

TURKMENISTAN
Turkmenbashy Oil Refinery complex

DIESEL OIL FROM LITTLE SULFUROUS CRUDE OIL

TŞ 05766698-06-2005

| № | Description of index | figure |
|----------|--|----------------|
| 1 | Cetane number, not less than | 45 |
| 2 | Fraction composition: - 50% °C, not more than - 96% °C, not more than | 290 360 |
| 3 | Kinematic viscosity 20°C, mm ² /s, (sSt) | 3,0-6,0 |
| 4 | Pour point, °C, not more than | - 10 |
| 5 | Cloud point, °C, not more than | - 5 |
| 6 | Flash point in close cup, °C, not less than - for diesel locomotive and ship engines and gas turbines - for diesels of the general-purpose - for diesels of the general-purpose | 62 50 40 |
| 7 | Mass portion of sulfur, %, not more than | 0,2 |
| 8 | Mass portion of mercaptane sulfur, %, not more than | 0,008 |
| 9 | Mass portion of hydrogen sulfide | no |
| 10 | Copper plate testing | ok |
| 11 | Presence of acids and bases, soluble in water | no |
| 12 | Actual resin concentration, mg 100 sm ³ fuel, not more than | 40 |
| 13 | Acidity, mg KOH by 100 sm ³ , not more than | 10 |
| 14 | Iodine number, mg I ₂ for 100g, not more than | 6 |
| 15 | Ash contents, % weight, not more than | 0,005 |
| 16 | Carbon residue of 10% remainder %, not more than | 0,25 |
| 17 | Filtering factor, not more than | 3,0 |
| 18 | Presence of mechanical impurities | no |
| 19 | Presence of water | no |
| 20 | Density 20°C, kg/m ³ , not more than | 860 |

Note:

1. From 1 March before 1 November production and using fuel allowed with pour point not above 0 °C (without determination of the cloud point) and contents of water not more "traces".
2. A filtering factor is defined in reservoir of the transfer base, but plant guarantees correspondence of the rate, specified in standard specifications.
3. Factor on points 1, 7, 8, 9, 15 are defined seasonally, once at 10 days.

**TURKMENISTAN
TURKMENBASHY OIL REFINERY COMPLEX**

**HYDROTREATED DIESEL FUEL
TŞ- 05766698-02-2012**

| № | Description of index | Figure |
|----------|--|---------------|
| 1 | Mass portion of sulfur,ppm,not more than | 0,01(100) |
| 2 | Fraction composition: -95%- °C, not more than: | 340 |
| 3 | Cetane index, not less than | 50 |
| 4 | Presence of water, ppm, not more than | 200 |
| 5 | Pour point, °C, no more than | -30 |
| 6 | Color, not more than -by ASTM -by SNT | 2.0 |
| 7 | Flash point in close cup, °C, not less than | 62 |
| 8 | Mass portion of poly aromatics, %, not more than | 11 |
| 9 | Density 15 °C, kg/m ³ not more than | 840 |
| 10 | Mass portion of nitrogen, ppm, not more than | 30 |
| 11 | Copper plate testing | Ok |
| 12 | Filtering factor, not more than | 3.0 |
| 13 | Kinematik viscosity 20 °C mm ² /s (sST) | No |
| 14 | Ash contents, % weight, not more than | 0.25 |
| 15 | Carbon residue of 10 % remainder, %, not more than | 0.005 |