



# Propellant Data

**Part Number:** 8441C

**Propellant Type:** AeroTech Classic™ (84% solids version)

**Visual Effect:** Yellow-orange flame, no smoke

**% Solids:** 84

**Density:** 0.0595 lb/in<sup>3</sup>

**I<sub>sp</sub> at 1000/14.7 PSI:** 248.2 seconds

**Burn Rate Exponent:** 0.323

**Burn Rate Coefficient:** 0.0304

## Thermodynamic Properties at 1000/14.7 PSI:

ENTHALPY = -46.75623      DENSITY = 1.652  
CSTAR = 5048.21

|                  | CHAMBER     | THR(SHIFT)  | EXH(SHIFT)  |
|------------------|-------------|-------------|-------------|
| PRESSURE (PSIA)  | 1000.000    | 565.092     | 14.700      |
| EPSILON          | .000        | 1.000       | 8.355       |
| ISP              | .000        | 106.210     | 248.188     |
| ISP (VACUUM)     | .000        | 194.877     | 267.458     |
| TEMPERATURE (K)  | 2887.981    | 2639.329    | 1345.096    |
| MOLECULAR WEIGHT | 24.145      | 24.231      | 24.316      |
| MOLES GAS/100G   | 4.142       | 4.127       | 4.113       |
| CF               | .000        | .677        | 1.582       |
| PEAE/M (SECONDS) | .000        | 88.667      | 19.270      |
| GAMMA            | 1.225       | 1.227       | 1.261       |
| HEAT CAP (CAL)   | 44.843      | 44.342      | 39.521      |
| ENTROPY (CAL)    | 246.320     | 246.318     | 246.319     |
| ENTHALPY (KCAL)  | -46.756     | -59.715     | -117.518    |
| DENSITY (G/CC)   | 6.93284E-03 | 4.30207E-03 | 2.20363E-04 |
| ITERATIONS       | 6           | 3           | 4           |

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