



TestrBot Test Results

Title: Acetone Treatment

Objective: Detemine Effects of Acetone Treatment

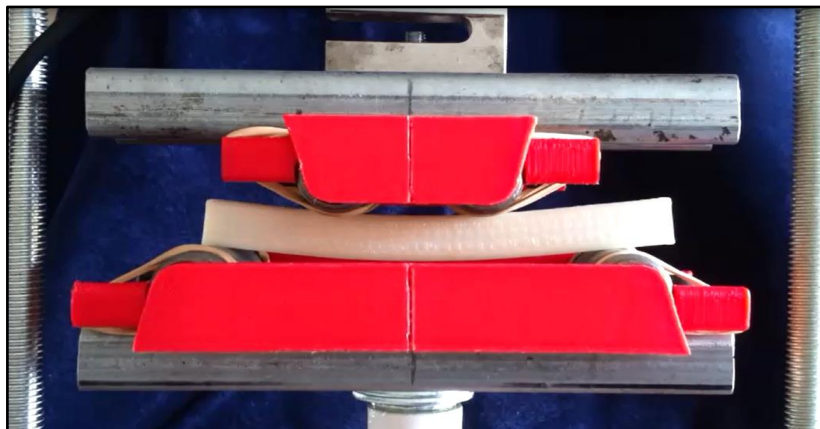
Test Method: 4 Point Bend, loaded at constant displacement rate

Procedure: A total of 6 abs plastic specimens were tested. 3 of the specimens were treated with acetone vapor for 17 minutes and allowed to dry out for 24 hours prior to testing.

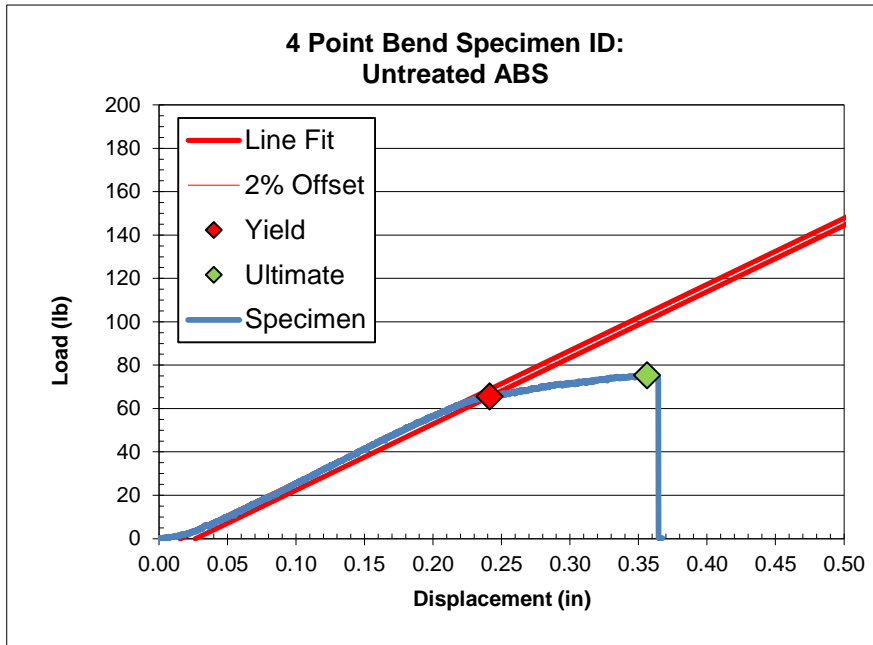
Conclusions: The vapor treatment resulted in a consistant overall weakening of the test specimens. Specimens that had not been treated with Acetone vapor had an average yield stress 24% higher than those treated with the vapor.

	Avg Yield Load (lb)	Avg Yield Stress (psi)	Avg Stiffness (lb/in)	Avg Ult Load (lb)	Avg Ult Stress (psi)	Ult Stress/Weight (psi/g)	Ult Stress/Print Time (psi/min)	Avg Stiffness per weight, (lb/in)
Untreated	65.8	4083.4	319.8	73.6	4564.8	769.4	217.2	53.9
Treated	53.2	3272.7	308.1	65.0	4003.3	674.8	190.5	51.9

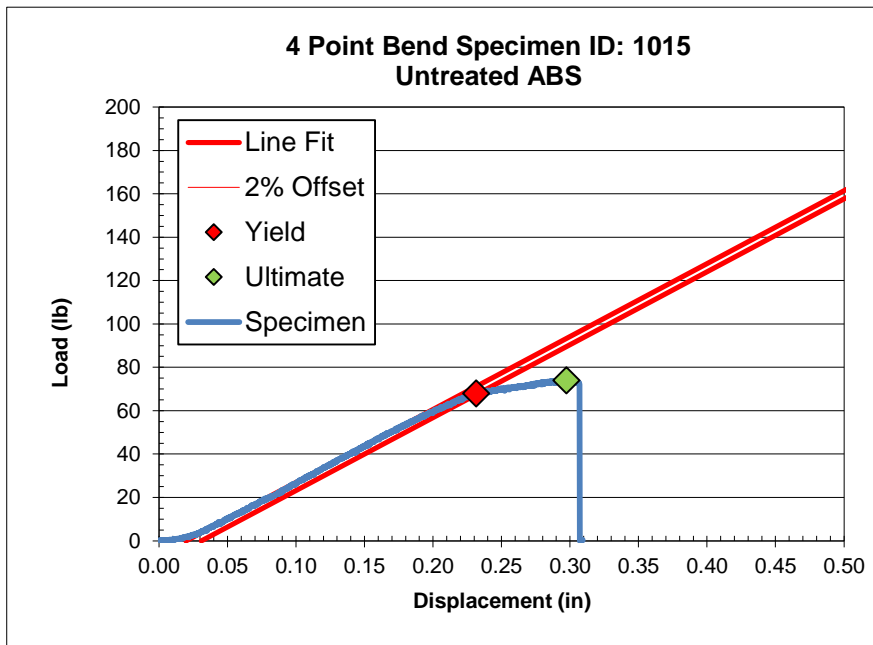
	Std Dev Yield (lb)	Std Dev Yield Stress (psi)	Std Dev Stiffness (lb/in)	Std Dev Ult Load (lb)	Std Dev Ult Stress (psi)	Std Dev Ult Stress/Weight (psi/g)	Std Dev Ult Stress/Print Time (psi/min)	Std Dev Stiffness per weight (lb/in)
Untreated	2.1	88.2	15.6	2.1	127.5	24.2	5.5	2.2
Treated	3.3	177.4	5.2	3.1	203.3	37.1	9.2	0.9



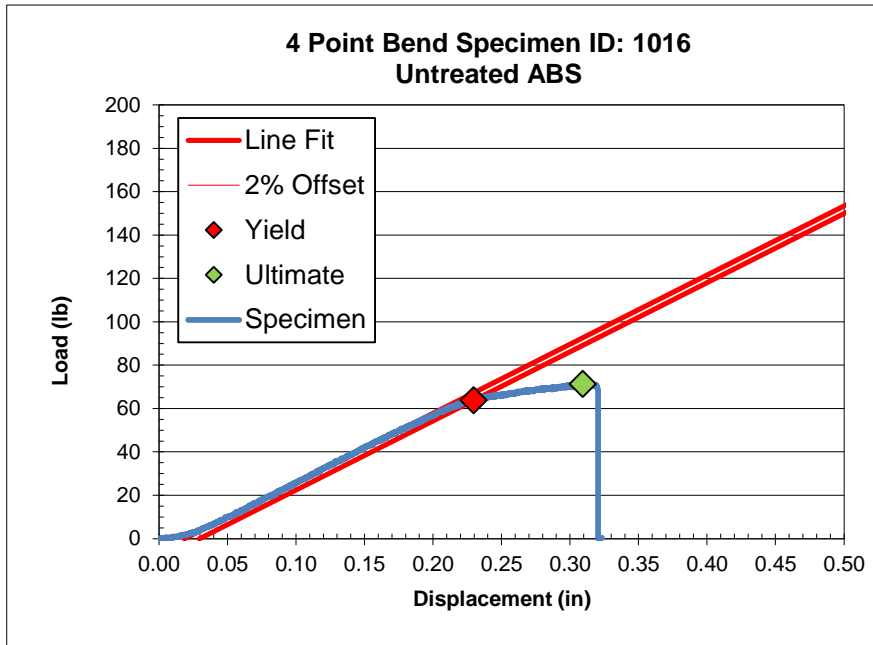
Test Setup



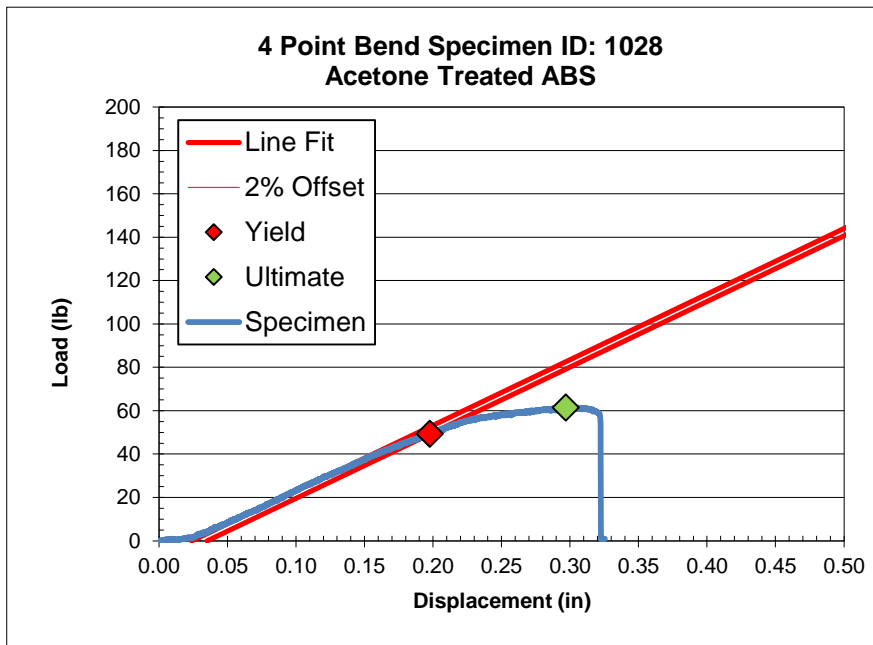
2% Yield:	65.63	lb
2% Yield Stress:	4094.8	psi
Stiffness:	304.9	lb/in
Ultimate Load:	75.40	lb
Displacement at Ultimate:	0.3408	in
Ultimate Bending Stress:	4704.1	psi



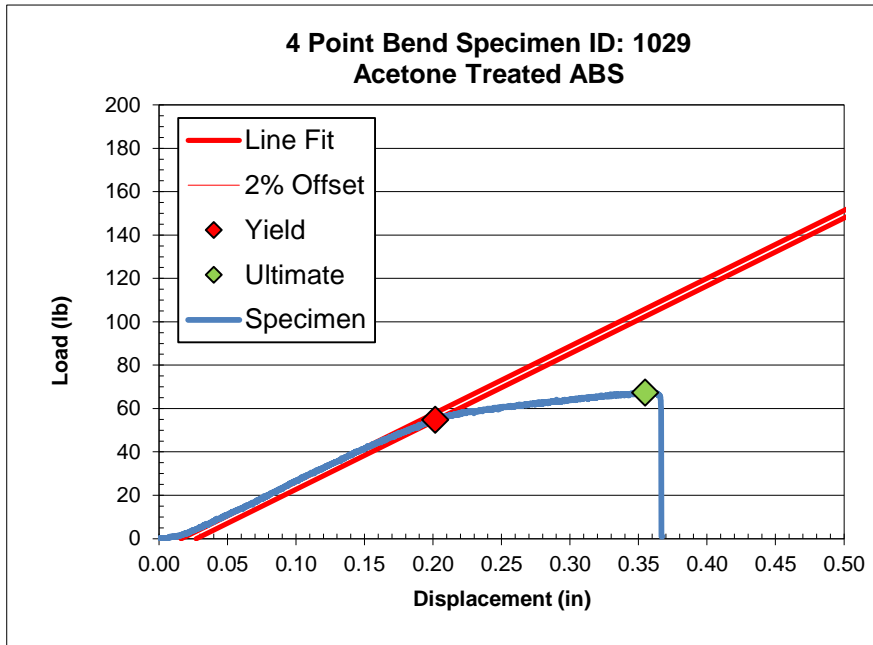
2% Yield:	67.97	lb
2% Yield Stress:	4165.5	psi
Stiffness:	336.0	lb/in
Ultimate Load:	74.03	lb
Displacement at Ultimate:	0.2777	in
Ultimate Bending Stress:	4536.5	psi



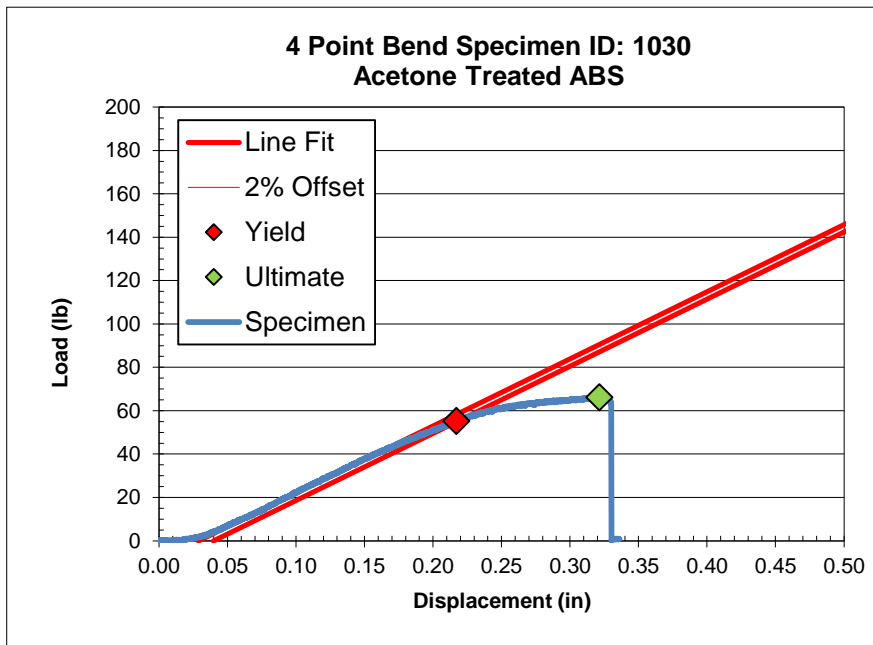
2% Yield:	63.87	lb
2% Yield Stress:	3990.1	psi
Stiffness:	318.5	lb/in
Ultimate Load:	71.29	lb
Displacement at Ultimate:	0.2910	in
Ultimate Bending Stress:	4453.8	psi



2% Yield:	49.4180	lb
2% Yield Stress:	3094.2	psi
Stiffness:	302.4808	lb/in
Ultimate Load:	61.5283	lb
Displacement at Ultimate:	0.2729	in
Ultimate Bending Stress:	3852.4	psi



2% Yield: 54.8871 lb
 2% Yield Stress: 3448.9 psi
 Stiffness: 312.6822 lb/in
 Ultimate Load: 67.3881 lb
 Displacement at Ultimate: 0.3387 in
 Ultimate Bending Stress: 4234.5 psi



2% Yield: 55.2778 lb
 2% Yield Stress: 3275.0 psi
 Stiffness: 309.2835 lb/in
 Ultimate Load: 66.2161 lb
 Displacement at Ultimate: 0.2927 in
 Ultimate Bending Stress: 3923.1 psi