

# ESTES B8

## CERTIFIED VALUES

Total Impulse: 4.80 newton-seconds  
Delays: 5 seconds

Propellant Type: Black Powder  
Propellant Mass: 5.5 grams

Casing Dimensions: 18 mm × 70 mm

Certification Date: Continuing  
Contest Use Date: Continuing

Certification Type: Model Rocket

## STATIC TEST DATA

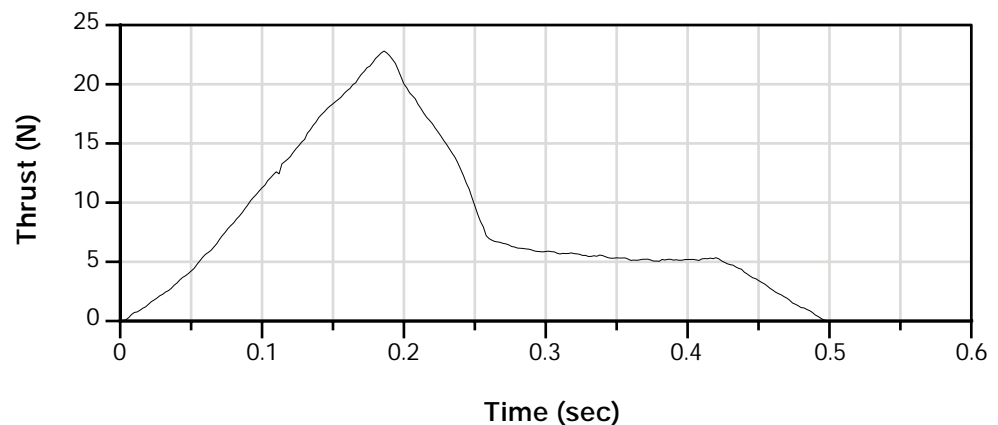
Date Tested: 94-December-4

Total Impulse: 4.23 newton-seconds ( $\sigma$  0.09)  
Peak Thrust: 22.80 newtons ( $\sigma$  0.94)  
Burn Time: 0.50 seconds ( $\sigma$  0.04)  
Average Thrust: 8.46 newtons

Mass After Firing: 10.1 grams

| Delay Time | Average Measured Delay | Initial Mass | Mfg Recommended Max Liftoff Weight |
|------------|------------------------|--------------|------------------------------------|
| 5          | 4.67                   | 17.4 g       | 141.5 g                            |

## TYPICAL THRUST-TIME CURVE



## REMARKS

; Estes B8 RASP.ENG file made from NAR published data  
; File produced October 3, 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.

|       |        |    |   |       |       |   |
|-------|--------|----|---|-------|-------|---|
| B8    | 18     | 70 | 5 | .0055 | .0174 | E |
| 0.031 | 2.437  |    |   |       |       |   |
| 0.068 | 6.662  |    |   |       |       |   |
| 0.102 | 11.212 |    |   |       |       |   |
| 0.142 | 17.062 |    |   |       |       |   |
| 0.187 | 22.800 |    |   |       |       |   |
| 0.196 | 20.640 |    |   |       |       |   |
| 0.212 | 17.871 |    |   |       |       |   |
| 0.227 | 15.434 |    |   |       |       |   |
| 0.239 | 12.996 |    |   |       |       |   |
| 0.249 | 10.071 |    |   |       |       |   |
| 0.259 | 7.149  |    |   |       |       |   |
| 0.277 | 6.337  |    |   |       |       |   |
| 0.306 | 5.850  |    |   |       |       |   |
| 0.351 | 5.362  |    |   |       |       |   |
| 0.391 | 5.037  |    |   |       |       |   |
| 0.419 | 5.362  |    |   |       |       |   |
| 0.436 | 4.550  |    |   |       |       |   |
| 0.464 | 2.437  |    |   |       |       |   |
| 0.500 | 0.000  |    |   |       |       |   |

