

## AUTOMOTIVE LPG FUEL<sup>4, 5, 7</sup>

**USE: FUEL FOR USE IN LPG VEHICLES DESIGNED TO RUN ON AUTOMOTIVE LPG FUEL**

- **GRADE A (WINTER) – PROPANE RICH**
- **GRADE C, D (SUMMER) – BUTANE RICH**

| PROPERTY   | MU     | LIMITS                                   |      | TEST METHOD  |
|--|--------|--|------|--|
|  |        | Min.                                     | Max. |  |
| Antiknock value:<br>MON  |        | 89                                       | -    | SR EN 589+A1:12 <sup>3</sup> (Anexa B)   |
| Total dienes content<br>(inclusive 1,3 butadiene)                        | % mol  | -  | 0.5  | SR EN 27941:00 <sup>3</sup>  |
| Hydrogen sulphide  |        | negative                                 |      | SR EN ISO 8819:02 / ASTM D 2420-13   |
| Sulphur total (after stenching) <sup>1</sup>                             | mg/kg  | -  | 50   | ASTM D 6667:14 <sup>3</sup>  |
| Cooper strip corrosion<br>(1 h at 40°C)                                  | rating | class 1                                  |      | ASTM D 1838-14 <sup>3</sup> / SR EN ISO 6251:02 <sup>3</sup>   |
| Evaporation residue  | mg/kg  | -  | 60   | SR EN 15471:08 <sup>3</sup>  |
| Vapour pressure <sup>6</sup> gauge at 40°C                               | kPa    | -  | 1550 | ASTM D 1267-12 <sup>3</sup> / SR EN ISO 4256:02 <sup>3</sup><br>SR EN ISO 8973:02 <sup>3</sup> (pct.6.3)<br>SR EN 589+A1:12 (Anexa C) <sup>3</sup> |
| Vapour pressure gauge, min 150<br>kPa at a temperature of <sup>2</sup> : | °C     |  |      |  |
| -for grade A   |        | -  | -10  | SR EN ISO 8973:02 <sup>3</sup> ( pct.6.3)  |
| -for grade C   |        | -  | 0    | SR EN 589+A1:12 (Anexa C) <sup>3</sup>   |
| for grade D  |        | -  | +10  |  |
| Water  |        | Pass                                     |      | EN ISO 13758:96 <sup>3</sup> / ASTM D 2713:15 <sup>3</sup><br>SR EN ISO 13758:03 <sup>3</sup> / SR EN 15469:08                                     |
| Odour  |        | Unpleasant and distinctive<br>at 20% LII |      | SR EN 589+A1:12 <sup>3</sup> (pct.6.3 si Anexa A)  |

NOTES: 1) In order to provide a specific odour, permitting the detection of the possible leaks, a sufficient amount of ethylmercaptan is added to the product. 2) Winter: from October, 1 to April, 30; for Summer: from May, 1 to September, 30 - no minimum vapour pressure limit is specified. 3) Accredited test by RENAR 4) The manufacturer warrants that product is unadditivated with methanol or other anti freezing agents. 5) Certified product by RAR. 6) It must be observed that minimum limits of vapour pressure at 40°C to be according to: for type A - 950kPa; for type C - 700 kPa; for type D - 500 kPa. 7) Name at the distribution pump: AUTOMOTIVE LPG FUEL

Quality control: control is done on lot.

Each batch will have maximum one wagon for delivery in tank wagons or max. 5000 LPG bottles for delivery in LPG bottles. The lot will have product of same type.

During testing, the product must comply with all parameters depicted in standard specification for corresponding product/type. If not, the batch is rejected. Sampling is done in accordance with the sampling procedure.

Sampling procedure: according to ASTM D 1265-11 / SR EN ISO 4257:2002/AC:2007

Informations about handling, transportation and storage: according to "Safety Data Sheet" FDS-1.4.2 T.

**Quality-Environment-Occupational Health and Safety Integrated Management System** is certified to the following standards:

- ISO 9001:2008
- ISO 14001:2004
- BS OHSAS 18001:2007

The test lab is accredited by RENAR, in compliance with SR EN ISO/CEI 17025:2005.

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**STANDARD SPECIFICATION, SS-1.4.2 T - AUTOMOTIVE LPG FUEL**