

# AEROTECH D21

## CERTIFIED VALUES

Total Impulse: 20 newton-seconds  
Delays: 4, 7

Propellant Type: Composite  
Propellant Mass: 9.6 grams

Casing Dimensions: 18 mm × 70 mm

Certification Date: 88-November-6  
Contest Use Date: 89-February-6

Certification Type: Model Rocket

## STATIC TEST DATA

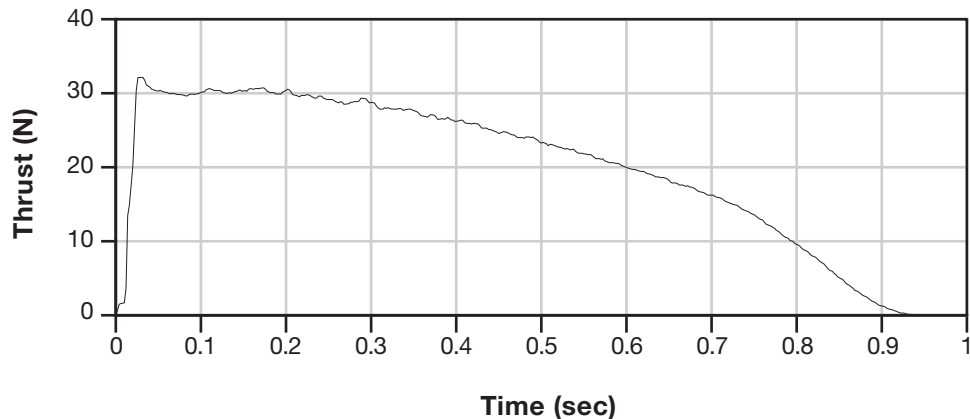
Date Tested: 95-September-3

Total Impulse: 19.59 newton-seconds ( $\sigma$  0.24)  
Peak Thrust: 32.12 newtons ( $\sigma$  0.92)  
Burn Time: 0.94 seconds ( $\sigma$  0.05)  
Average Thrust: 20.84 newtons

Mass After Firing: 10.4 grams

| Delay Time | Average Measured Delay | Initial Mass | Mfg Recommended Max Liftoff Weight |
|------------|------------------------|--------------|------------------------------------|
| 4          | 4.80                   | 24.9 g       | 454 g                              |
| 7          | 7.38                   | 25.0 g       | 318 g                              |

## TYPICAL THRUST-TIME CURVE



## REMARKS

; Aerotech D21 RASP.ENG file made from NAR published data  
; File produced July 4, 2000  
; The total impulse, peak thrust, average thrust and burn time are  
; the same as the averaged static test data on the NAR web site in  
; the certification file. The curve drawn with these data points is as  
; close to the certification curve as can be with such a limited  
; number of points (32) allowed with wRASP up to v1.6.

D21 18 70 4-7 .0096 .0250 A  
0.010 1.367  
0.021 19.367  
0.029 32.120  
0.037 31.667  
0.051 30.528  
0.094 30.074  
0.115 31.213  
0.133 30.074  
0.177 30.760  
0.189 29.842  
0.203 30.528  
0.226 29.842  
0.275 28.935  
0.296 29.389  
0.331 28.027  
0.421 25.971  
0.478 24.146  
0.579 20.728  
0.659 17.774  
0.739 14.356  
0.799 9.569  
0.852 4.557  
0.899 1.139  
0.940 0.000

