

# ESTES 1/2A6

## CERTIFIED VALUES

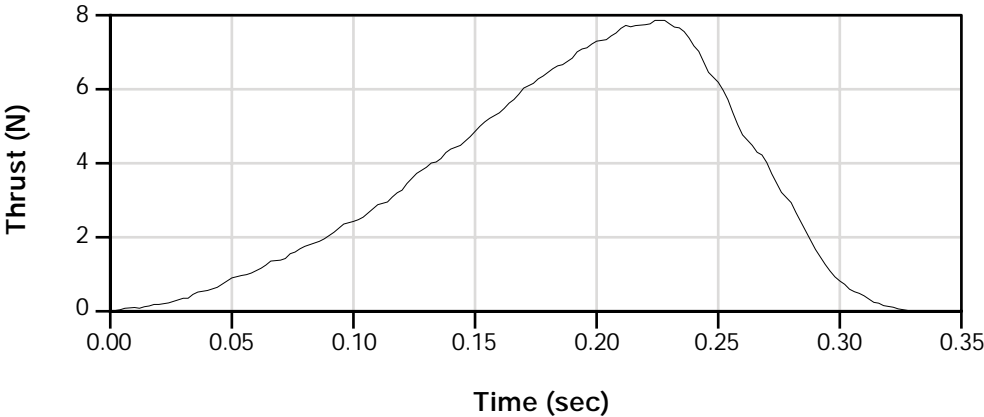
Total Impulse: 1.25 newton-seconds  
Delays: 2 seconds  
Propellant Type: Black Powder  
Propellant Mass: 2.6 grams  
Casing Dimensions: 18 mm × 70 mm  
Certification Date: Continuing  
Contest Use Date: Continuing  
Certification Type: Model Rocket

## STATIC TEST DATA

Date Tested: 95-March-25  
Total Impulse: 1.13 newton-seconds ( $\sigma$  0.04)  
Peak Thrust: 7.86 newtons ( $\sigma$  0.39)  
Burn Time: 0.33 seconds ( $\sigma$  0.02)  
Average Thrust: 3.42 newtons  
Mass After Firing: 9.9 grams

Delay Time	Average Measured Delay	Initial Mass	Mfg Recommended Max Liftoff Weight
2	1.74	13.8 g	70.8 g

## TYPICAL THRUST-TIME CURVE



## REMARKS

Updated: 8/96

; Estes 1/2A6 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.

```
1/2A6 18 70 2 .0026 .0138 E  
0.031 0.404  
0.064 1.258  
0.096 2.263  
0.124 3.467  
0.149 4.720  
0.172 6.023  
0.196 7.027  
0.210 7.528  
0.225 7.860  
0.235 7.482  
0.244 6.683  
0.254 5.685  
0.263 4.487  
0.269 4.087  
0.279 3.039  
0.290 1.790  
0.297 1.042  
0.306 0.593  
0.314 0.344  
0.330 0.000
```

