

# BIO LPG PRIMAGAS

## Specifikace složení a původu



PRIMAGAS

| Supplier   | Recipient    | Certification System                     |
|--|--------------|--|
| Name:<br>PRIMAGAS s.r.o.                                       | Name:<br>    | REDcert EU<br>ID number:<br>553-06170003 |
| Address:<br>Na Pankráci 30<br>140 00 Praha 4<br>Czech Republic | Address:<br> |  |
| Certificate Number:  |              | EU-REDcert-553-06170003                  |

### 1. General information

|                                     |   |
|-------------------------------------|---|
| Type of Product:                    | Bio propane-butane  |
| Type of Raw Material:               | food waste  |
| Additional Information (voluntary): | waste code: 020304  |
| Country of Origin:                  | Hungary   |
| Quantity:                           | 30,000 <input checked="" type="checkbox"/> m <sup>3</sup> <input type="checkbox"/> mt |
| Energy content (MJ):                | 735 540 Please specify Energy content in MJ per l: 24,52                              |

### 2. Sustainability criteria of the biomass according to Art. 17, 2009/28/EC

The raw material complies with the sustainability criteria according to Art. 17 (3), (4) and (5) RED<sup>1</sup>  Yes  No

The raw material meets the definition of waste or residue according to the RED, i.e. it was not intentionally produced and not intentionally modified, or contaminated, or discarded, to meet the definition of waste or residue<sup>2</sup>  Yes  No

### 3. Greenhouse Gas (GHG) information

Total default value according to RED applied:  Yes  No

$$E = E_{ec} + E_{I} + E_{p} + E_{td} + E_{u} - E_{sca} - E_{ccs} - E_{ccr} - E_{ee} = 0 + 0 + 14,68 + 3,78 + 0 - 0 - 0 - 0 - 0 = 18,46$$

GHG emission saving [%]<sup>3</sup>: 77,97% (for biofuels 83,8g CO<sub>2</sub> eq/MJ)

If the GHG emission savings are below 60%:  Yes  No

The installation where the final biofuel or bioliquid was produced started physical production of biofuels or bioliquids after 5 October 2015.

This form is valid without signature. By issuing this PoS, the issuing party guarantees that all information made on this Proof of Sustainability are correct, in compliance with the requirements of REDcert EU, and that the biofuel or bioliquid has not already been used to fulfil a national quota obligation.

#### Explanations

**E<sub>ec</sub>** - GHG emissions from the extraction or cultivation of raw materials

**E<sub>I</sub>** - Annualized (over 20 years) GHG emissions from carbon stock change due to land use change

**E<sub>p</sub>** - GHG emissions from processing

**E<sub>td</sub>** - GHG emissions from transport and distribution. **etd** includes downstream emissions for distribution up to and including the filling station

**E<sub>u</sub>** - GHG emissions from the fuel in use (shall be taken to be zero)

**E<sub>sca</sub>** - GHG emissions savings from soil carbon accumulation via improved agricultural management

**E<sub>ccs</sub>** - GHG emissions savings from carbon capture and geological storage

**E<sub>ccr</sub>** - GHG emissions savings from carbon capture and replacement

**E<sub>ee</sub>** - GHG emissions savings from excess electricity from cogeneration

**E** - Total GHG emissions from supply and use of the fuel

1) Applicable to biomass from agricultural, aquaculture, fisheries and forestry including residues from agricultural, aquaculture, fisheries and forestry residues

2) Applicable to waste and residues and products produced from waste and residues

3) Saving is calculated automatically based on the fossil fuel comparator according to the RED:  $(EF - EB)/EF$  where **EB** = total emissions from the biofuel or bioliquid and **EF** = total emissions from the fossil fuel comparator

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**BANKOVNÍ SPOJENÍ**  
ING BANK  
1000005551/3500

**REGISTRACE**  
Společnost je vedená  
u Městského soudu  
v Praze, Sp. zn. C 12554

**4. Výsledky chemické analýzy:**

| Parametr:  | Hodnota:   | Jednotka:         | Zkouší se podle:   |
|--|------------|-------------------|--|
| 1.C1   | <0,1       | % (mim)           | PN-EN 27941:2015-12A <sup>A</sup>  |
| 2.C2   | 2,6        |                   |  |
| 3.C3   | 38,5       |                   |  |
| 4.C4   | 57,8       |                   |  |
| 5.C5   | 1,1        |                   |  |
| 1. metan   | <0,1       | % (mim)           | PN-EN 27941:2015-12A <sup>A</sup>  |
| 2. etan  | 2,6        |                   |  |
| 3. etylen  | <0,1       |                   |  |
| 4. propan  | 38,2       |                   |  |
| 5. propylen  | 0,3        |                   |  |
| 6. i-butan   | 36,3       |                   |  |
| 7. propadien   | <0,1       |                   |  |
| 8. n-butan   | 20,2       |                   |  |
| 9. 2-buten-trans   | 0,3        |                   |  |
| 10. 1-buten  | 0,2        |                   |  |
| 11. i-buten  | 0,6        |                   |  |
| 12. 2-buten-cis  | 0,2        |                   |  |
| 13. 2,2-dimetylopropan                                       | <0,1       |                   |  |
| 14. i-pentan   | 0,9        |                   |  |
| 15. Metyloacetylen   | <0,1       |                   |  |
| 16. n-pentan   | 0,1        |                   |  |
| 17. 1,3-butadien   | <0,1       |                   |  |
| 18. C5+  | 01         |                   |  |
| Oktanové číslo motoru MON                                    | 94,5       | .                 | PN-EN 589 +A1:2012 příl.B <sup>A</sup>                                     |
| Celkový obsah dienů (včetně 1,3 butadienu)                   | <0,1       | % (mol/mol)       | PN-EN 27941:2015-12A <sup>A</sup>  |
| Sirovodík  | neobsahuje | .                 | PN-EN ISO 8819:2000 <sup>A</sup>   |
| Celkový obsah síry   | <1,0       | mg/kg             | ASTM D 6667-14   |
| Obsah vody   | nenalezen  | .                 | PN-EN 15469:2009 <sup>A</sup>  |
| Zůstává po odpaření  | <20        | mg/kg             | PN-EN 15470:2017-08 <sup>A</sup>   |
| Hustota při 15°C   | 533,3      | kg/m <sup>3</sup> | PN-EN ISO 8973:2000 <sup>A</sup>   |
| Korozní zkouška na měděné desce (1 h při 40°C)               | třída 1    | .                 | PN-EN ISO 6251:2001 <sup>A</sup>   |
| Relativní tlak par při 40°C                                  | 987        | kPa               | PN-EN 589+A1:2012 příl.C <sup>A</sup><br>+PN-EN ISO 8973:2000 <sup>A</sup> |
| Teplota, při které není relativní tlak par nižší než 150 kPa | -13        | °C                |  |
| Zápach   | 2)         | .                 | PN-EN 589+A1:2012 příl.A <sup>A</sup>                                      |

2) Nepříjemný a zaznamenanatelný ve vzduchu při koncentraci 20% dolní meze výbušnosti.