

TEX TECH

industries

FAA BURNTROUGH
CALIBRATION MATERIALS
DEVELOPMENT

31 Oct 2007

Material Descriptions



Two Styles have been Optimized

- 8579R – 9.5 Oz/Yd2, .125 Thick, .102g/cc
- 8611 – 17 Oz/Yd2, .110 Thick, .206g/cc

Material Description



Composition: 100% Zoltex PAN

- Fiber Size: 1.7 Denier
- Fiber Cut Length: 60mm
- Tradename: Pyron ®

Production Description



Trial Goals for Optimization:

Less Variation

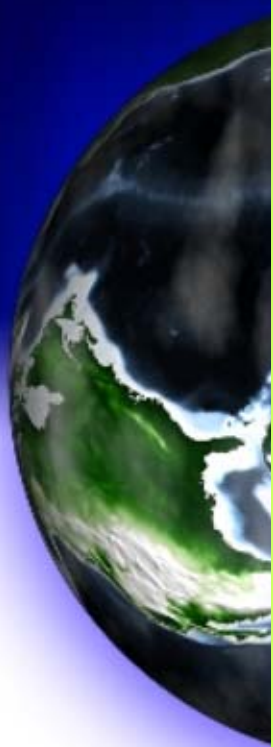
Actions Taken:

- Reduced Speed
- Lowered Feed Rate
- Increased Layer Count
- Reduced Draft

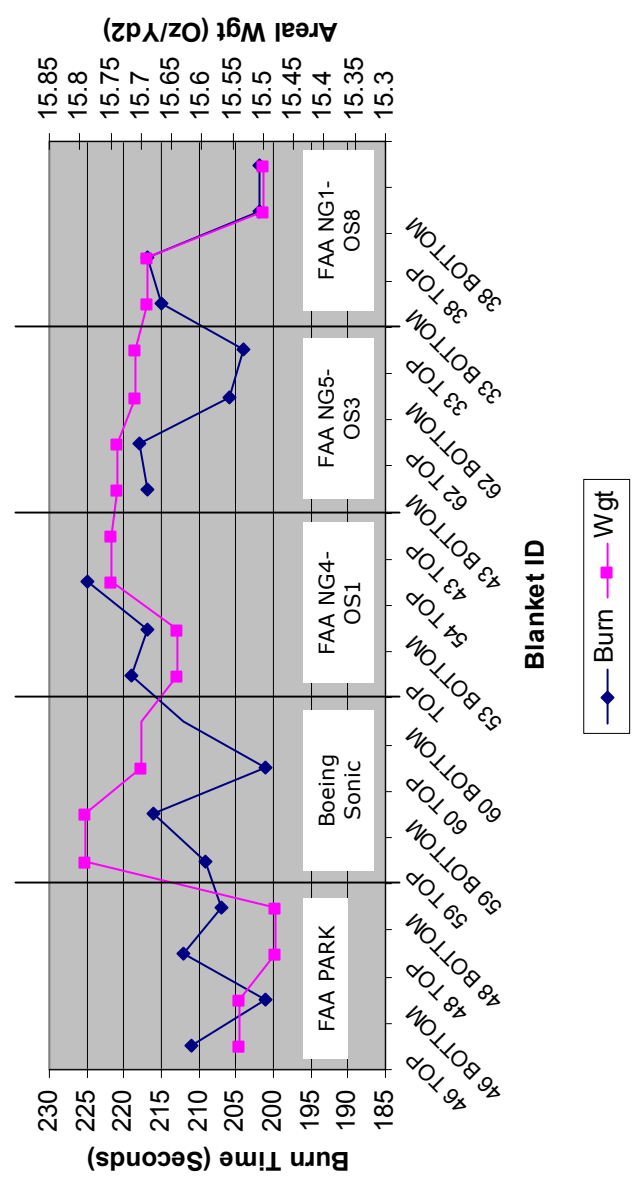
Performance Analysis



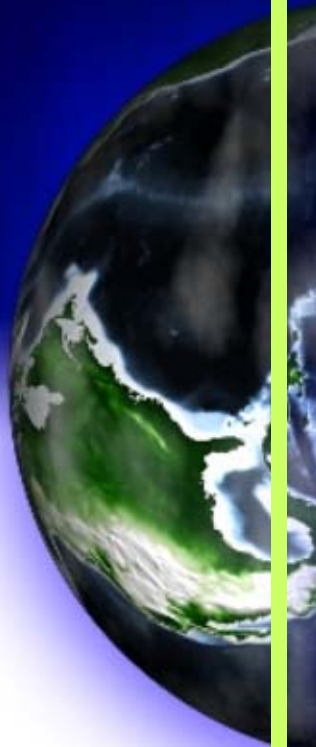
- The Following 4 Slides show Burn Time Vs. Areal Weight
- The next 4 Slides show Burn Time Vs. Material Thickness
- Some Correlation was found on Some Burners otherwise loose relationships



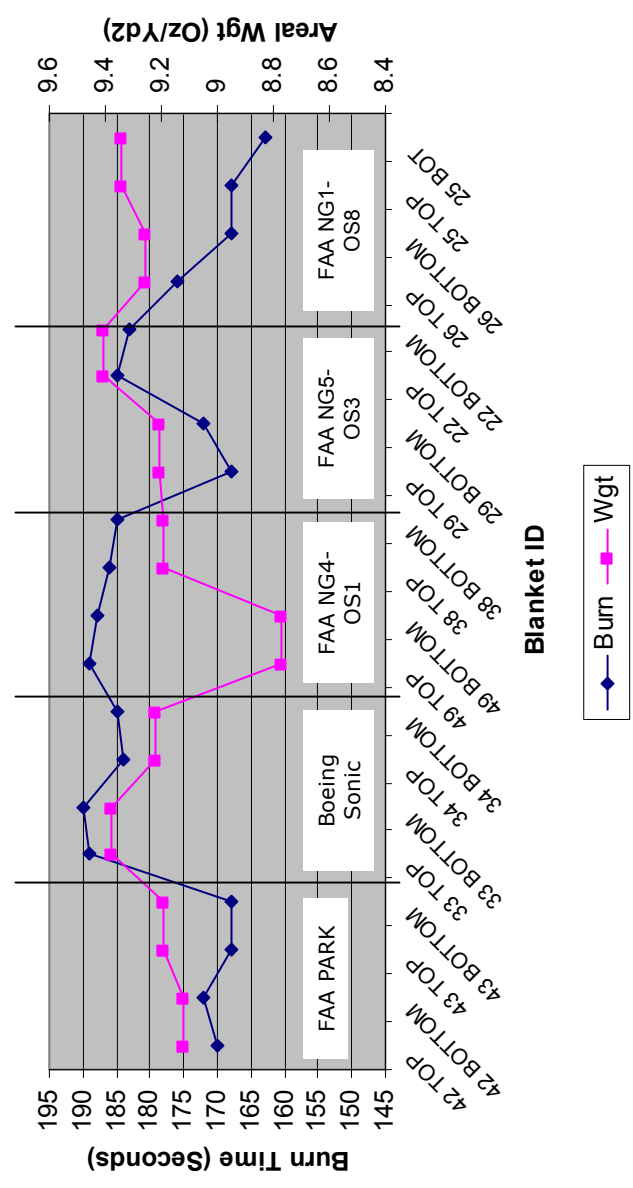
**Comparison of Areal Weight and Burnthrough time for Calibration
Standard 8611 Fabric (Ct# 19394)**



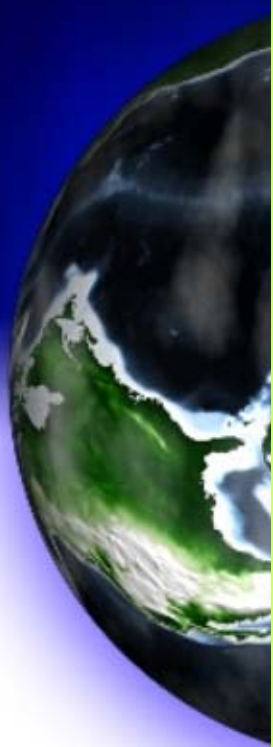
	Avg. Weight
Mean	15.88147
Standard Error	0.045725
Median	15.81447
Mode	16.06643
Standard Deviation	0.379818
Sample Variance	0.144262
Kurtosis	-1.03689
Skewness	0.208165
Range	1.411092
Minimum	15.21762
Maximum	16.62871
Sum	1095.821
Count	69
Confidence Level 95	0.091242



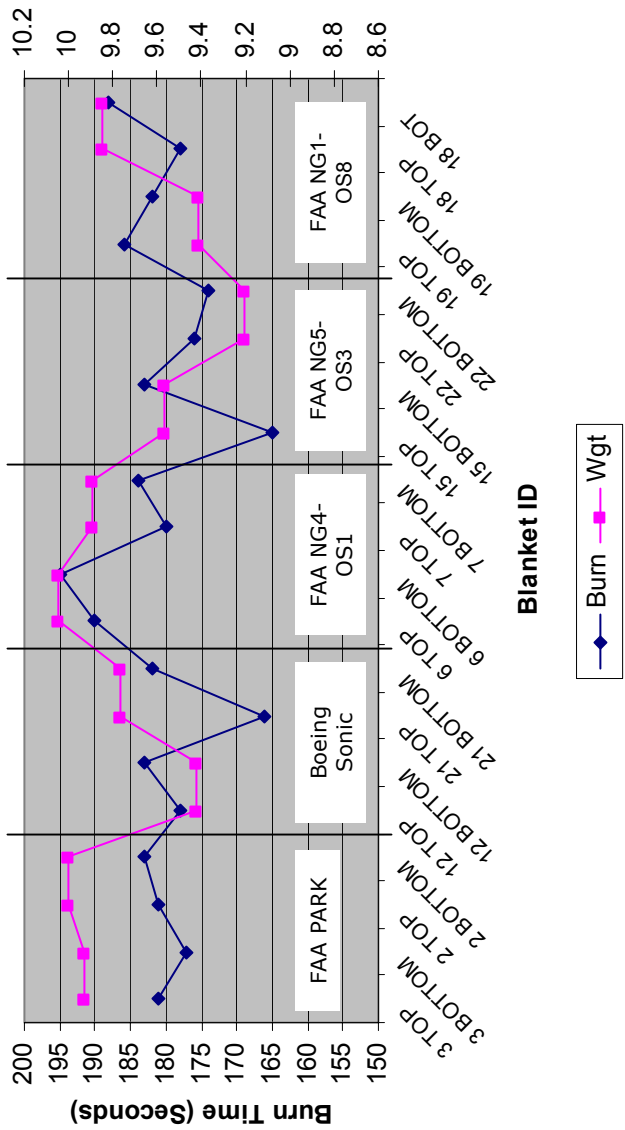
Comparison of Areal Weight and Burnthrough time for Calibration Standard 8579 Fabric (Ct# 19391)



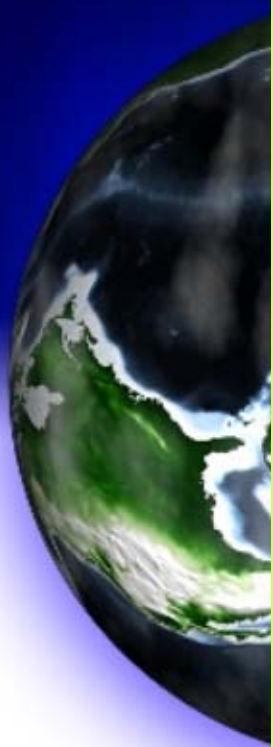
Avg. Weight	
Mean	9.14668291
Standard Error	0.106714151
Median	9.238608119
Mode	9.882858797
Standard Deviation	0.853713206
Sample Variance	0.728826238
Kurtosis	1.548941967
Skewness	-0.896187888
Range	4.494489638
Minimum	6.499537767
Maximum	10.99402741
Sum	585.3877062
Count	64
Confidence Level(95)	0.213251344



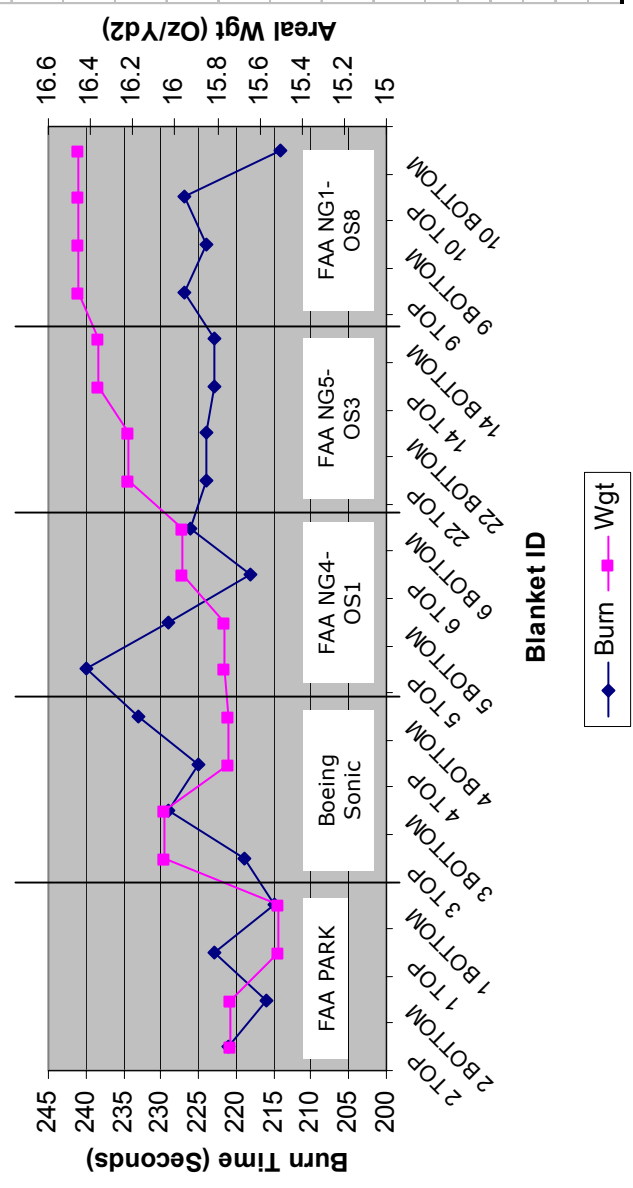
**Comparison of Areal Weight and Burnthrough time for Calibration Standard
8579R Fabric (Ct# 19391A)**



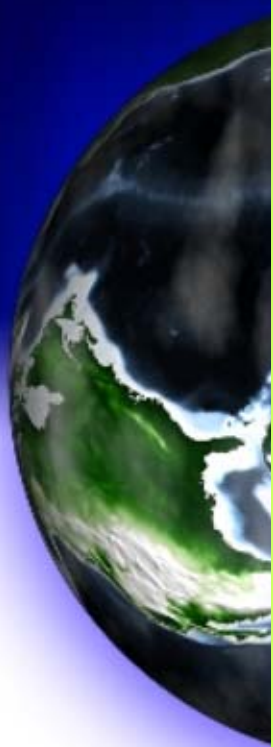
	Avg. Weight
Mean	9.362083
Standard Error	0.100874
Median	9.450642
Mode	9.450642
Standard Deviation	0.806991
Sample Variance	0.651235
Kurtosis	1.403524
Skewness	-0.70009
Range	4.160232
Minimum	7.093002
Maximum	11.25323
Sum	599.1733
Count	64
Confidence Level(95.0%)	0.201581



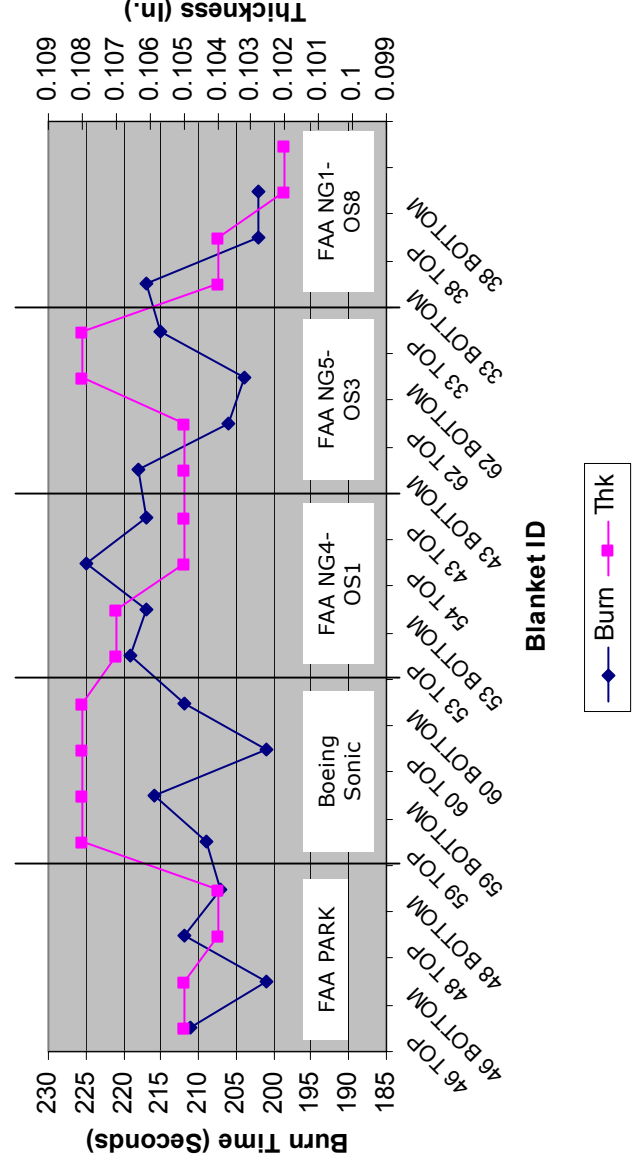
Comparison of Areal Weight and Burnthrough time for Calibration Standard 8611 Fabric (Ct# 19395)



Avg. Weight	
Mean	15.70076
Standard Error	0.045651
Median	15.61381
Mode	16.46133
Standard Deviation	0.390046
Sample Variance	0.152136
Kurtosis	-0.8388
Skewness	0.491981
Range	1.444681
Minimum	15.06033
Maximum	16.50501
Sum	1146.156
Count	73
Confidence Level 95	0.091004

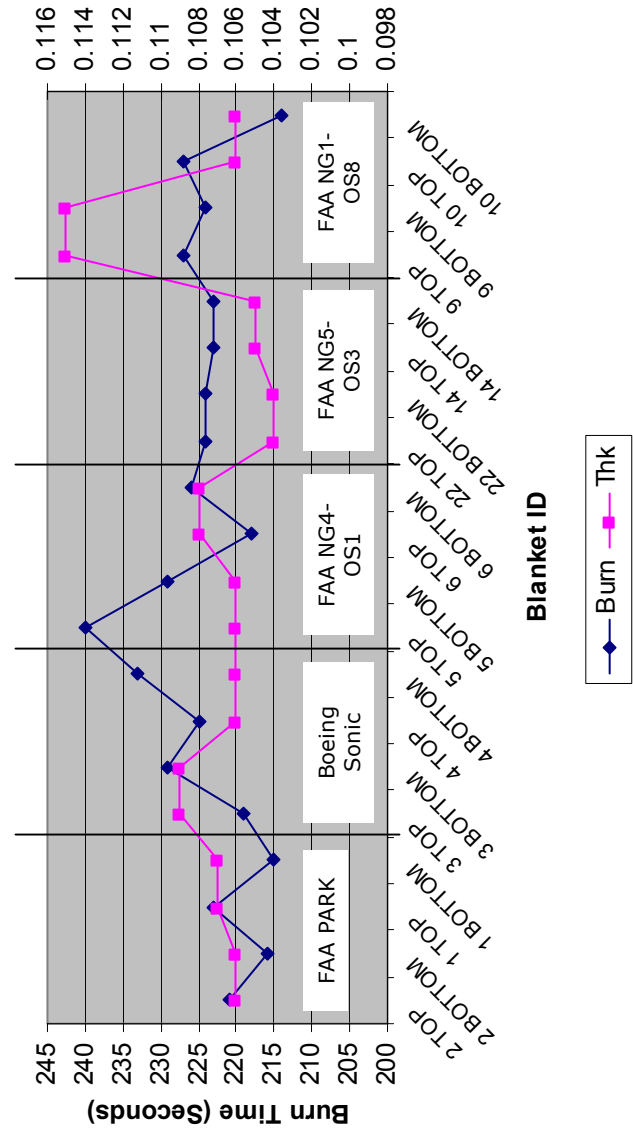


Comparison of Fabric Thickness and Burnthrough time for Calibration Standard 8611 Fabric (Ct# 19394)



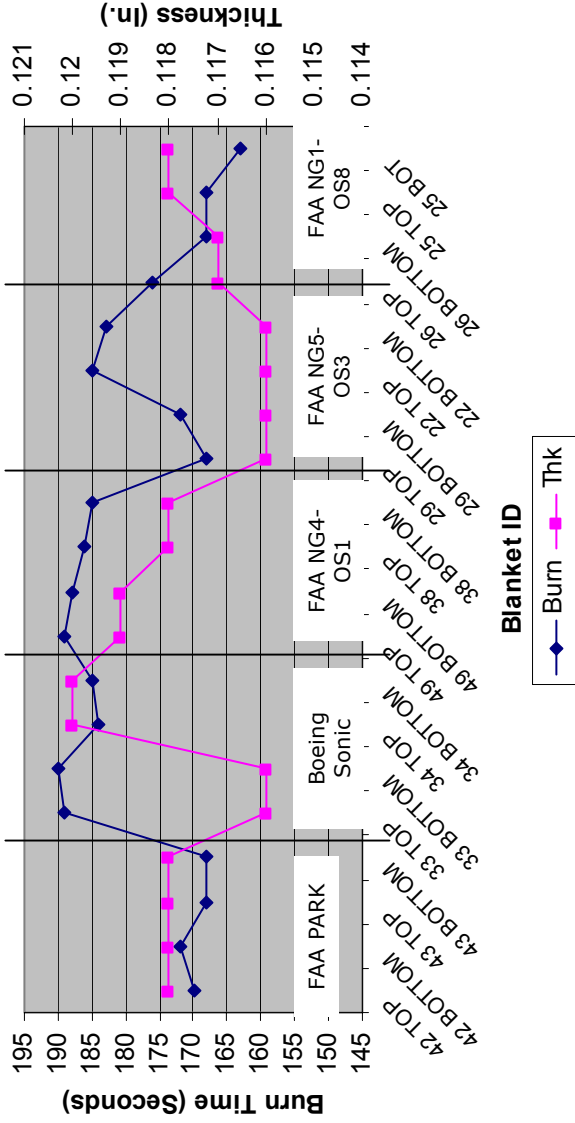
Avg. Thickness	
Mean	0.107249
Standard Error	0.000586
Median	0.106
Mode	0.104667
Standard Deviation	0.004865
Sample Variance	2.37E-05
Kurtosis	1.533687
Skewness	1.252674
Range	0.023167
Minimum	0.100667
Maximum	0.123833
Sum	7.400167
Count	69
Confidence Level 95	0.001169

Comparison of Fabric Thickness and Burnthrough time for Calibration Standard 8611 Fabric (Ct# 19395)

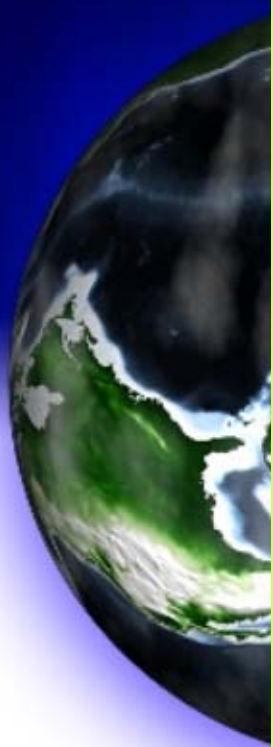


Avg. Thickness	
Mean	0.10403
Standard Error	0.000642
Median	0.104
Mode	0.1055
Standard Deviation	0.005488
Sample Variance	3.01E-05
Kurtosis	-0.34544
Skewness	0.533509
Range	0.022
Minimum	0.095167
Maximum	0.117167
Sum	7.594167
Count	73
Confidence Level 95	0.001281

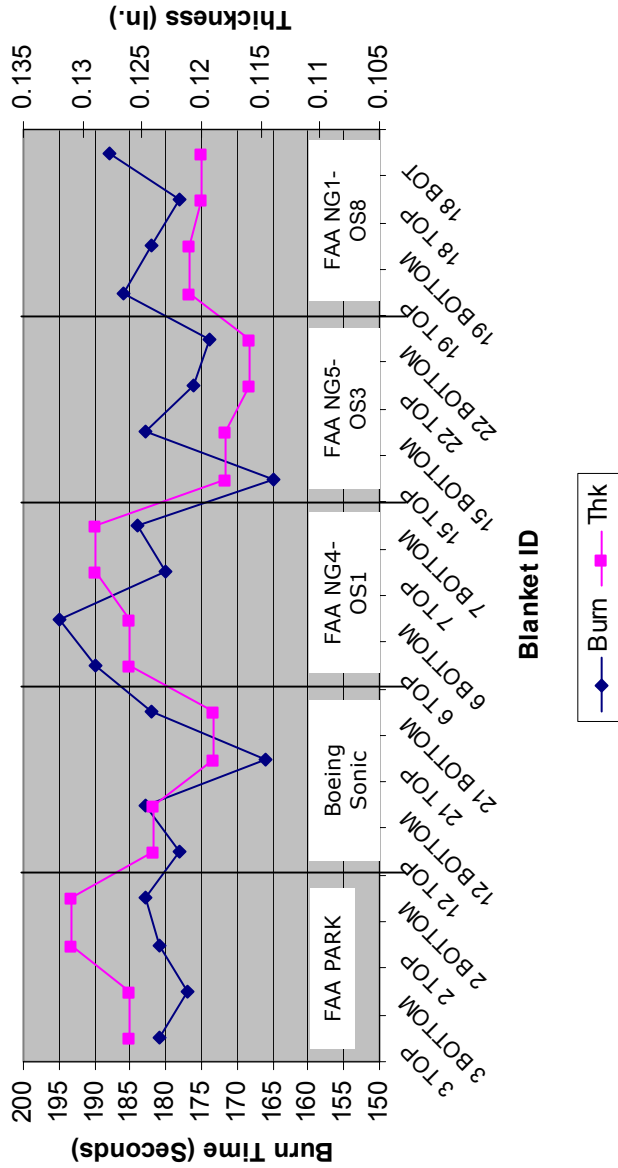
Comparison of Fabric Thickness and Burnthrough time for Calibration Standard 8579R Fabric (C# 19391)



Avg. Thickness	
Mean	0.1207875
Standard Error	0.001008676
Median	0.119166667
Mode	0.117666667
Standard Deviation	0.008069411
Sample Variance	6.51154E-05
Kurtosis	3.071957429
Skewness	1.41123383
Range	0.0415
Minimum	0.107166667
Maximum	0.148666667
Sum	7.7304
Count	64
Confidence Level(95)	0.00201568



**Comparison of Fabric Thickness and Burnthrough time for Calibration
Standard 8579R Fabric (C# 19391A)**



Avg. Thickness	
Mean	0.120583
Standard Error	0.001073
Median	0.118417
Mode	0.115667
Standard Deviation	0.008582
Sample Variance	7.36E-05
Kurtosis	2.635
Skewness	1.333681
Range	0.046
Minimum	0.1055
Maximum	0.1515
Sum	7.717333
Count	64
Confidence Level(95.0%)	0.002144

Product Offering



- Materials are produced in Rolls and cut to Test Rig Specifications (32" X 36").
- Materials are sent individually labeled with Blanket ID, Weight and thickness measurements.
- Contact:
 - Denny Webber or David Erb at Tex Tech Industries 207-933-4404.

QUESTIONS?

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High Performance Materials

