

| CHARACTERISTICS                                      | UNITS     | LÍMITS (1)           | TEST METHOD                      |  |                    |
|--|-----------|----------------------|----------------------------------|--|--------------------|
|  |           |                      | STANDARDS EN 5376 (2)            | STANDARDS UNE (2)                            | STANDARDS ASTM (2) |
| Ethanol content + higher saturated alcohol(s)        | % m/m     | minimum 98,7         | EN 15721                         | UNE-EN15721                                  |                    |
| Higher saturated monoalcohols content(C3-C5) (3) (4) | % m/m     | maximum 2,0          | EN 15721                         | UNE-EN 15721                                 |                    |
| Methanol content(3)                                  | % m/m     | maximum 10           | EN 15721                         | UNE-EN 15721                                 |                    |
| Water content(5)                                     | % m/m     | maximum 0,300        | EN 15489<br>EN 15692             | UNE-EN 15489<br>UNE-EN 15692                 |                    |
| Total acidity(expressed as acetic acid)              | % m/m     | maximum 0,007        | EN 15491                         | UNE-EN15491                                  |                    |
| Electrical conductivity (6)                          | µS/cm     | maximum 2,5          | EN 15938                         | UNE-EN 15938                                 |                    |
| Appearance   |           | Clear and colourless | EN 15769                         | UNE-EN 15769                                 |                    |
| Inorganic chloride content                           | mg/kg     | maximum 1,5          | EN 15492                         | UNE-EN 15492                                 |                    |
| Sulfate content                                      | mg/kg     | maximum 3,0          | EN 15492                         | UNE-EN 15492                                 |                    |
| Copper content(7)                                    | mg/kg     | maximum 0,100        | EN 15488<br>EN 15837             | UNE-EN 15548<br>UNE-EN 15837                 |                    |
| Phosphorus content(7)                                | mg/l      | maximum 0,15         | EN 15487<br>EN 15837             | UNE-EN15487<br>UNE-EN 15837                  |                    |
| Involatile material content                          | mg/100 ml | maximum 10           | EN 15691                         | UNE-EN 15691                                 |                    |
| Sulfur content                                       | mg/kg     | maximum 100          | EN 15485<br>EN 15486<br>EN 15837 | UNE-EN 15485<br>UNE-EN 15486<br>UNE-EN 15837 |                    |
| EDITION: 1   |           | 20/09/2020           |                                  |  |                    |
| SEE NOTES IN THE NEXT PAGE                           |           |                      |                                  |  |                    |

CLIMATE DEPENDENT REQUIREMENTS

Given the known potential for ethanol to absorb water, suppliers shall ensure that no water segregation occurs under the range of climatic and fuel distribution conditions experienced



**viroque energy**  
Siempre a tu servicio

NOTES:

- (1 ) All test methods referred to in this document include a precision statement according to EN ISO 4259. In cases of dispute, the procedures for resolving the dispute and interpretation of the results based on test method precision, described in EN ISO 4259, shall be used.
- (2 ) For standards established in EN 15376, methods specified in the second paragraph of this rule should be applied. For other test methods, those corresponding to the latest release should be applied.
- (3 ) The result of this test method refers to the sample free of water.
- (4 ) The higher saturates alcohols respond to the formula  $C_nH_{2n+1}OH$ , when n is 3, 4 o 5.
- (5 ) In cases of dispute concerning water content EN 15489 shall be used
- (6 ) It is measures before adding additives
- (7 ) In cases of dispute concerning copper or sulphur content, EN 15837 shall be used.

IN CASE OF CHANGES IN OFFICIAL SPECIFICATIONS IN SPAIN, THIS BOX WILL WE REVISED TO BE ADAPTED TO THE NEW SITUATION