

22777 Springwoods Village Parkway,
Spring, TX 77389

GORGN16S

| | Butane and Lighter | Lt. Naphtha | Hvy Naphtha | Kerosene | Diesel | Vacuum Gas Oil | Vacuum Residue | |
|--|--------------------------|----------------|----------------|---------------|---------------|-------------------|-------------------|----------|
| Whole crude | IBP - 60F | C5 - 165F | 165 - 330F | 330 - 480F | 480 - 650F | 650 - 1000F | 1000F+ | |
| Cut volume, % | 100.0 | 1.4 | 23.1 | 44.3 | 16.2 | 10.2 | 4.2 | 0.6 |
| API Gravity, | 53.0 | 124.0 | 82.9 | 54.8 | 38.9 | 30.7 | 26.0 | 14.9 |
| Specific Gravity (60/60F), | 0.767 | 0.554 | 0.660 | 0.759 | 0.830 | 0.872 | 0.898 | 0.966 |
| Carbon, wt % | 85.5 | 82.4 | 83.8 | 85.2 | 86.4 | 87.2 | 87.1 | 86.8 |
| Hydrogen, wt % | 14.4 | 17.6 | 16.2 | 14.8 | 13.6 | 12.8 | 12.8 | 12.6 |
| Pour point, F | (34.3) | | | (150.3) | (96.3) | (49.8) | 20.7 | 116.1 |
| Neutralization number (TAN), MG/GM | 0.017 | 0.000 | 0.001 | 0.004 | 0.018 | 0.041 | 0.117 | 0.153 |
| Sulfur, wt% | 0.009 | 0.002 | 0.006 | 0.008 | 0.012 | 0.008 | 0.011 | 0.083 |
| Viscosity at 20C/68F, cSt | 1.0 | 0.5 | 0.6 | 0.9 | 2.0 | 5.5 | 49.6 | 45,302.9 |
| Viscosity at 40C/104F, cSt | 0.8 | 0.4 | 0.5 | 0.7 | 1.5 | 3.4 | 19.4 | 3,258.1 |
| Viscosity at 50C/122F, cSt | 0.7 | 0.4 | 0.5 | 0.7 | 1.3 | 2.8 | 13.3 | 1,179.5 |
| Mercaptan sulfur, ppm | 3.4 | 0.4 | 1.6 | 4.2 | 5.3 | 1.5 | 0.2 | 0.0 |
| Nitrogen, ppm | 4.2 | - | - | 0.0 | 1.9 | 10.6 | 38.2 | 85.7 |
| CCR, wt% | 0.0 | | | | | | 0.1 | 1.3 |
| N-Heptane Insolubles (C7 Asphaltenes), wt% | 0.1 | | | | | | - | 7.2 |
| Nickel, ppm | 0.1 | | | | | | | 7.6 |
| Vanadium, ppm | 0.1 | | | | | | | 7.4 |
| Calcium, ppm | NotAvailable | | | | | | | |
| Reid Vapor Pressure (RVP) Whole Crude, psi | 5.6 | | | | | | | |
| Hydrogen Sulfide (dissolved), ppm | NotAvailable | | | | | | | |
| Salt content, ptb | 0.3 | | | | | | | |
| Paraffins, vol % | 55.7 | 100.0 | 88.8 | 53.9 | 43.0 | 27.9 | 29.5 | 16.3 |
| Naphthenes, vol % | 31.7 | - | 11.2 | 39.4 | 30.5 | 45.2 | 36.3 | 18.0 |
| Aromatics (FIA), vol % | 12.6 | - | - | 6.7 | 26.5 | 26.8 | 34.3 | 65.7 |
| Distillation type, TBP | | | | | | | | |
| IBP, F | (2.3) | | 62.9 | 165.6 | 330.6 | 480.5 | 650.9 | 1,000.7 |
| 5 vol%, F | 100.6 | | 80.4 | 170.7 | 335.8 | 485.5 | 659.2 | 1,007.5 |
| 10 vol%, F | 123.3 | | 91.6 | 176.4 | 341.8 | 491.0 | 668.7 | 1,015.2 |
| 20 vol%, F | 153.2 | | 106.3 | 188.1 | 354.5 | 502.0 | 688.9 | 1,032.0 |
| 30 vol%, F | 179.2 | | 116.8 | 200.2 | 368.0 | 513.3 | 710.9 | 1,050.7 |
| 40 vol%, F | 206.5 | | 125.4 | 213.0 | 382.4 | 524.8 | 734.9 | 1,071.9 |
| 50 vol%, F | 238.2 | | 133.1 | 226.8 | 397.4 | 536.7 | 761.6 | 1,096.3 |
| 60 vol%, F | 279.0 | | 140.1 | 242.0 | 413.1 | 549.8 | 791.9 | 1,125.3 |
| 70 vol%, F | 338.7 | | 146.6 | 259.1 | 429.2 | 564.6 | 827.1 | 1,161.3 |
| 80 vol%, F | 428.0 | | 152.9 | 278.7 | 445.8 | 583.4 | 869.4 | 1,209.3 |
| 90 vol%, F | 536.0 | | 159.0 | 301.9 | 462.8 | 610.9 | 923.4 | 1,283.6 |
| 95 vol%, F | 643.7 | | 162.0 | 315.3 | 471.4 | 629.2 | 957.6 | 1,346.7 |
| EP, F | 1,035.5 | | 164.7 | 328.4 | 479.1 | 647.8 | 995.2 | 1,466.2 |
| Freeze point, F | | | | (138.8) | (85.1) | (38.3) | | |
| Smoke point, mm | | | | 30.5 | 21.6 | 13.5 | | |
| Naphthalenes (D1840), vol% | | | | | 0.2 | 5.0 | | |
| Viscosity at 100C/212F, cSt | 0.5 | 0.3 | 0.3 | 0.4 | 0.8 | 1.4 | 3.7 | 45.3 |
| Viscosity at 150C/302F, cSt | 0.3 | 0.2 | 0.3 | 0.3 | 0.5 | 0.8 | 1.7 | 8.7 |
| Cetane Index 1990 (D4737), | | | | 22.3 | 33.6 | 43.1 | | |
| Cloud point, F | | | | (146.1) | (92.2) | (45.7) | | |
| Aniline pt, F | | | | | 130.2 | 144.8 | 177.0 | |