

# AEROTECH G80

## CERTIFIED VALUES

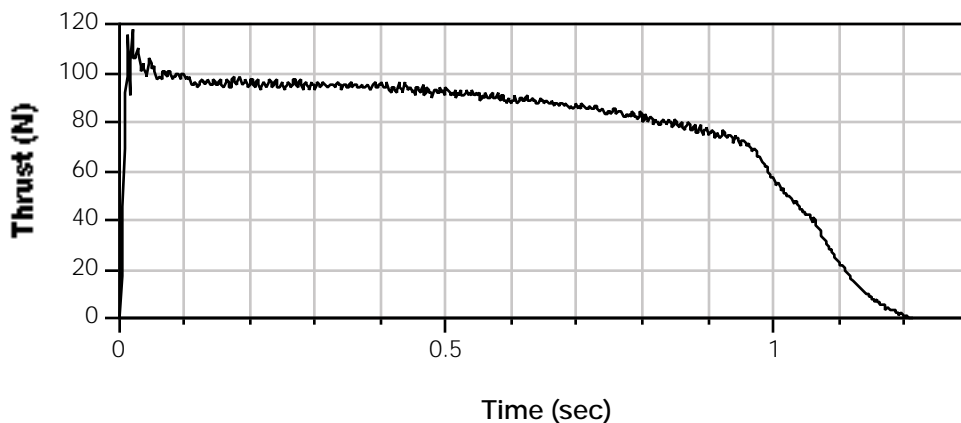
Total Impulse: 94.00 newton-seconds  
Delays: 4, 7 and 10 seconds  
Propellant Type: Composite Blue Thunder  
Propellant Mass: 47.9 grams  
Casing Dimensions: 29 mm × 124 mm  
Certification Date: Continuing  
Contest Use Date: Continuing  
Certification Type: Model Rocket

## STATIC TEST DATA

Date Tested: September 30, 2006  
Total Impulse: 94.00 newton-seconds ( 0.46)  
Peak Thrust: 118.23 newtons ( 10.03)  
Burn Time: 1.21 seconds ( 0.02)  
Average Thrust: 77.41 newtons  
Mass After Firing: 59.6 grams

Delay Time	Average Measured Delay	Initial Mass
4	2.95	112.6 g
7	5.63	113.4 g
10	8.30	114.5 g

## TYPICAL THRUST-TIME CURVE



## REMARKS

AEROTECH G80 Propellant Type: Blue Thunder Mass: 47.9 gr

Data Rate 1500 CPS ISP 200 SEC

Test Date 9/30/06

ENGINE TYPE	TOTAL IMPULSE	MAX THRUST	AVG THRUST	BURN TIME	DELAY TIME	INIT WT	BURNT WT
G80-4	94.83	116.44	77.86	1.22	3.17	112.68	59.87
G80-4	93.74	139.62	75.97	1.23	2.73	112.60	59.27
G80-7	93.59	115.63	76.46	1.22	5.73	113.54	59.69
G80-7	93.47	116.31	79.34	1.18	5.53	113.22	59.60
G80-10	94.16	113.70	76.30	1.23	8.06	114.41	
G80-10	94.24	107.67	78.66	1.20	8.53	114.52	59.46
AVG	94.00	118.23	77.43	1.21		Rated Average Thru 77.41 N	
STD	0.46	10.03	1.27	0.02			
STD %	0.49	8.48	1.64	1.67			

### DELAYS

ALLOWABLE RANGE			INDICATED	AVG	ACTUAL	ACTUAL
3	To	5.5	4	2.95	3.17	2.73
6	To	8.5	7	5.63	5.75	5.53
8	To	12	10	8.30	8.06	8.53

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; AEROTECH G80 RASP.ENG FILE
; 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.

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G80	29	124	4-7-10	0.0479	0.113	AERO
0.006	84.371					
0.018	118.230					
0.027	109.378					
0.037	101.350					
0.042	105.565					
0.059	98.370					
0.113	95.821					
0.185	96.252					
0.277	94.556					
0.404	94.978					
0.526	91.165					
0.671	87.100					
0.792	82.675					
0.885	77.166					
0.943	73.353					
0.971	68.266					
0.997	57.237					
1.030	48.337					
1.059	40.279					
1.085	27.986					
1.112	17.811					
1.144	10.175					
1.168	5.512					
1.182	2.968					
1.210	0.000					

