

98 RON GASOLINE ^{3, 8, 9}

USE: FUEL FOR SPARK IGNITION ENGINES

| PROPERTY | UM | LIMITS | | TEST METHOD |
|--|-------------------|-----------------------|---------|--|
| | | Min. | Max. | |
| RON Antiknock value | | 98,0 | - | ASTM D 2699-23 ² SR EN ISO 5164:2014 ² / EN ISO 5164:2014 ² / ISO 5164:2014 ² |
| MON Antiknock value | | 86,0 | - | SR EN ISO 5163:2014 ² / EN ISO 5163:2014 ² ISO 5163:2014 ² / ASTM D 2700-23 ² |
| Lead content ⁷ | mg/l | - | 5,0 | SR EN 237:2005 ² / EN 237:2004 ² / ASTM D 3237-22 ² |
| Density (at 15 oC) | kg/m ³ | 720,0 | 775,0 | ASTM D 4052-22 ² / ASTM D 1298-12b(2017)e1 SR EN ISO 3675:2002 / SR EN ISO 3675:2002 /C91:2005 EN ISO 3675:1998 / ISO 3675:1998 SR EN ISO 12185:2003 ² / EN ISO 12185:1996 ² / ISO 12185:1996 ² |
| Sulfur content | mg/kg | - | 10,0 | SR EN ISO 20846 :2020 ² / EN ISO 20846:2019 ² / ISO 20846 :2019 ² / SR EN ISO 20884 :2020 ² ; SR EN ISO 20884 :2020 ² / A1 :2021 ² / EN ISO 20884 :2019 ² ; EN ISO :2019 ² / A1 :2021 ² / ISO 20884 :2019 ² ; ISO 20884 :2019 ² / Amd1 :2021 ² ASTM D 2622-21 ² / ASTM D 5453-19a ² |
| Manganese content ⁷ | mg/l | - | 2,0 | EN 16135:2011 ² / SR EN 16135:2012 ² / IP 592/11 ² |
| Oxidation stability ⁷ | minute | 360 | - | SR EN ISO 7536:2001 ² / EN ISO 7536:1996 ² / ISO 7536:1994 ² ASTM D 525-12a(2019) ² |
| Actual gums content (washed with solvents) | mg/100 ml | - | 5 | SR EN ISO 6246:2017 ² ; SR EN ISO 6246:2017/A1 :2020 ² / EN ISO 6246:2017 ² ; EN ISO 6246 :2017/A1 :2019 / ISO 6246:2017 ² ; ISO 6246:2017/AMD 1 :2019 ² /ASTM D 381-22 ² |
| Copper strip corrosion rating (3 h at 50 °C) | rating | | 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) | | | SR EN 15553:2022 ² / EN 15553:2021 ² SR EN ISO 22854:2021 ² / EN ISO 22854:2021 ² / ISO 22854:2021 ² ASTM D 1319-20a ² / ASTM D 6839-21a |
| - Olefins | | - | 18,0 | |
| - Aromatics | | - | 35,0 | |
| Benzene content | % (v/v) | - | 1,00 | SR EN ISO 22854:2021 ² / EN ISO 22854:2021 ² / ISO 22854:2021 ² ASTM D 6839-21a |
| Oxygen content | % (m/m) | - | 3,7 | SR EN ISO 22854:2021 ² / EN ISO 22854:2021 ² / ISO 22854:2021 ² ASTM D 6839-21a |
| Oxygenate compounds content | % (v/v) | | | |
| Methanol | | - | 3,0 | |
| Ethanol ⁴ | | - | 10,0 | |
| Iso-propil alcohol | | - | 12,0 | SR EN ISO 22854:2021 ² / EN ISO 22854:2021 ² / ISO 22854:2021 ² |
| Iso-butyl alcohol | | - | 15,0 | ASTM D 6839-21a |
| Tert-butyl alcohol | | - | 15,0 | |
| Ethers (5 or more C atoms) | | - | 22,0 | |
| Other oxygenates | | - | 15,0 | |
| Bio-component ⁵ | % (v/v) | To be reported | | % (v/v) bio = % (v/v) bio-ethanol + 0,48x% (v/v) bio-ETBE |
| Distillation | | | | ASTM D 86-23 ² |
| Evaporated at 70 °C, E70 | % (v/v) | | | SR EN ISO 3405:2019 ² |
| - Summer ¹ | | 22,0 | 50,0 | EN ISO 3405:2019 ² |
| - Winter ¹ | | 24,0 | 52,0 | ISO 3405:2019 ² |
| - Transition ¹ | | 22,0 | 52,0 | |

| | | | | |
|--|---------|------|-------------------|--|
| Evaporated at 100 °C, E100 (Summer ¹ , Winter ¹ , transition ¹) | % (v/v) | 46,0 | 72,0 | |
| Evaporated at 150 °C, E150 (Summer ¹ , Winter ¹ , transition ¹) | % (v/v) | 75,0 | - | |
| Final boiling point, FBP | °C | - | 210 | |
| Residue of distillation | % (v/v) | - | 2,0 | |
| <hr/> | | | | |
| Vapour Pressure, VP | kPa | | | |
| - Summer ¹ | | 45,0 | 60,0 ⁶ | SR EN 13016-1:2018 ² / EN 13016-1:2018 ² |
| - Winter ¹ | | 60,0 | 90,0 | ASTM D 5191-22 ² |
| - transition ¹ | | 45,0 | 90,0 | |
| <hr/> | | | | |
| Volatility Index, VLI | | | | Calculation (10 VP + 7 E70) |
| - Summer ¹ | | - | - | |
| - Winter ¹ | | - | - | |
| - transition ¹ | | - | 1164 | |

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 3) Product certified by RAR 4) The ethanol, as a blending component used, will be in accordance with EN 15376 in force at the time of product batch manufacturing 5) The bio-component content will respect the laws in force at the time of product batch manufacturing 6) In Table 1 (according to EN 228) are mentioned the permitted vapour pressure waiver during summer time depending on the ethanol content, in accordance with the national legislation in force and with the condition that the ethanol used is a biofuel 7) This condition is guaranteed by the manufacturing technology and it is checked weekly 8) The fuel meets all the requirements of the SR EN 228 standard in force 9) Product's commercial name: 98 RON GASOLINE.

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

| Bioethanol content, %v/v | Vapour Pressure Waiver Permitted, kPa | Bioethanol content, %v/v | Vapour Pressure Waiver Permitted, kPa |
|-----------------------------|--|-----------------------------|--|
| 0 | 0 | 6 | 8,0 |
| 1 | 3,7 | 7 | 7,9 |
| 2 | 6,0 | 8 | 7,9 |
| 3 | 7,2 | 9 | 7,8 |
| 4 | 7,8 | 10 | 7,8 |
| 5 | 8,0 | | |

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.

The quality of delivered product is certified by Conformity Declaration issued in accordance with the national legislation in force.

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

Sampling procedure: according to SR EN ISO 3170:2004/SR EN ISO 3170:2004/C91:05/ASTM D 4057-22

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

The Integrated Management System is certified according to the following standards:

- ISO 9001
- ISO 14001
- ISO 45001
- ISO 50001

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

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