

# **COMPANY TECHNICAL SPECIFICATION**

# **FUEL FOR DIESEL ENGINES**

# 1. Technical requirements

| №   | Property  | Units                    | Norms        |                 | Method                                 |
|-----|---|--------------------------|--------------|-----------------|--|
|     |   |                          | min          | max             |  |
| 1.  | Density at 15 °C  | кg/m³                    | 820,0        | 845,0           | BDS EN ISO<br>3675*BDS EN<br>ISO 12185 |
| 2.  | Cetane Number   |                          | 51,0         | -               | BDS EN ISO 5165                        |
| 3.  | Cetane Index  |                          | 46,0         | -               | BDS EN ISO 4264                        |
| 4.  | Mass Fraction of Sulfur   | mg/kg                    | -            | 10,0            | BDS EN ISO 20846                       |
| 5.  | Flash Point by Pensky-Martens Closed Cup<br>Manual Tester   | °C                       | Above 55     | -               | BDS EN ISO 2719                        |
| 6.  | Carbon Residue (on 10 % Dist<br>Residue)  | % (m/m)                  | -            | 0,30            | BDS EN ISO 10370                       |
| 7.  | Ash Content   | % (m/m)                  | -            | 0,01            | BDS EN ISO 6245                        |
| 8.  | Copper Corrosion (3 h / 50°C)   | клас                     | ]            | l <sub>_</sub>  | BDS EN ISO 2160                        |
| 9.  | Kinematic Viscosity at 40 °C  | mm <sup>2</sup> /s       | 2,00         | 4,50            | BDS EN ISO 3104                        |
| 10. | Water Content by Coulometric KF   | mg/kg                    | -            | 200             | BDS EN ISO 12937                       |
| 11. | Total Contamination   | mg/kg                    | -            | 24              | BDS EN 12662                           |
| 12. | Oxidation Stability of Middle Distillate Fuels  | g/m³                     | -            | 25              | BDS EN ISO 12205                       |
|     |   | h                        | 20           | -               | BDS EN 15751                           |
| 13. | Mean wear scar diameter (wsd 1,4) at 60°C   | μm                       | -            | 460             | BDS EN ISO<br>12156-1                  |
| 14. | Aromatic Hydrocarbon Types in Middle Distillates by HPLC  | % (m/m)                  | -            | 8,0             | BDS EN 12916                           |
| 15. | <ul> <li>Distillation Characteristics</li> <li>Recovered at 250 °C</li> <li>Recovered at 350 °C</li> <li>95 % Recovered at</li> </ul> | % (V/V)<br>% (V/V)<br>°C | -<br>85<br>- | <65<br>-<br>360 | BDS EN ISO 3405                        |
| 16. | Cold Filter Plugging Point (CFPP)  Class A Class E  | °C                       |              | 5<br>minus 15   | BDS EN 116                             |
| 17. | Fatty Acids Methyl Ester - Range A  | % (V/V)                  | -            | 7,0             | BDS EN 14078                           |
| 18. | Specific heat of combustion (lower)**   | MJ/кg                    | 41,868       | -               | ASTM D 4868<br>ASTM D 240              |
| 19. | Manganese   | mg/l                     | -            | 2,0             | BDS EN 16576                           |



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- \*Arbitration method
- \*\* The indicator is analyzed only upon special request from the client.

## 2. Product description

Colorless to yellowish, highly flammable liquid with specific odor. Fuel for engines adapted to run on diesel fuel.

#### 3. Method of production and sampling

- 3.1 Diesel fuels are obtained by mixing distillate fractions from primary and secondary oil processing. Insertion of grafts is allowed.
- 3.2 Sampling for analysis is carried out in batches according to BDS EN ISO 3170.

"Batch" is a quantity of one type or brand of liquid fuel, uniform in quality, produced by the same technology, stored in one or more tanks and accompanied by one test document.

#### 4. Packaging, marking, storage

Storage is carried out in closed stationary tanks, intended only for this product.

### 5. Transportation and documentation

- 5.1 Transportation is carried out by tankers, road and rail. tanks meeting the requirements for the carriage of liquid flammable substances.
- 5.2 According to the UN classification, the product is UN №1202.
- 5.3 Each shipped quantity of diesel fuel is accompanied by a Declaration of Conformity, according to the Ordinance on the requirements for the quality of liquid fuels, the conditions, order and manner of their control.
- 5.4 For each batch of diesel fuel, a Protocol or Test Certificate is issued by an accredited laboratory with the results of the analyzes under item 1.
- 5.5 The user is provided with a Safety Data Sheet (SDS) of the product, before or during the first delivery.

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