



Crude **ES SIDER**

Country **Libya**

TBP
DISTILLATION

| | | | | | | | | | |
|--------------------------------|-------|------------|-----------|-----|------|------|-----|------|------|
| Density at 15°C, kg/m3 | 843.3 | Assay Date | 16-Oct-18 | °C | wt% | vol% | °C | wt% | vol% |
| °API | 36.2 | | | 080 | 8.3 | 10.9 | 460 | 70.5 | 74.2 |
| Bbl/mt | 7.471 | | | 090 | 9.3 | 12.1 | 480 | 73.3 | 76.7 |
| Acidity, mg KOH/g | 0.16 | | | 100 | 10.4 | 13.4 | 500 | 75.9 | 79.2 |
| Sulphur, wt% | 0.38 | | | 120 | 12.8 | 16.1 | 520 | 78.4 | 81.4 |
| Hydrogen Sulphide, mg/kg | 2 | | | 140 | 15.5 | 19.1 | 540 | 80.7 | 83.6 |
| Mercaptan Sulphur, mg/kg | 79 | | | 160 | 18.8 | 22.8 | 560 | 82.8 | 85.5 |
| Viscosity, cSt at 10 °C | 67.1 | | | 180 | 22.3 | 26.5 | 580 | 84.8 | 87.3 |
| 50 °C | 1.5 | | | 200 | 25.5 | 29.9 | | | |
| Pour Point, °C | 0 | | | 220 | 28.7 | 33.3 | | | |
| Total Nitrogen, wt% | 0.13 | | | 240 | 32.3 | 37.0 | | | |
| Wax, wt% | - | | | 260 | 36.1 | 40.9 | | | |
| Wax Appearance Temperature, °C | - | | | 280 | 40.1 | 44.9 | | | |
| RVP at 37.8 °C, kPa | 270 | | | 300 | 44.0 | 48.8 | | | |
| Water, vol% | - | | | 320 | 47.8 | 52.5 | | | |
| NaCl, mg/kg | - | | | 340 | 51.3 | 56.0 | | | |
| Nickel, mg/kg | 7.1 | | | 360 | 54.8 | 59.4 | | | |
| Vanadium, mg/kg | 1.9 | | | 380 | 58.1 | 62.6 | | | |
| Iron, mg/kg | - | | | 400 | 61.4 | 65.6 | | | |
| Mercury, µg/kg | - | | | 420 | 64.6 | 68.6 | | | |
| | | | | 440 | 67.6 | 71.4 | | | |

PROPERTIES OF TBP CUTS

| LIGHT NAPHTHA | Cuts | Yield | Yield | Den 15°C | S | RSH | RON | MON | | | Napht. | Aro. | RVP | | | |
|-------------------|---------|-------|-------|----------|------|---------|----------|---------|--------|-----------|--------|---------|----------|----------|-------|--------|
| | °C | wt% | vol % | kg/m3 | wt% | mg/kg | clear | clear | | | vol% | vol% | kPa | | | |
| | 15-65 | 5.0 | 6.4 | 656 | 0.01 | 18 | 69.6 | 68.1 | | | 11.4 | 0.4 | - | | | |
| | 15-80 | 6.4 | 8.1 | 667 | 0.01 | 31 | 66.3 | 64.8 | | | 17.6 | 1.0 | - | | | |
| HEAVY NAPHTHA | Cuts | Yield | Yield | Den 15°C | S | RSH | | | | | Napht. | Aro. | | | | |
| | °C | wt% | vol % | kg/m3 | wt% | mg/kg | | | | | vol% | vol% | | | | |
| | 80-150 | 8.8 | 10.0 | 745 | 0.02 | 94 | | | | | 42.7 | 5.5 | | | | |
| 80-175 | 13.2 | 14.7 | 755 | 0.03 | 103 | | | | | 42.1 | 6.3 | | | | | |
| 100-150 | 6.7 | 7.5 | 752 | 0.02 | 98 | | | | | 42.0 | 5.8 | | | | | |
| KEROSENE | Cuts | Yield | Yield | Den 15°C | S | RSH | Smoke | Acidity | Cetane | Freez. Pt | | Aro. | Visc cSt | | | Flash |
| | °C | wt% | vol % | kg/m3 | wt% | mg/kg | Pt mm | mgKOH/g | Index | °C | | vol% | 50°C | | | Point |
| | 150-230 | 13.4 | 14.2 | 792 | 0.08 | 118 | 28 | 0.10 | 43.6 | -57 | | 10.7 | 1.0 | | | 55.8 |
| | 175-230 | 9.0 | 9.5 | 800 | 0.10 | 116 | 29 | 0.11 | 45.2 | -51 | | 12.0 | 1.1 | | | 69.0 |
| 150-250 | 17.1 | 18.0 | 798 | 0.10 | 112 | 29 | 0.11 | 45.5 | -50 | | 11.6 | 1.1 | | | 59.1 | |
| GASOIL | Cuts | Yield | Yield | Den 15°C | S | | Anilin | | Cetane | Cloud Pt | CFPP | Pour Pt | Visc cSt | Visc cSt | UOPK | Flash |
| | °C | wt% | vol % | kg/m3 | wt% | | Point °C | | Index | C | C | C | 50°C | 100°C | | Point |
| | 175-400 | 39.9 | 40.0 | 839 | 0.25 | | 74 | | 53.3 | 2 | -1 | -5 | 2.7 | 1.3 | 11.9 | 82.1 |
| | 230-400 | 30.9 | 30.6 | 851 | 0.30 | | 77 | | 56.7 | 6 | 5 | 4 | 3.7 | 1.7 | 12.0 | 106.2 |
| 230-375 | 26.8 | 26.7 | 845 | 0.29 | | 76 | | 57.3 | 1 | 0 | 0 | 3.3 | 1.5 | 12.0 | 104.5 | |
| VACUUM DISTILLATE | Cuts | Yield | Yield | Den 15°C | S | Conrad. | Anilin | Ni | Va | Total N | Bas N | Pour Pt | Visc cSt | Visc cSt | UOPK | Asp C7 |
| | °C | wt% | vol % | kg/m3 | wt% | wt% | Point °C | mg/kg | mg/kg | wt% | mg/kg | C | 100°C | 150°C | | wt % |
| | 375-550 | 24.4 | 22.8 | 903 | 0.46 | 0.1 | 94 | 0 | 0 | 0.09 | 437 | 42 | 7.6 | 3.1 | 12.1 | 0.3 |
| | 375-565 | 26.0 | 24.2 | 904 | 0.47 | 0.1 | 95 | 0 | 0 | 0.10 | 462 | 43 | 8.1 | 3.2 | 12.1 | 0.4 |
| | 375-580 | 27.5 | 25.5 | 906 | 0.48 | 0.2 | 95 | 1 | 0 | 0.10 | 489 | 44 | 8.7 | 3.4 | 12.1 | 0.4 |
| 400-580 | 23.4 | 21.6 | 908 | 0.50 | 0.2 | 97 | 1 | 0 | 0.12 | 546 | 46 | 10.4 | 3.9 | 12.2 | 0.5 | |
| RESIDUE | Cuts | Yield | Yield | Den 15°C | S | Conrad. | Acidity | Ni | Va | Total N | | Pour Pt | Visc cSt | Visc cSt | Pene | Asp C7 |
| | °C | wt% | vol % | kg/m3 | wt% | wt% | mgKOH/g | mg/kg | mg/kg | wt% | | C | 100°C | 150°C | mm/10 | wt% |
| | > 375 | 42.7 | 38.2 | 939 | 0.68 | 6.6 | 0.2 | 17 | 4 | 0.30 | | 39 | 30 | 8 | - | 1.6 |
| | > 550 | 18.2 | 15.5 | 993 | 0.97 | 15.4 | 0.1 | 39 | 10 | 0.59 | | 55 | 680 | 71 | 134 | 3.4 |
| | > 565 | 16.7 | 14.0 | 999 | 1.00 | 16.8 | 0.1 | 42 | 11 | 0.62 | | 56 | 1020 | 93 | 109 | 3.6 |
| > 580 | 15.2 | 12.7 | 1006 | 1.03 | 18.2 | 0.1 | 46 | 12 | 0.66 | | 57 | 1600 | 125 | 91 | 3.8 | |

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