

AEROTECH I49N

CERTIFIED VALUES

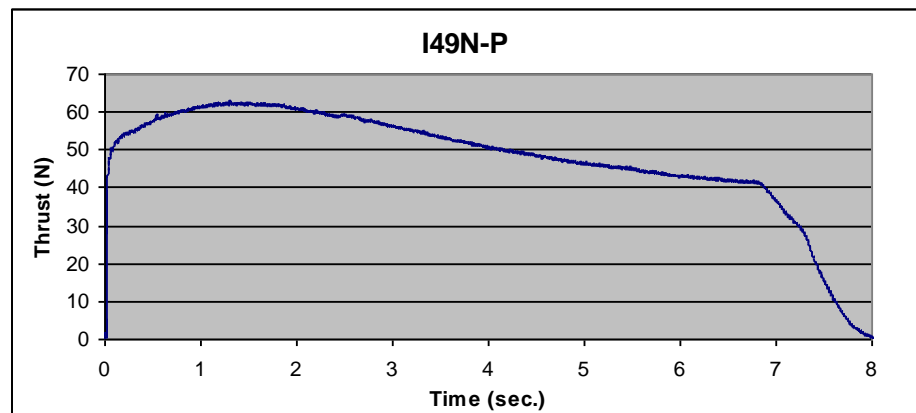
Total Impulse: 383 Newton-seconds
Delays: Plugged
Propellant Type: Warp 9
Propellant Mass: 190.8 grams
Casing Dimensions: 38mm x 184mm
Certification Date: May 22, 2009
Certification Type: High Power Rocket Motor

STATIC TEST DATA

Date Tested: November 25, 2007
Total Impulse: 383 Newton-seconds (σ 7)
Peak Thrust: 63.7 Newtons (σ 3.5)
Burn Time: 7.68 seconds (σ 0.29)
Average Thrust: 49.4 Newtons (σ 1.5)
Mass After Firing: 193 grams

Delay Time(sec.)	Plugged		
Average Measured Delay(sec.)	Plugged		
Initial Mass (gm.)	398		

TYPICAL THRUST-TIME CURVE



REMARKS

Uses Aerotech RMS 38/360 Hardware or authorized reproductions with the 38EBFCPT forward closure. No substitutions allowed



Data File #	Engine	Total Impulse	Max Thrust	Avg Thrust	Burn Time	Delay Time	Init Weight	Fired Weight
71125W15	I49N-P	380.0	66.4	51.0	7.408	Plugged	396.3	191.5
71125W16	I49N-P	378.3	59.7	48.9	7.657	Plugged	399.8	194.4
71125W21	I49N-P	390.7	64.8	48.2	7.982	Plugged	398.7	193.5
Average		383.00	63.7	49.4	7.682		398.3	193.1
Std Dev		6.722	3.511	1.494	0.288			
Std Dev %		1.8%	5.5%	3.0%	3.7%			
Range	Indicated	Actual	Actual	Actual	Actual	Average		
	Plugged	Plugged	Plugged	Plugged				

; @File: I49N.txt, @Pts-I: 4042, @Pts-O: 32, @Sm: 5, @CO: 5%
 ; @TI: 381.69, @Tla: 381.343, @Tle: 0.0%, @ThMax: 62.3475, @ThAvg: 48.8338, @Tb: 7.809
 ; Exported using ThrustCurveTool, www.ThrustGear.com
 I49 38 202 Plugged 0.1908 0.398 RCS/Aerotech
 0.0 0.358581
 0.006 1.535147
 0.012 11.74173
 0.016 21.0992
 0.018 26.6398
 0.020 29.1119
 0.022 32.594
 0.024 35.3028
 0.028 39.1195
 0.034 43.0007
 0.042 46.0073
 0.058 49.1458
 0.102 51.8176
 0.158 53.4355
 0.470 57.1076
 0.538 58.5044
 0.960 61.3638
 1.3059 62.3183
 1.8619 61.7034
 2.3779 58.9263
 2.5779 58.9313
 2.7079 57.5958
 3.3219 54.6322
 3.6439 52.3457
 4.9178 46.6098
 5.9418 43.198
 6.8297 41.232
 7.2717 28.8658
 7.4937 15.58782
 7.6597 8.11481
 7.8177 3.06938
 8.0817 0.0