



DiversifiedCPC

INTERNATIONAL

24338 W Durkee Road | Channahon, IL 60410 | 815-424-2000

Certificate of Analysis

Global Rare Gases, LLC

2533 Tracy Road, Northwood, OH 43619

Plant: Channahon
 Product: XPG-n-Butane
 DCPC No: 080000
 DCPC Lot No: 090424_dv64#2
 Lot Expiration: 08/30/2034
 Standard Density: 4.864 (LB/GL)
 Cyl. Net Wgt. (Lb)

Manufacture Date: 08/30/2024
 Customer Part No:
 Customer PO: 1443
 Sample Source: DV64-2
 Sales Order #: 2024-47399-00
 Analyst: BV
 Sampled By: AL

Tests Performed

Test	Result	Unit	Specifications	Method
Air	0.01	Wgt%	0.00 Min, 0.05 Max	Gas Chromatography
Ethane	0.00	Wgt%	0.00 Min, 0.05 Max	Gas Chromatography
Propane	0.00	Wgt%	0.00 Min, 0.10 Max	Gas Chromatography
Isobutane	0.19	Wgt%	0.00 Min, 0.25 Max	Gas Chromatography
n-Butane	99.77	Wgt%	99.50 Min, 100.00 Max	Gas Chromatography
Pentanes	0.03	Wgt%	0.00 Min, 0.20 Max	Gas Chromatography
Benzene	0.0	ppm	0.00 Min, 1.00 Max	Gas Chromatography
Total Unsaturation	14.0	ppm	0.00 Min, 25.00 Max	Gas Chromatography
Benzene	0.0	ppm	0.00 Min, 0.10 Max	Gas Chromatography
C6+ Hydrocarbons	0.0	ppm	0.00 Min, 1.00 Max	Gas Chromatography
Sulfur	0.0	ppm	0.00 Min, 1.00 Max	ASTM D-6667
ODOR	PASS		5.00 Min, 10.00 Max	Panel
Moisture	0.0	ppm	0.00 Min, 3.00 Max	Electronic
Total Oxygenates	0.0	ppm	0.00 Min, 5.00 Max	ASTM D7423
Sulfur	0.0	ppm	0.00 Min, 1.00 Max	ASTM D-6667

* Benzene - 0 ppm means it is below the minimum quantification limit (MQL). Current MQL is 0.1 ppm.

Approved By: Aaron Lade

Date: 08/30/2024



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Certificate of Analysis

Global Rare Gases, LLC

2533 Tracy Road, Northwood, OH 43619

Plant: Channahon
 Product: XPG-Propane
 DCPC No: 089100
 DCPC Lot No: 090424_dv64#1
 Lot Expiration: 08/30/2034
 Standard Density: 4.234 (LB/GL)
 Cyl. Net Wgt. (Lb)

Manufacture Date: 08/30/2024
 Customer Part No:
 Customer PO: 1443
 Sample Source: DV64-1
 Sales Order #: 2024-47399-00
 Analyst: BV
 Sampled By: AG

Tests Performed

Test	Result	Unit	Specifications	Method
Air	0.00	Wgt%	0.00 Min, 0.05 Max	Gas Chromatography
Ethane	0.00	Wgt%	0.00 Min, 0.10 Max	Gas Chromatography
Propane	99.68	Wgt%	99.50 Min, 100.00 Max	Gas Chromatography
Isobutane	0.21	Wgt%	0.00 Min, 0.30 Max	Gas Chromatography
n-Butane	0.11	Wgt%	0.00 Min, 0.20 Max	Gas Chromatography
Pentanes	0.00	Wgt%	0.00 Min, 0.10 Max	Gas Chromatography
Benzene	0.0	ppm	0.00 Min, 1.00 Max	Gas Chromatography
Total Unsaturation	16.0	ppm	0.00 Min, 25.00 Max	Gas Chromatography
Benzene	0.0	ppm	0.00 Min, 0.10 Max	Gas Chromatography
C6+ Hydrocarbons	0.0	ppm	0.00 Min, 1.00 Max	Gas Chromatography
Sulfur	0.0	ppm	0.00 Min, 1.00 Max	ASTM D-6667
ODOR	PASS		5.00 Min, 10.00 Max	Panel
Moisture	0.1	ppm	0.00 Min, 3.00 Max	Electronic
Total Oxygenates	0.0	ppm	0.00 Min, 5.00 Max	ASTM D7423
Sulfur	0.0	ppm	0.00 Min, 1.00 Max	ASTM D-6667

* Benzene - 0 ppm means it is below the minimum quantification limit (MQL). Current MQL is 0.1 ppm.

Approved By: Arturo Guzman

Date: 08/30/2024