	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	1/28/2025	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	1/28/2025	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	1/28/2025	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	1/28/2025	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	1/28/2025	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.46	BDK	1/28/2025	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	1/28/2025	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	1/28/2025	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	1/28/2025	Pass

Miscellaneous Secondary Unregulated Quality Standards

Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	---	---	---	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0879	MFB	1/29/2025	---

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Certification Approval _____

Laboratory Director: Anthony J Scala

Date: 1/29/2025

Client:	DEF Products, LLC
Contact	Sharon Stegmuller
Address	422 East Barioni Blvd Imperial, CA 02251
Email	defproducts@gmail.com
Phone	760 355 7997
Report Date	3/6/2025

Enalytic ID	E2503005-001
TRAIN #	GATX22478
TRC #	302272025M
T #	5&4
Sample ID	DEF 32.9%
Date Sampled	2/27/2025
Date Received	3/3/2025
ISO 17025	Certificate Number: L24-103

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.9% DEF TRAIN # GATX22478 T # 5&4 TRC # 302272025M

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.6	SPT	3/6/2025	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3831	MDC	3/5/2025	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.02	MDC	3/4/2025	Pass
Biuret	%	22241-2 Annex E	<0.3	0.15	NAC	3/4/2025	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MFB	3/4/2025	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	3.9	MFB	3/4/2025	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	3/6/2025	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.20	BDK	3/6/2025	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	3/6/2025	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	3/6/2025	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	3/6/2025	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	3/6/2025	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	3/6/2025	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.46	BDK	3/6/2025	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	3/6/2025	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	3/6/2025	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	3/6/2025	Pass

Miscellaneous Secondary Unregulated Quality Standards

Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	---	---	---	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0909	MFB	3/5/2025	---

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Certification Approval _____

Laboratory Director: Anthony J Scala

Date: 3/6/2025