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|  | COMPANY TECHNICAL SPECIFICATION | CTS 1 – 08 |
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| PROPAN - BUTAN LIQUEFIED PETROLEUM GAS (LPG) | | |

1. Technical requirements and test methods

| № | Property | Unit | Value | | Test Method |
|-----|--|-------------------|---|--------|--|
| | | | min | max | |
| 1. | Motor octane number, MON | | 89,0 | - | БДС EN 589, Annex B |
| 2. | Total sulphur content | mg/kg | - | 50 | БДС EN 24260 ASTM D 3246 ASTM D 6667 |
| 3. | Copper strip corrosion (1 h at 40°C) | rating | Class 1 | | БДС EN ISO 6251 |
| 4. | Vapour Pressure at 40 °C | kPa | - | 1550 | БДС EN ISO 8973 БДС EN 589 and Annex C |
| 5. | Vapour Pressure at °C: ➤ minus 5 °C for grade B (winter) ➤ plus 10 °C for grade D (summer) | kPa | 150 150 | - - | БДС EN ISO 8973 БДС EN 589 and Annex C |
| 6. | Density at 15 °C | kg/m ³ | report | | БДС EN ISO 8973 |
| 7. | Hydrogen sulphide* | | negative | | БДС EN ISO 8819 |
| 8. | Water content* | | pass | | БДС EN 15469 |
| 9. | Evaporation residue* | mg/kg | - | 60 | БДС EN 15470 БДС EN 15471 |
| 10. | Odour* | | Unpleasant and distinctive at 20 % LFL | | БДС EN 589, 6.3 and Annex A |
| 11. | Hydrocarbon composition: ➤ $\sum C_2$ ➤ propane ➤ propene ➤ n-butane ➤ i-butane ➤ butenes ➤ 1,3 butadiene ➤ $\sum C_5$ ➤ Total dienes content (including 1,3 butadiene) | % (m/m) | report - 75 report - 50 report report report report - 0,5 | | БДС EN 27941 |


Notes:

* - The indices to be determined periodically, but not less than once per month.

БДС – Bulgarian standard;

Seasons: grade B - Winter - from 16 October to 15 April;

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|-------------|---------------------------|-------------|
| Revision 01 | Validity from: 15.12.2021 | Page 1 of 2 |
|-------------|---------------------------|-------------|

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| LUKOIL Neftohim Burgas AD | | |
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grade D - Summer - from 16 April to 15 October;

2. Product description

Colorless Liquefied Gas for industrial, everyday and utilities purposes.

3. Method for production and sampling

3.1 Blending of propane, propene, butane and butenes.

3.2 Sampling procedure corresponds to БДC ISO 4257.

- Batch is the quantity of one kind or brand product, with same qualitative indices, produced by the same technologies, stored in one or more tanks and accompanied by a test document.

4. Storage

In covered steel tanks, according to the regulations for liquefied and compressed gasses.

5. Transportation and documents

5.1 Tankers, tank lorry and rail tanks, observing the transport regulation of dangerous goods.

5.2 The product has UN № 1965 according to UNO (United Nations Organization).

5.3 Each shipment shall be accompanied by Quality Certificate of the test results according to point 1.

5.4 Product SDS (Safety Data Sheet) is submitted to the user prior or at the time of first delivery.

end

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| Revision 01 | Validity from: 15.12.2021 | Page 2 of 2 |
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