

EFIX 95 GASOLINE ^{3, 4, 9}

USE: FUEL FOR SPARK IGNITION ENGINES

| PROPERTY | UM | LIMITS | | TEST METHOD |
|---|-----------------------|----------------|-------|---|
| | | Min. | Max. | |
| RON Antiknock value | | 95,0 | - | ASTM D 2699-16e1 ² SR EN ISO 5164:14 ² / EN ISO 5164:14 ² / ISO 5164:14 ² |
| MON Antiknock value | | 85,0 | - | SR EN ISO 5163:14 ² / EN ISO 5163:14 ² ISO 5163:14 ² / ASTM D 2700-16 ² a |
| Lead content | mg/l | - | 5,0 | SR EN 237:05 ² / EN 237:04 ² / ASTM D 3237-17 ² |
| Density (at 15 oC) | kg/m ³ | 720,0 | 775,0 | ASTM D 4052-16 ² / ASTM D 1298-12b(2017) SR EN ISO 3675:02 / SR EN ISO 3675:02 / C91:05 EN ISO 3675:98 / ISO 3675:98 SR EN ISO 12185:03 ² / EN ISO 12185:96 ² / ISO 12185:96 ² |
| Sulfur content | mg/kg | - | 10,0 | SR EN ISO 20846-12 ² / EN ISO 20846-11 ² / ISO 20846-11 ² SR EN ISO 20884-11 ² / EN ISO 20884-11 ² / ISO 20884-11 ² ASTM D 5453-16e1 ² |
| Manganese content | mg/l | - | 2,0 | EN 16135:11 ² / SR EN 16135:12 ² / IP 592:11 ² |
| Oxidation stability | minute | 360 | - | SR EN ISO 7536:01 ² / EN ISO 7536:96 ² / ISO 7536:94 ² ASTM D 525-12a ² |
| Actual gums content (washed with solvents) | mg/100 ml | - | 5 | SR EN ISO 6246:17 ² / EN ISO 6246:17 ² / ISO 6246:17 ² ASTM D 381-12 ² (17) |
| Copper strip corrosion rating (3 h at 50 °C) | evaluare | class 1 | | SR EN ISO 2160-03 ² / EN ISO 2160-98 ² / ISO 2160-98 ² ASTM D 130-12 ² |
| Aspect | Clear and transparent | | | Visual inspection |
| Type of hydrocarbons content | % (v/v) | | | |
| - Olefins | | - | 18,0 | SR EN 15553:07 ² / EN 15553:07 ² / SR EN ISO 22854:16 ² ASTM D 1319-15 ² / ASTM D 6839-17 |
| - Aromatics | | - | 35,0 | |
| Benzene content | % (v/v) | - | 1,00 | SR EN 12177:01 / SR EN 12177:01 / AC:02 EN 12177:98 / SR EN ISO 22854:16 ² / ASTM D 6839-17 |
| Oxygen content | % (m/m) | - | 2,7 | SR EN ISO 22854:16 ² |
| Oxygenate compounds content | % (v/v) | | | |
| Methanol | | - | 3,0 | |
| Ethanol ⁵ | | - | 5,0 | |
| Iso-propil alcohol | } | | | SR EN ISO 22854:16 ² ASTM D 6839-17 |
| Iso-butyl alcohol | | | | |
| Tert-butyl alcohol | | | | |
| Ethers (5 or more C atoms) | | | | |
| Other oxygenates | | | | |
| Bio-component ⁶ | % (v/v) | To be reported | | % (v/v) bio = % (v/v) bio-ethanol + 0,47x% (v/v) bio-ETBE |
| Distillation | | | | |
| Evaporated at 70 °C, E70 | % (v/v) | | | |
| - Summer ¹ | | 20,0 | 48,0 | |
| - Winter ¹ | | 22,0 | 50,0 | ASTM D 86-17 ² |
| - Transition ¹ | | 20,0 | 50,0 | SR EN ISO 3405:11 ² |
| Evaporated at 100 °C, E100 (Summer ¹ , Winter ¹ , transition ¹) | % (v/v) | 46,0 | 71,0 | EN ISO 3405:11 ² |
| Evaporated at 150 °C, E150 (Summer ¹ , Winter ¹ , transition ¹) | % (v/v) | 75,0 | - | ISO 3405:11 ² |
| Final boiling point, FBP | °C | - | 210 | |
| Residue of distillation | % (v/v) | - | 2,0 | |

| Vapour Pressure, VP | kPa | | |
|---------------------------|-----------------------------|-------------------|--|
| - Summer ¹ | 45,0 | 60,0 ⁸ | SR EN 13016-1:08 ² / EN 13016-1:07 ² |
| - Winter ¹ | 60,0 | 90,0 | ASTM D 5191-15 ² / ASTM D 6378-10(2016) |
| - transition ¹ | 45,0 | 90,0 | |
| Volatility Index, VLI | Calculation (10 VP + 7 E70) | | |
| - Summer ¹ | - | - | |
| - Winter ¹ | - | - | |
| - transition ¹ | - | 1150 | |

NOTES: 1) Summer - from May, 1 to September, 30; Transition: March 15 to April 30, October 1 to November 15; Winter - from November, 16 to March, 14 2) Accredited test by RENAR 3) The product contains a set of multipurpose additives which prevent deposits on valves and injection nozzles, having favourable effects upon the fuel consumption and emissions 4) Certified product by RAR 5) The ethanol, as a blending component used, will be in accordance with EN 15376 in force at the time of product batch manufacturing 6) The bio-component content will respect the laws in force at the time of product batch manufacturing 7) Volume blending restricted by 2,7% (m/m) maximum oxygen content 8) Tabel 1 - The permitted vapour pressure waiver during summer time for ethanol content and only if ethanol is biological origin 9) Commercial product name: EFIX GASOLINE 95, EN 228.

Table 1 – Vapour pressure waiver permitted for unleaded gasoline containing bioethanol

| Bioethanol content, % v/v | Vapour Pressure Waiver Permitted, kPa |
|------------------------------|---|
| 0 | 0 |
| 1 | 3,7 |
| 2 | 6,0 |
| 3 | 7,2 |
| 4 | 7,8 |
| 5 | 8,0 |

| Bioethanol content, % v/v | Vapour Pressure Waiver Permitted, kPa |
|------------------------------|---|
| 6 | 8,0 |
| 7 | 7,9 |
| 8 | 7,9 |
| 9 | 7,8 |
| 10 | 7,8 |

Quality control: control is done on lot/batch.

Each batch will be tank size (max. 5,000 tones). The lot (batch) 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.

In case of litigious, the quality control will be done using the samples kept for these cases, sampling being done in accordance with the sampling procedure.

Sampling procedure: SR EN ISO 3170:2004 / C91:05 / ASTM D 4057-12

Information about handling, transportation and storage: according to Safety Data Sheet 2.1 T.

The integrated Quality-Environment-Occupational Health and Safety Management System is certified by DNV-GL according to the following standards:

- ISO 9001
- ISO 14001
- BS OHSAS 18001

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

© **ROMPETROL RAFINARE SA** Unauthorized reproduction by any mean, partial or total, is prohibited.