

Free Flight covering materials strength testing –

Raw data from testing:

Test section	1								
Initial weight	2.517 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	-1.05	2.55	4.9	7.15	9.45	11.7	13.9	16.15	
Covering material	1/3 mil Mylar from FAI Model Supply								
Adhesive used	Mod Podge								
Weight after adhesive	2.732								
		Total			Just Adhesive and covering			% mass gained	
Weight gain from covering		3.054 grams			0.537 grams			21.3 %	
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	-1.45	-0.95	-0.65	-0.45	-0.15	0.2	0.5	0.75	

Test section	2								
Initial weight	2.715 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	-0.95	0.9	2.85	4.65	6.7	8.7	10.5	12.35	
Covering material	1/4 mil Mylar from FAI Model Supply								
Adhesive used	Mod Podge								
Weight after adhesive	2.917								
		Total			Just Adhesive and covering			% mass gained	
Weight gain from covering		3.152 grams			0.437 grams			16.1 %	
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	-2	-1.75	-1.55	-1.3	-1.05	-0.85	-0.6	-0.35	

Test section	3								
Initial weight	2.89 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	0.1	1.5	2.95	4.3	5.7	7.3	9	10.45	
Covering material	2um mil Mylar - Ebay Taiwan								
Adhesive used	Mod Podge								
Weight after adhesive	3.117								
		Total			Just Adhesive and covering			% mass gained	
Weight gain from covering		3.249 grams		0.359 grams			12.4 %		
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	-0.9	0.75	1.1	1.45	1.75	2.15	2.45	2.75	

Test section	4						Silkspan details:	19.75" x 2.4"
							0.315362	12.43015
Initial weight	2.734 (grams)							
	no weight	1"	2"	3"	4"	5"	6"	7"
Initial angles	-1.15	1.2	2.8	4.3	5.75	7.55	9.6	11.15
Covering material	Silkspan	12.4 gsm						
Adhesive used	Dope							
Weight after adhesive	2.878							
	Total	Just Adhesive and covering				% mass gained		
Weight gain from covering	3.248 grams	0.514 grams				18.8%		
	no weight	1"	2"	3"	4"	5"	6"	7"
After shrinkage	0.25	0.55	0.7	0.85	1.05	1.4	1.6	1.8
After 1 coat	3.343 grams							
	no weight	1"	2"	3"	4"	5"	6"	7"
After 1 coat	-0.2	0.1	0.25	0.55	1.1	1.35	1.5	1.7
After 2 coats	3.392 grams							
	no weight	1"	2"	3"	4"	5"	6"	7"
After 2 coats	-0.9	-0.65	-0.5	-0.4	-0.25	-0.15	0	0.1
After 3 coats	3.476 grams							
	no weight	1"	2"	3"	4"	5"	6"	7"
After 3 coats	-0.1	0.9	1	1.15	1.3	1.4	1.6	1.7

Test section	5					Silk details:	14.5x36	
						0.336774	17.32915	
Initial weight	2.761	(grams)						
	no weight	1"	2"	3"	4"	5"	6"	7"
Initial angles	-1.6	0.55	1.9	3.35	4.8	6.25	7.95	9.75
Covering material	Silk	17.3 gsm						
Adhesive used	Dope							
Weight after adhesive	2.901							
	Total	Just Adhesive and covering			% mass gained			
Weight gain from covering	3.423	grams	0.662	grams	24.0 %			
	no weight	1"	2"	3"	4"	5"	6"	7"
After shrinkage	-0.85	0	0.8	1.55	2.35	3.35	4.1	4.95
After 1 coat	3.501	grams						
	no weight	1"	2"	3"	4"	5"	6"	7"
After 1 coat	-0.65	-0.1	0.4	0.8	1.25	1.85	2.25	2.65
After 2 coats	3.557	grams						
	no weight	1"	2"	3"	4"	5"	6"	7"
After 2 coats	-0.75	-0.2	0.15	0.45	0.85	1.2	1.5	1.85
After 3 coats	3.622	grams						
	no weight	1"	2"	3"	4"	5"	6"	7"
After 3 coats	-0.7	-0.05	0.25	0.5	0.8	0.95	1.3	1.6

Test section	6								
Initial weight	2.958 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	-1.95	-0.7	0.95	2.75	4.1	5.75	7.3	9.15	
Covering material	Gifu tissue	9gsm							
Adhesive used	Elmers Gluestick								
Weight after adhesive	0								
	Total			Just Adhesive and covering				% mass gained	
Weight gain from covering	3.256 grams			0.298 grams				10.1 %	
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	-1.45	-0.85	-0.4	0	0.4	0.7	1.1	1.65	
After 1 coat	3.289 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 1 coat	-1.15	-0.65	-0.45	-0.25	0.2	0.4	0.7	1.15	
After 2 coats	3.342 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 2 coats	-1.7	-1.15	-0.95	-0.6	-0.1	0.15	0.4	0.65	

Test section	7								
Initial weight	2.803								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	-1.65	0.75	2.3	3.65	5.1	6.75	8.45	9.95	
Covering material	Mitsumata	12.25 gsm							
Adhesive used	Elmer's gluestick								
Weight after adhesive	0								
		Total			Just Adhesive and covering			% mass gained	
Weight gain from covering		3.201 grams		0.398 grams		14.2%			
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	0.25	0.5	0.7	0.55	1	1.2	1.4	1.6	
After 1 coat	3.215	grams							
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 1 coat	-0.2	0.15	0.3	0.45	0.65	0.8	0.9	1	
After 2 coats	3.251	grams							
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 2 coats	-0.1	0.2	0.4	0.5	0.65	0.8	0.95	1.05	

Test section	8						Tissue details:	18 9/16 x 2	
							0.300892	18.96697	
Initial weight	2.794 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	0.4	2.5	4	5.4	7.2	8.6	10	11.25	
Covering material	Mt Fuji Re	19 GSM							
Adhesive used	Elmer's Gluestick								
Weight after adhesive	0								
		Total			Just Adhesive and covering			% mass gained	
Weight gain from covering		3.379	grams	0.585	grams		20.9	%	
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	-0.75	0.35	0.5	0.75	0.9	1.05	1.2	1.3	
After 1 coat	3.398	grams							
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 1 coat	-0.15	0.05	0.15	0.25	0.35	0.5	0.65	0.75	
After 2 coats	3.42	grams							
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 2 coats	-0.2	-0.05	0.1	0.25	0.35	0.45	0.55	0.65	

Test section	9						Tissue details:	20.125 x 3
							0.391138	17.91438
Initial weight	2.935 (grams)							
	no weight	1"	2"	3"	4"	5"	6"	7"
Initial angles	-1.15	1.1	2.4	3.7	5.1	6.6	8.05	9.3
Covering material	Peck Dom	17.9 gsm						
Adhesive used	Elmer's gluestick							
Weight after adhesive	0							
		Total			Just Adhesive and covering			% mass gained
Weight gain from covering		3.486 grams		0.551 grams		18.8 %		
	no weight	1"	2"	3"	4"	5"	6"	7"
After shrinkage	-0.4	0.4	0.55	0.8	1.05	1.2	1.45	1.7
After 1 coat	3.511 grams							
	no weight	1"	2"	3"	4"	5"	6"	7"
After 1 coat	-2.1	-1.7	-1.55	-1.35	-1.25	-1.15	-1.05	-0.85
After 2 coats	3.542 grams							
	no weight	1"	2"	3"	4"	5"	6"	7"
After 2 coats	-1.7	-1.15	-0.95	-0.7	-0.5	-0.2	0	0.5

Test section	10						Tissue details:	17.75 x 23
							0.269112	11.34099
Initial weight	2.935 (grams)							
	no weight	1"	2"	3"	4"	5"	6"	7"
Initial angles	-0.4	0.85	2.25	3.6	5.2	7	8.6	9.85
Covering material	Gampi		11.3					
Adhesive used	Elmer's gluestick							
Weight after adhesive	0							
	Total			Just Adhesive and covering			% mass gained	
Weight gain from covering	3.299 grams			0.364 grams			12.4 %	
	no weight	1"	2"	3"	4"	5"	6"	7"
After shrinkage	-1	-0.25	-0.05	0.3	0.65	0.95	1.1	1.4
After 1 coat	3.319 grams							
	no weight	1"	2"	3"	4"	5"	6"	7"
After 1 coat	-0.85	-0.2	0	0.15	0.35	0.65	0.95	1.25
After 2 coats	3.342 grams							
	no weight	1"	2"	3"	4"	5"	6"	7"
After 2 coats	-0.35	-0.15	0	0.15	0.3	0.4	0.5	0.85

Test section	11								
Initial weight	2.651 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	-0.2	2	3.85	5.8	7.9	9.75	11.6	13.35	
Covering material	Polyspan f?								
Adhesive used	Elmer's gluestick								
Weight after adhesive	0								
		Total		Just Adhesive and covering			% mass gained		
Weight gain from covering		3.123 grams		0.472 grams			17.8%		
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	-0.25	0.6	1	1.55	1.9	2.4	2.8	3.25	
After 1 coat	3.167 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 1 coat	0.1	0.55	0.9	1.2	1.55	1.9	2.2	2.5	
After 2 coats	3.217 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 2 coats	-1.3	-0.95	-0.7	-0.4	-0.1	0.2	0.45	0.7	

Test section	12								
Initial weight	2.811 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	0	1.75	3.2	4.95	6.35	7.8	9.35	10.8	
Covering material	Mikalenta?								
Adhesive used	Elmer's gluestick								
Weight after adhesive	0								
		Total			Just Adhesive and covering			% mass gained	
Weight gain from covering		3.418 grams		0.607 grams			21.6%		
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	0.05	1.5	2.2	2.65	2.95	3.25	3.65	3.9	
After 1 coat	3.465 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 1 coat	1.05	1.3	1.5	1.85	2.05	2.5	2.85	3.1	
After 2 coats	3.527 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 2 coats	0.45	1.05	1.25	1.4	1.65	1.9	2.15	2.225	

Test section	13							
Initial weight	2.726 (grams)							
	no weight	1"	2"	3"	4"	5"	6"	7"
Initial angles	-0.1	1.35	3.2	4.6	6.35	7.9	9.85	11.3
Covering material	Rayon tiss	12 gsm						
Adhesive used	Elmer's gluestick							
Weight after adhesive	0							
		Total			Just Adhesive and covering			% mass gained
Weight gain from covering		3.163 grams		0.437 grams			16.0 %	
	no weight	1"	2"	3"	4"	5"	6"	7"
After shrinkage	-1.35	-0.4	0.1	0.65	1.2	1.75	2.3	2.75
After 1 coat	3.204 grams							
	no weight	1"	2"	3"	4"	5"	6"	7"
After 1 coat	0.7	1.1	1.65	2.25	2.7	3.35	3.85	4.2
After 2 coats	3.281 grams							
	no weight	1"	2"	3"	4"	5"	6"	7"
After 2 coats	0.25	0.4	0.65	0.85	1.05	1.25	1.45	1.65

Test section	14							
Initial weight	2.873 (grams)							
	no weight	1"	2"	3"	4"	5"	6"	7"
Initial angles	-1.6	0.2	2.1	3.75	5.5	7.9	9.55	11.1
Covering material	Lens clean	9 gsm						
Adhesive used	Elmer's gluestick							
Weight after adhesive	0							
		Total			Just Adhesive and covering			% mass gained
Weight gain from covering		3.246 grams		0.373 grams		13.0 %		
	no weight	1"	2"	3"	4"	5"	6"	7"
After shrinkage	-1.55	-0.7	-0.25	0.4	0.8	1.2	1.75	2.2
After 1 coat	3.292 grams							
	no weight	1"	2"	3"	4"	5"	6"	7"
After 1 coat	-1.4	-1	-0.7	-0.45	-0.25	0.05	0.35	0.65
After 2 coats	3.365 grams							
	no weight	1"	2"	3"	4"	5"	6"	7"
After 2 coats	-1.1	-0.9	-0.5	-0.35	-0.1	0.15	0.45	0.7

Test section	15								
Initial weight	2.752 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	-1.65	-0.15	1.5	3.2	4.9	7	9.05	10.7	
Covering material	Blue Esaki	12.9 gsm							
Adhesive used	Elmer's gluestick								
Weight after adhesive	0								
		Total			Just Adhesive and covering			% mass gained	
Weight gain from covering		3.19 grams			0.438 grams			15.9%	
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	-1.6	-1.5	-1.35	-1.25	-0.7	-0.6	-0.45	-0.15	
After 1 coat	3.217 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 1 coat	-1.2	-1.15	-1.05	-0.9	-0.75	-0.45	-0.35	-0.1	
After 2 coats	3.258 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 2 coats	-1.25	-1.25	-1.2	-1	-0.85	-0.5	-0.4	-0.25	

Test section	16								
Initial weight	2.827 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	-2.1	-0.2	1.35	3.15	4.95	6.8	8.6	10.7	
Covering material	Kubo tissu	14 gsm							
Adhesive used	Elmer's gluestick								
Weight after adhesive	0								
		Total			Just Adhesive and covering			% mass gained	
Weight gain from covering		3.289 grams			0.462 grams			16.3 %	
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	-2.95	-1.5	-1.25	-0.9	-0.5	-0.2	0.1	0.35	
After 1 coat	3.328 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 1 coat	-1.1	-0.85	-0.65	-0.45	-0.35	-0.2	0	0.2	
After 2 coats	3.387 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 2 coats	0.1	0.3	0.4	0.7	0.9	1.25	1.4	1.65	

Test section	17								
Initial weight	2.732 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	-3.05	-1.3	0.35	2	3.85	5.85	7.5	9.85	
Covering material	1980's Jap?								
Adhesive used	Elmer's gluestick								
Weight after adhesive									
		Total			Just Adhesive and covering			% mass gained	
Weight gain from covering		3.127 grams		0.395 grams			14.5 %		
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	-3.35	-2.15	-1.95	-1.7	-0.65	0.1	0.3	0.65	
After 1 coat	3.153 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 1 coat	-1.3	-1.1	-0.95	-0.75	-0.65	-0.5	-0.3	0.05	
After 2 coats	3.187 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 2 coats	-1.8	-1.35	-1.2	-1.1	-0.9	-0.65	-0.35	0.15	

Test section	18								
Initial weight	2.964 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	0.85	3.35	4.95	6.4	7.9	9.5	11.1	12.8	
Covering material	Asagami	15gsm							
Adhesive used	Elmer's gluestick								
Weight after adhesive									
		Total		Just Adhesive and covering			% mass gained		
Weight gain from covering		3.546 grams		0.582 grams			19.6 %		
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	1.3	1.8	2.15	2.35	2.55	2.85	3	3.25	
After 1 coat	3.609 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 1 coat	1.7	2.25	2.4	2.55	2.65	2.7	2.75	2.95	
After 2 coats	3.642 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 2 coats	1.7	2.4	2.5	2.65	2.7	2.85	2.9	3	

Test section	19						Tissue details:	6 x 14"
							0.054193	12.91669
Initial weight	3.078 (grams)							
	no weight	1"	2"	3"	4"	5"	6"	7"
Initial angles	1.4	3.95	5.4	7.05	8.7	10.35	11.9	13.6
Covering material	"00" Silksp	12.9 GSM						
Adhesive used	Elmer's gluestick							
Weight after adhesive								
		Total			Just Adhesive and covering			% mass gained
Weight gain from covering		3.517	grams	0.439	grams		14.3	%
	no weight	1"	2"	3"	4"	5"	6"	7"
After shrinkage	1.8	2.3	2.45	2.65	2.75	2.9	3.1	3.3
After 1 coat	3.549	grams						
	no weight	1"	2"	3"	4"	5"	6"	7"
After 1 coat	2	2.6	2.75	2.85	2.95	3.1	3.25	3.35
After 2 coats	3.571	grams						
	no weight	1"	2"	3"	4"	5"	6"	7"
After 2 coats	1.65	2.75	2.9	3	3.1	3.2	3.35	3.4

Test section	20							
Initial weight	3.168 (grams)							
	no weight	1"	2"	3"	4"	5"	6"	7"
Initial angles	-0.15	3.7	5.5	7.35	9.25	11.25	13.35	15.3
Covering material	Kuranai	9gsm						
Adhesive used	Elmer's gluestick							
Weight after adhesive								
	Total	Just Adhesive and covering			% mass gained			
Weight gain from covering	3.461 grams	0.293 grams					9.2 %	
	no weight	1"	2"	3"	4"	5"	6"	7"
After shrinkage	-0.5	0.35	0.95	1.55	2.15	2.85	3.5	4.5
After 1 coat	3.522 grams							
	no weight	1"	2"	3"	4"	5"	6"	7"
After 1 coat	-0.05	0.35	0.6	0.85	1.1	1.5	1.75	2.1
After 2 coats	3.59 grams							
	no weight	1"	2"	3"	4"	5"	6"	7"
After 2 coats	0.1	0.45	0.65	0.85	1	1.25	1.55	1.75

Test section	21						Tissue details:	20 7/16 x 2
							0.32222	11.4363
Initial weight	2.955 (grams)							
	no weight	1"	2"	3"	4"	5"	6"	7"
Initial angles	0.5	4.7	6.85	9.2	11.7	14.1	16.65	18.8
Covering material	Joe Ott ge	11.4 gsm						
Adhesive used	Elmer's gluestick							
Weight after adhesive								
		Total			Just Adhesive and covering			% mass gained
Weight gain from covering		3.349 grams		0.394 grams			13.3 %	
	no weight	1"	2"	3"	4"	5"	6"	7"
After shrinkage	0.5	2.8	3	3.2	3.45	3.65	3.85	4.2
After 1 coat	3.352 grams							
	no weight	1"	2"	3"	4"	5"	6"	7"
After 1 coat	2.15	2.45	2.6	2.75	2.9	3.05	3.2	3.35
After 2 coats	3.362 grams							
	no weight	1"	2"	3"	4"	5"	6"	7"
After 2 coats	-0.05	2.45	2.6	2.75	2.9	3	3.15	3.25

Test section	22							
Initial weight	2.801 (grams)							
	no weight	1"	2"	3"	4"	5"	6"	7"
Initial angles	-0.3	2.7	4.15	5.7	7.4	9.05	10.75	12.35
Covering material	Ultracoat Light							
Adhesive used								
Weight after adhesive								
		Total			Just Adhesive and covering			% mass gained
Weight gain from covering		3.914 grams		1.113 grams			39.7 %	
	no weight	1"	2"	3"	4"	5"	6"	7"
After shrinkage	0.3	0.45	0.65	0.85	1	1.25	1.4	1.6

Test section	23								
Initial weight	3.56 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	2.6	4.2	5.3	6.4	7.55	8.8	9.95	11.15	
Covering material	Icarex								
Adhesive used	Mod Podge								
Weight after adhesive	3.79								
		Total	Just Adhesive and covering			% mass gained			
Weight gain from covering		4.831 grams	1.271 grams			35.7 %			
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	2.05	2.85	3.2	3.5	4.05	4.45	4.75	5.05	

Test section	24								
Initial weight	2.808 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	0.5	2.95	4.95	6.8	9	11.15	13.6	16.1	
Covering material	Orange Airspan								
Adhesive used	Mod Podge								
Weight after adhesive	3.069								
		Total	Just Adhesive and covering			% mass gained			
Weight gain from covering		3.729 grams	0.921 grams			32.8 %			
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	0.45	1.05	1.2	1.4	1.7	1.95	2.15	2.35	

Test section	25								
Initial weight	2.913 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	0	5.45	7.4	9.3	11.2	13.25	15.2	17.15	
Covering material	Polyspan	20gsm quoted			Neil Householder				
Adhesive used	Mod Podge								
Weight after adhesive	3.246								
	Total	Just Adhesive and covering			% mass gained				
Weight gain from covering	3.856 grams	0.943 grams			32.4 %				
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	3.75	4.15	4.4	4.7	4.95	5.25	5.5	5.85	
After 1 coat	3.945 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 1 coat	3.3	4.15	4.35	4.55	4.85	5.1	5.35	5.65	
After 2 coats	3.992 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 2 coats	2.7	3.7	3.85	4.05	4.3	4.5	4.7	4.85	

Test section	26								
Initial weight	2.893 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	-0.2	2.65	4.35	6.2	8.15	10.35	12.3	14.4	
Covering material	White Hallmark tissue	David Duganne							
Adhesive used	Elmers gluestick								
Weight after adhesive									
	Total	Just Adhesive and covering				% mass gained			
Weight gain from covering	3.295 grams	0.402 grams				13.9%			
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	0.65	2.25	2.4	2.55	2.7	2.95	3.1	3.25	
After 1 coat	3.377 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 1 coat	1.1	1.55	1.7	1.8	2	2.15	2.35	2.5	
After 2 coats	3.398 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 2 coats	1.55	1.75	1.9	2.05	2.2	2.3	2.45	2.5	

Test section	27								
Initial weight	2.947 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	0.5	2.5	3.9	5.45	6.8	8.5	10	11.5	
Covering material	Kubo's light tissue	10.9gsm							
Adhesive used	Elmer's gluestick								
Weight after adhesive									
		Total		Just Adhesive and covering			% mass gained		
Weight gain from covering		3.312 grams		0.365 grams			12.4 %		
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	0.2	0.5	0.65	0.8	0.95	1.15	1.3	1.5	
After 1 coat	3.345 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 1 coat	0.8	1.6	1.7	1.8	1.95	2.1	2.15	2.3	
After 2 coats	3.354 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 2 coats	1.15	2	2.15	2.25	2.35	2.45	2.55	2.65	

Test section	28							
Initial weight	3.028 (grams)							
	no weight	1"	2"	3"	4"	5"	6"	7"
Initial angles	0.1	1.7	3.5	5.2	6.8	8.45	10.1	11.8
Covering material	Red Asuka tissue	14.66 gsm						
Adhesive used	Elmer's gluestick							
Weight after adhesive								
	Total	Just Adhesive and covering		% mass gained				
Weight gain from covering	3.526 grams	0.498 grams		16.4 %				
	no weight	1"	2"	3"	4"	5"	6"	7"
After shrinkage	0.35	0.9	1.1	1.25	1.45	1.7	1.9	2.05
After 1 coat	3.562 grams							
	no weight	1"	2"	3"	4"	5"	6"	7"
After 1 coat	1.4	1.8	1.95	2.05	2.35	2.6	2.75	3
After 2 coats	3.566 grams							
	no weight	1"	2"	3"	4"	5"	6"	7"
After 2 coats	1	1.35	1.5	1.6	1.8	1.95	2.15	2.25

Test section	29								
Initial weight	3 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	0.2	1.8	3.1	4.45	5.85	7.4	9	10.45	
Covering material	Flomo white tissue	14gsm	George Bredehoft						
Adhesive used	Elmer's gluestick								
Weight after adhesive									
	Total	Just Adhesive and covering			% mass gained				
Weight gain from covering	3.535 grams	0.535 grams					17.8%		
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	-0.9	0.35	0.5	0.65	0.75	0.9	1.05	1.2	
After 1 coat	3.59 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 1 coat	-0.55	0.55	0.7	0.95	1.15	1.25	1.5	1.7	
After 2 coats	3.622 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 2 coats	0.2	0.35	0.5	0.6	0.7	0.75	0.9	0.95	

Test section	30								
Initial weight	3.528 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	0.6	0.75	1.85	2.95	4.15	5.4	6.65	7.8	
Covering material	Cuben								
Adhesive used	Mod Podge								
Weight after adhesive	3.808								
	Total			Just Adhesive and covering			% mass gained		
Weight gain from covering	4.098 grams			0.57 grams			16.2 %		
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	-0.9	-0.4	-0.15	0.15	0.5	0.9	1.25	1.7	

Test section	31								
Initial weight	3.663 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	0.35	1.5	2.45	3.45	4.7	5.7	6.85	7.85	
Covering material	Oralight yellow								
Adhesive used	(part of covering)								
Weight after adhesive									
	Total			Just Adhesive and covering			% mass gained		
Weight gain from covering	4.565 grams			0.902 grams			24.6 %		
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	-0.35	0.1	0.3	0.45	0.65	0.8	1.05	1.15	

Test section	32								
Initial weight	3.483 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	-0.95	0.25	1.3	2.4	3.65	4.9	6	7.15	
Covering material	White Oratex								
Adhesive used	(part of covering)								
Weight after adhesive									
	Total			Just Adhesive and covering			% mass gained		
Weight gain from covering	6.09 grams			2.607 grams			74.8 %		
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	-1.15	-0.8	-0.6	-0.35	-0.15	0.15	0.35	0.6	

Test section	33								
Initial weight	3.469 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	-1.1	0.1	1.15	2.35	3.5	4.75	6	7.3	
Covering material	Oracover Purple								
Adhesive used	(part of covering)								
Weight after adhesive	0								
	Total			Just Adhesive and covering			% mass gained		
Weight gain from covering	4.733 grams			1.264 grams			36.4 %		
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	-0.85	-0.05	0.1	0.2	0.3	0.45	0.6	0.65	

Test section	34								
Initial weight	2.778 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	-1	0.35	1.6	2.85	4.35	5.7	7	8.45	
Covering material	Oracover Air transparent red								
Adhesive used	Mod Podge								
Weight after adhesive	3.026								
	Total			Just Adhesive and covering			% mass gained		
Weight gain from covering	3.443 grams			0.665 grams			23.9%		
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	-1.7	-1.4	-1.25	-1.05	-0.85	-0.7	-0.55	-0.35	

Test section	35								
Initial weight	2.715 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	-1.15	0.75	2.65	4.85	6.9	9.1	11.4	13.65	
Covering material	2um Mylar								
Adhesive used	Liquitex								
Weight after adhesive	2.98								
	Total			Just Adhesive and covering			% mass gained		
Weight gain from covering	3.101 grams			0.386 grams			14.2%		
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	-1.6	-1.15	-0.8	-0.45	-0.1	0.35	0.7	1.1	
After 1 coat	3.381 grams			Add Kuramai					
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 1 coat	-1.35	-1.1	-0.95	-0.8	-0.65	-0.45	-0.25	-0.1	
After 2 coats	3.423 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 2 coats	-1.2	-1.05	-0.95	-0.85	-0.65	-0.5	-0.35	-0.2	

Test section	36								
Initial weight	3.081 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	0.3	2.5	3.8	5.4	6.65	8.05	9.35	10.8	
Covering material	6um Mylar			7.7gsm					
Adhesive used	Liquitex								
Weight after adhesive	3.36								
	Total			Just Adhesive and covering				% mass gained	
Weight gain from covering	3.553 grams			0.472 grams				15.3 %	
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	1.05	1.55	1.75	2.15	2.4	2.6	2.85	3.1	
After 1 coat	3.954 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 1 coat	0.6	0.85	0.95	1.05	1.2	1.3	1.4	1.6	
After 2 coats	4 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 2 coats	0.15	1.15	1.2	1.35	1.45	1.55	1.6	1.75	

Test section	37								
Initial weight	2.962 (grams)								
	no weight	1"	2"	3"	4"	5"	6"	7"	
Initial angles	-1.25	-0.1	1.05	2.2	3.4	4.55	5.7	6.9	
Covering material	Light Polyspan								
Adhesive used	Liquitex								
Weight after adhesive	3.289								
	Total	Just Adhesive and covering			% mass gained				
Weight gain from covering	3.614 grams	0.652 grams					22.0%		
	no weight	1"	2"	3"	4"	5"	6"	7"	
After shrinkage	-1.6	-1.25	-0.85	-0.45	0.1	0.45	0.85	1.35	
After 1 coat	4.036 grams	Plus Esaki							
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 1 coat	-2.2	-2.1	-2	-1.9	-1.8	-1.6	-1.55	-1.4	
After 2 coats	4.075 grams								
	no weight	1"	2"	3"	4"	5"	6"	7"	
After 2 coats	-1.7	-1.6	-1.55	-1.5	-1.4	-1.3	-1.2	-1.05	