

INSPECTION REPORT No. 32/34/IRE/2023

Inspection facility/ Commodity declared as
Scope of inspection

hydrocarbon gases/ LPG
sampling and laboratory testing

Declared quantity

quantity 1041,700 mt
338079199992, 338079205914, 338079205930, 338079205963, 338079205989, 338079206102, 338079206193,
338079215483, 338079186700, 378079160560, 378079160578, 378079232039, 378079232407, 338079216457,
378079160271, 378079160040, 338078189333, 338078189317, 338778137400, 338079206169, 338778140602,
338778139430, 378079160206, 378079160263

Samples from
Sample submitted as
Place of sampling
Laboratory testing No.

RTC's N° 3780 79232039, 3380 78189317
Sample from liquid phase (2 x 2,13ltr)
Reloading Terminal Aleksandra, Malaszewicze (Poland)
5372/LPG/MA/2023
VIXON GAS SRL, Str. Constantin Radulescu Motru nr. 13,
București, Sector 4, Romania

Customer

Date of sampling/Date of testing/ Report issued on (date) 30.08.2023/ 30.08.2023/ 30.08.2023

RESULTS OF CHEMICAL ANALYSIS

Parameter	Result	Unit	Testing method	Requirements of EN 589+A1:2002-07 method
1. C1	<0,1	% (m/m)	PN-EN 27941:2015-12 ^A	no requirements
2. C2	0,2			
3. C3	61,1			
4. C4	37,9			
5. C5+	0,8			
1. methane	<0,1	% (m/m)	PN-EN 27941:2015-12 ^A	no requirements
2. ethane	0,2			
3. ethylene	<0,1			
4. propane	61,1	% (m/m)	PN-EN 27941:2015-12 ^A	min 20 % (m/m)
5. propene	<0,1	% (m/m)	PN-EN 27941:2015-12 ^A	no requirements
6. i-butane	13,8			
7. propadiene	<0,1			
8. n-butane	24,1			
9. 2-trans-butene	<0,1			
10. 1-butene	<0,1			
11. i-butene	<0,1			
12. 2-cis-butene	<0,1			
13. 2,2-dimethylpropane	0,1			
14. i-pentane	0,6			
15. Metyloacetylene	<0,1			
16. n-pentane	0,1			
17. 1,3-butadiene	<0,01	% (m/m)	DIN 51619:2004-02 ^A	max 0,09 % (m/m)
18. cyklopentane	<0,1	% (m/m)	PN-EN 27941:2015-12 ^A	no requirements
19. C5+	<0,1			
Motor octane number, MON	94,3	-	PN-EN 589+A1:2022-07 zał. B ^A	min 89,0
Total dienes content	<0,01	% (m/m)	DIN 51619:2004-02 ^A	max 0,5 % (m/m)
Hydrogen sulphide	negative	-	PN-EN ISO 8819:2000 ^A	negative
Water content	not detected	-	PN-EN 15469:2009 ^A	not detected
Evaporation residue	8	mg/kg	PN-EN 15470:2017-08	max 60 mg/kg
Density at 15°C	531,7	kg/m3	PN-EN ISO 8973:2000;	no requirements
Vapour pressure, gauge, at 40°C	967	kPa	PN-EN ISO 8973:2000/A1:2020-10 ^A	
Vapour pressure, gauge, min. 150 kPa at a temp. Of:	-11	°C	PN-EN ISO 8973:2000 PN-EN ISO 8973:2000/A1:2020-1, PN-EN 589+A1:2022-07 zał. C ^A	max 1550 kPa
- for grade A				max -10 °C
- for grade B				max -5 °C
- for grade C				max 0 °C
- for grade D				max +10 °C
- for grade E				max +20 °C
Total sulfur content	29	mg/kg	ASTM D 6667-21 ^A	max 30 mg/kg
Copper strip corrosion (1h at, 40°C)	class 1	-	PN-EN ISO 6251:01 ^A	class 1
Odour	unpleasant and distinctive	-	PN-EN 589+A1:2022-07 zał. A ^A	unpleasant and distinctive at 20 % I.F.I.

Testing IREAST Laboratory in Malaszewicze, accredited by Polish Centre Accreditation, No. AB 1275 Index A means accredited methods.

Sample was taken from the rail tank cars as above in accordance with PN EN ISO 4257:2004^B. Inspection Unit branch Malaszewicze, accredited by PCA, No. AK 030.

Inspection implemented in accordance with the procedure PJI-01 edition IX of 17.04.2023^B. Index B means accredited methods Inspection Unit.

This Certificate reflects the findings as received during the time of sampling and analysis

ORIGINAL

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