



## INSPECTION REPORT No. 354/18/IRE/2019

Commodity declared as/ Scope of inspection **PROPANE/ sampling and laboratory testing**  
 Declared **90 MT**  
 Samples from RTC's No. **reservoir No. 3**  
 Sample submitted as **Single sample from liquid phase (1 x 2,13l)**  
 Place of sampling **Reloading Terminal Bialchem, Zaborze (Poland)**  
 Laboratory testing No. **2965/LPG/MA/2019**  
 Customer **Bialchem Group Sp. z o. o. Wólka Dobryńska 159, 21-512 Zalesie**  
 Date of sampling/Date of testing **03.07.2019/ 03.07.2019**  
 Report issued on (date) **03.07.2019**

### RESULTS OF CHEMICAL ANALYSIS

| Parameter C1 - C5 % (m/m)                                   | Results                | Requirements for technical propane according to PN-C-96008:1998 | Testing method                         |
|---|------------------------|---|--|
| 1. C1   | <0,1                   | max 0,1 % m/m   | PN-EN 27941:2015-12 <sup>2</sup>       |
| 2. C2   | 0,5                    | max 5,5 % m/m   |  |
| 3. C3   | 95,7                   | min 90,0 % m/m  |  |
| 4. C4   | 3,7                    | max 10 % m/m  |  |
| 5. C5+  | <0,1                   | not detected  |  |
| <b>total composition of the hydrocarbon C1 - C5 % (m/m)</b> |                        |   |  |
| Metane  | <0,1                   | no requirements   | PN-EN 27941:2015-12 <sup>2</sup>       |
| Ethane  | 0,5                    |   |  |
| Etene   | <0,1                   |   |  |
| Propane   | 95,7                   |   |  |
| Propene   | <0,1                   |   |  |
| I-butane  | 2,5                    |   |  |
| Propadiene  | <0,1                   |   |  |
| N-butane  | 0,9                    |   |  |
| 2-butene-trans  | <0,1                   |   |  |
| 1-butene  | 0,1                    |   |  |
| I-butene  | 0,1                    |   |  |
| 2-butene-cis  | <0,1                   |   |  |
| 2,2-dimetylopropane   | <0,1                   |   |  |
| I-pentane   | <0,1                   |   |  |
| Propyne   | <0,1                   |   |  |
| N-pentane   | <0,1                   |   |  |
| 1,3-butadiene   | 0,1                    |   |  |
| >C5   | <0,1                   |   |  |
| Hydrogen sulphide   | not detected           | not detected  | PN-C-96008:1998 p.4.4.2                |
| Total sulfur content  | 0,0005 % m/m           | nie więcej niż 0,005 0 % m/m                                    | ASTM D 6667-14 <sup>4</sup>            |
| Water   | not detected           | not detected  | PN-C-96008:1998 p. 4.4.5 <sup>4</sup>  |
| Odour   | perceptible            | perceptible   | PN-C-96008:1998 p. 4.4.7 <sup>4</sup>  |
| Mineral oil content   | <0,0002 % m/m          | max 0,005 % m/m   | PN-C-96008:1998 p. 4.4.4 <sup>4</sup>  |
| Density at 15,6°C   | 0,510 t/m <sup>3</sup> | min 0,495 t/m <sup>3</sup>                                      | PN-C-96008:1998 p. 4.4.9 <sup>4</sup>  |
| Calorific value   | 46336                  | min 45 640 kJ/kg  | PN-C-96008:1998 p. 4.4.8 <sup>4</sup>  |
| Vapour pressure, gauge, at -15°C                            | 0,29 MPa               | min 0,20 Mpa  | PN-C-96008:1998 p. 4.4.10 <sup>4</sup> |
| Vapour pressure, gauge, at 70°C                             | 2,55 Mpa               | max 3,04 Mpa  |  |

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

Sample was taken from the tank as above in accordance with PN-EN ISO 4257:2004 method. Accreditation PCC No. 116

Inspection implemented in accordance with the procedure PJI-01 edition VII of 17.11.2016.

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

ORIGINAL