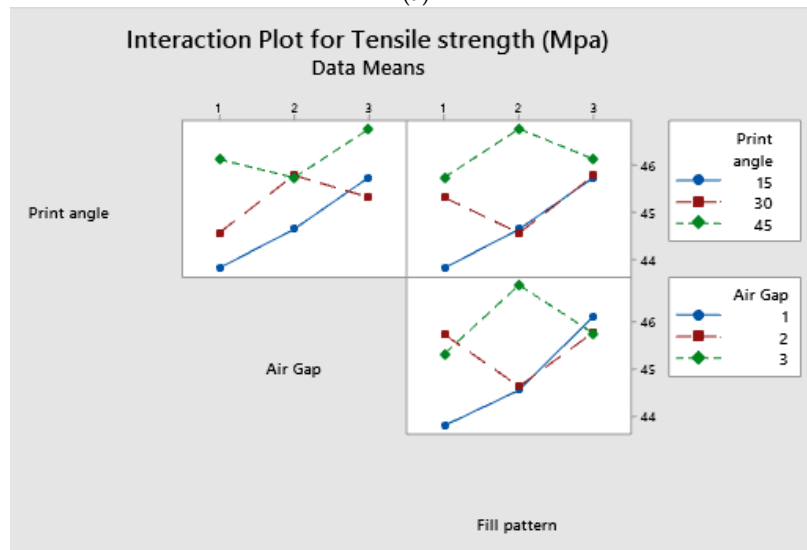
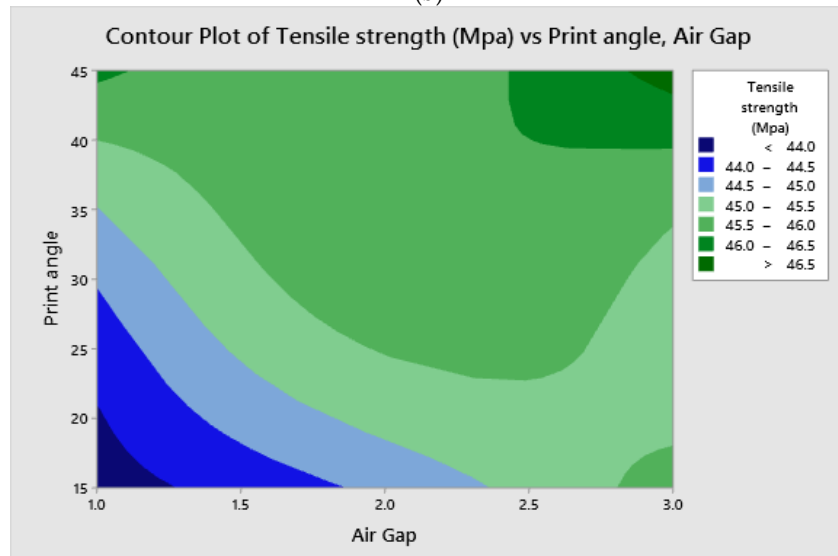


(a)



(b)



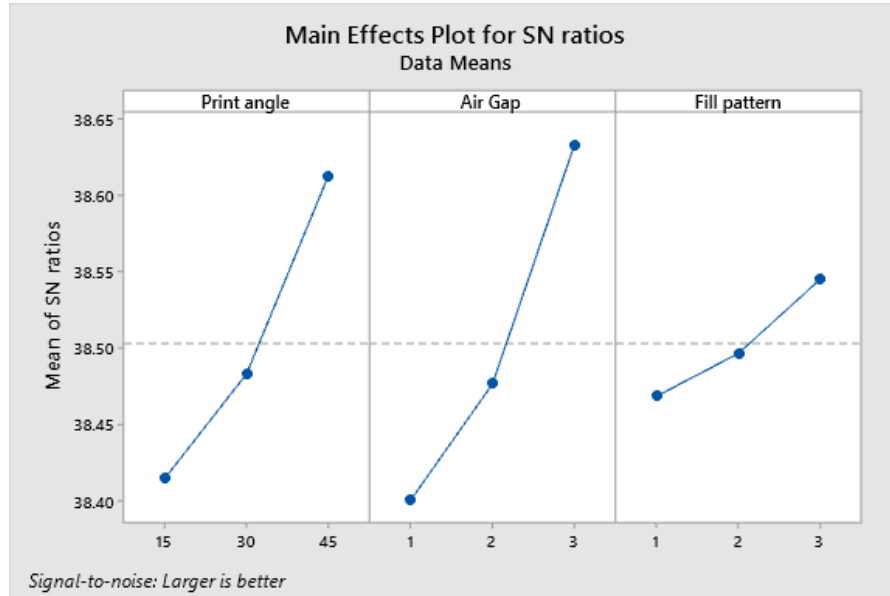
(c)

Figure S1. Plots for tensile strength

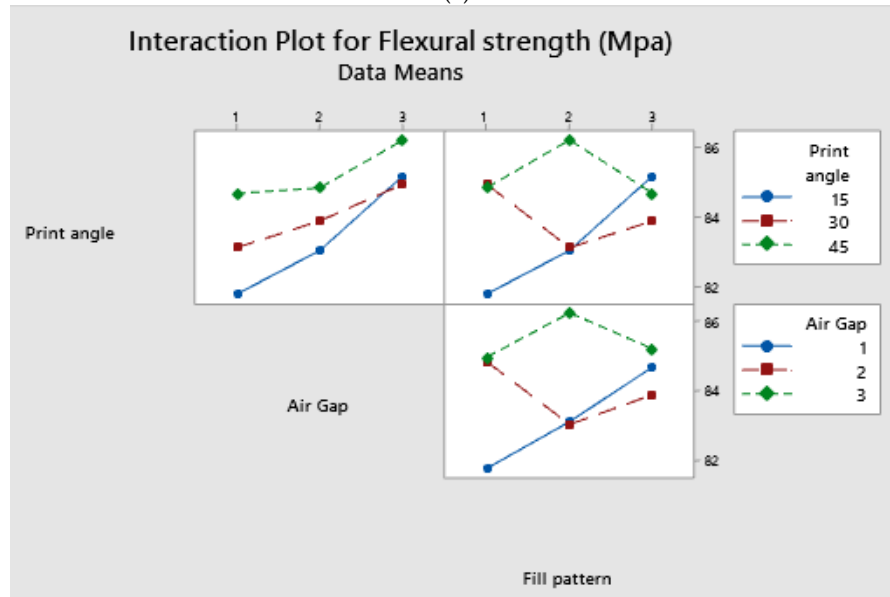
Note: In the plots, the levels of the Air gap and Fill patterns will be indicated as 1, 2, and 3.

Air gap: 1 – Zero; 2 – Positive; 3 – Negative

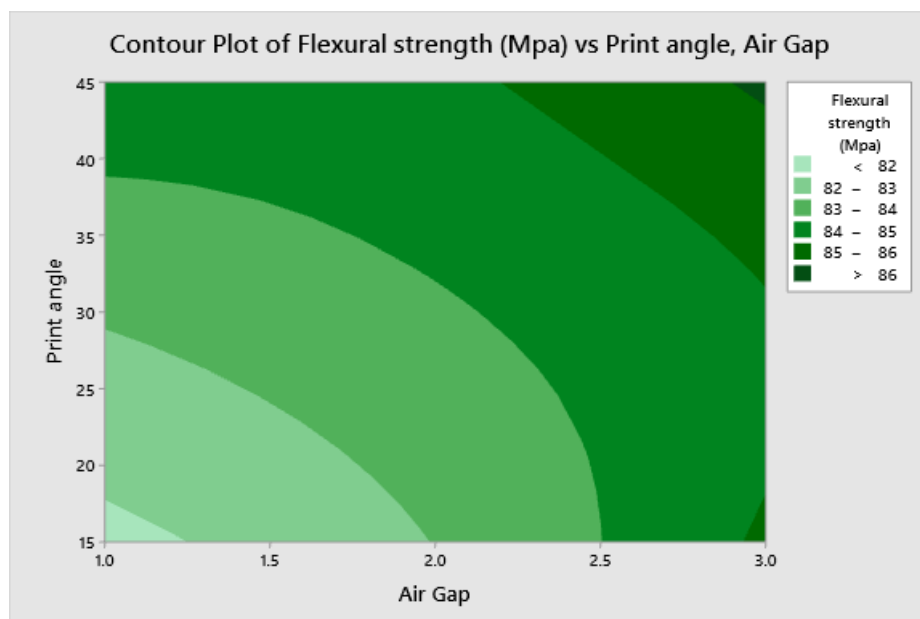
Fill patterns: 1 – Concentric; 2 – Honeycomb; 3 – Hilbert curve



(a)

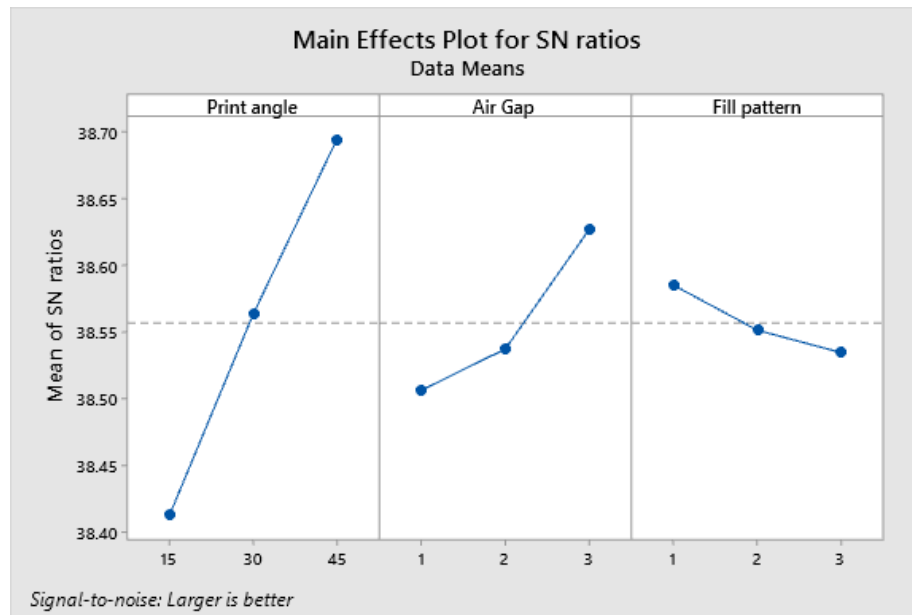


(b)

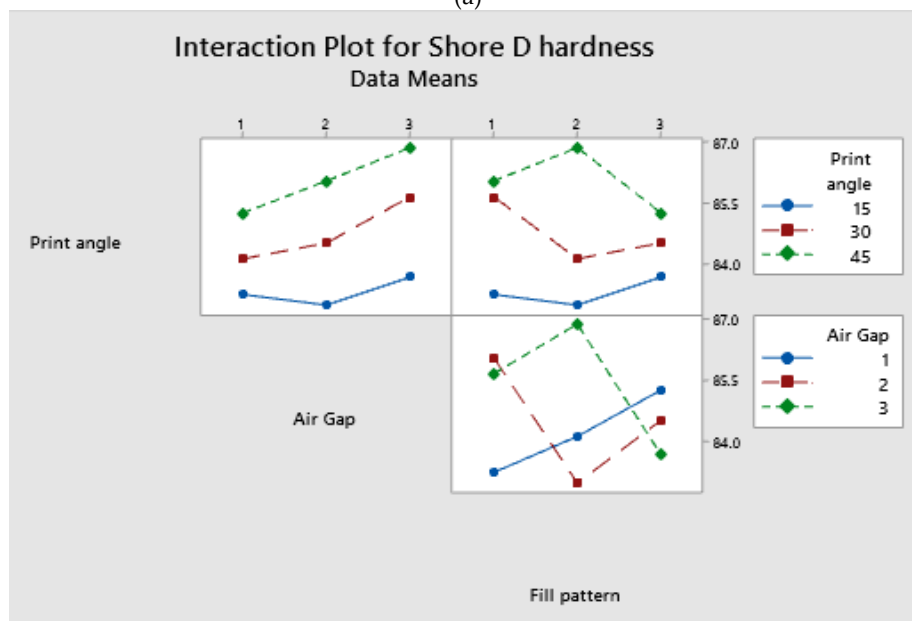


(c)

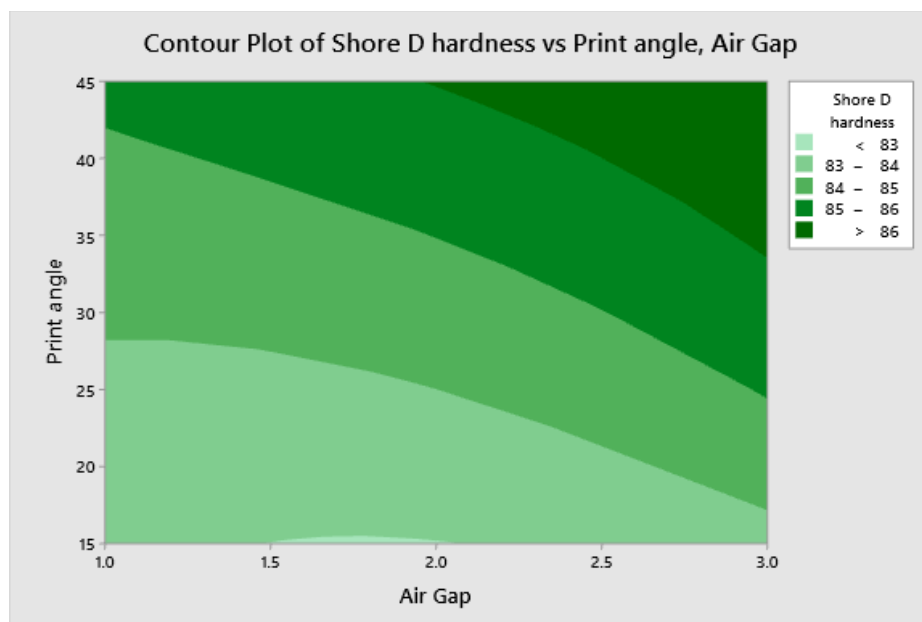
Figure S2. Plots for flexural strength



(a)

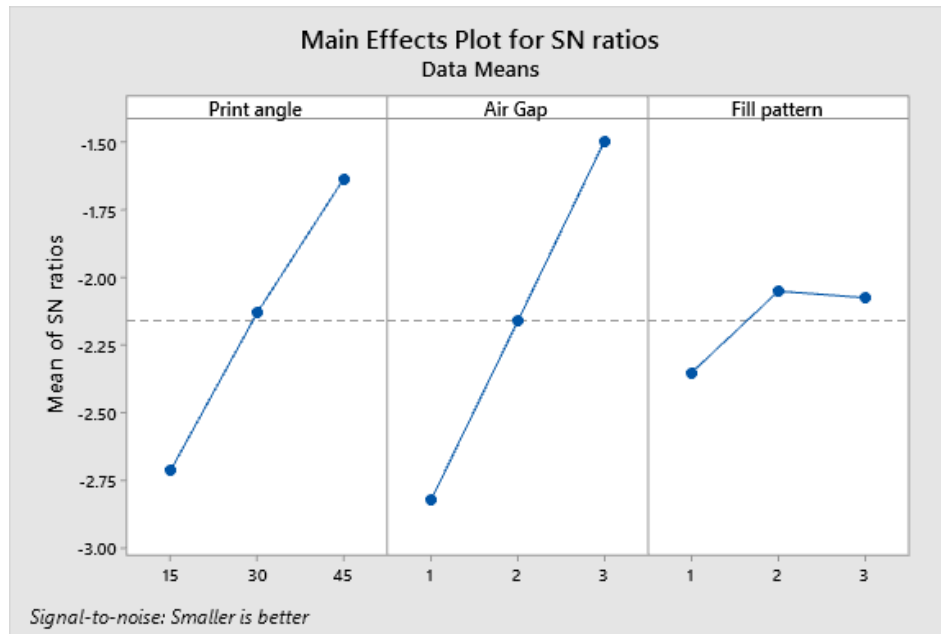


(b)

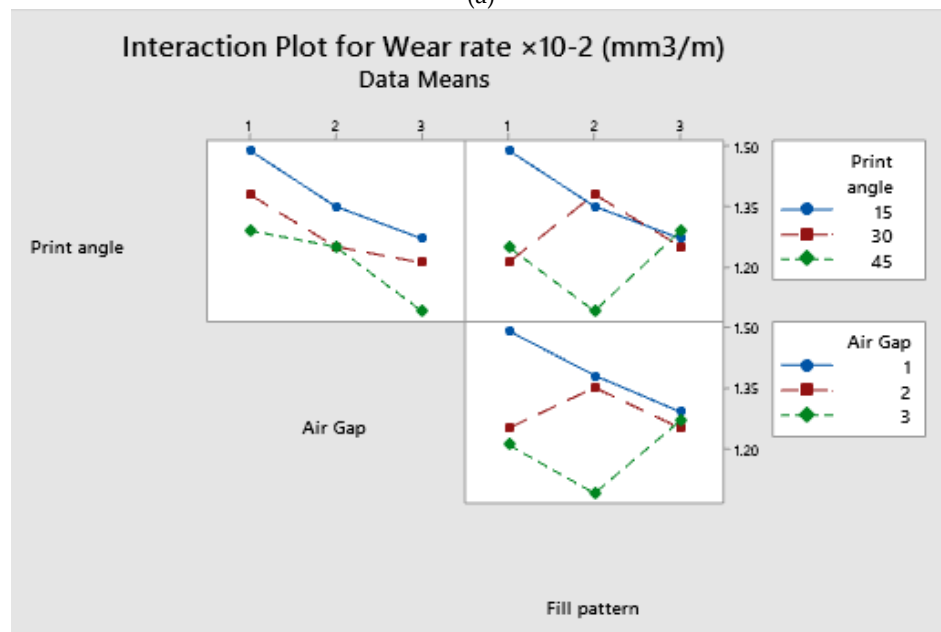


(c)

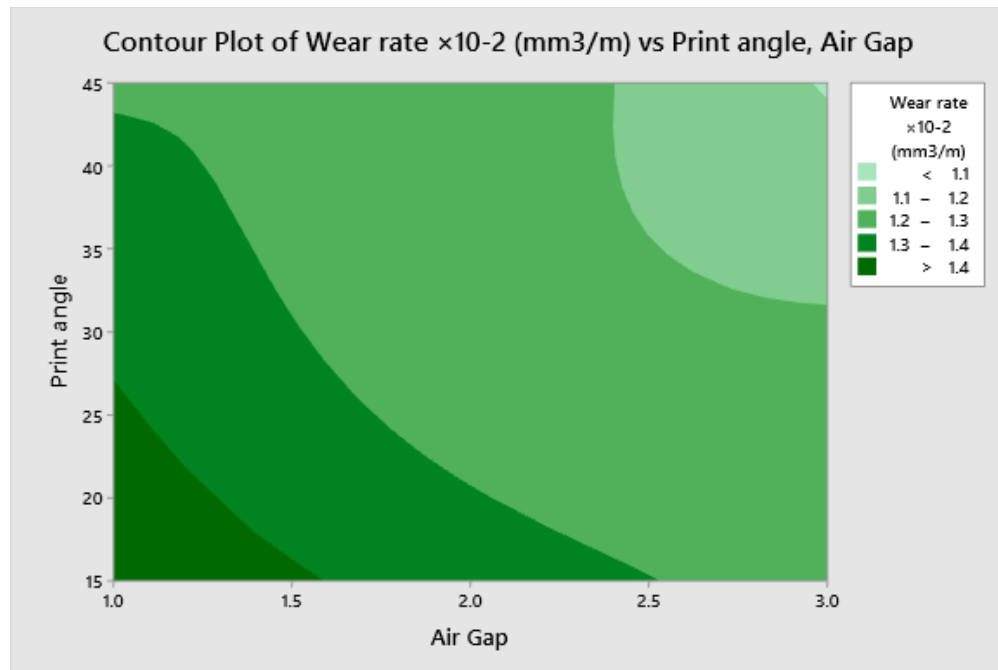
Figure S3. Plots for Shore D hardness



(a)

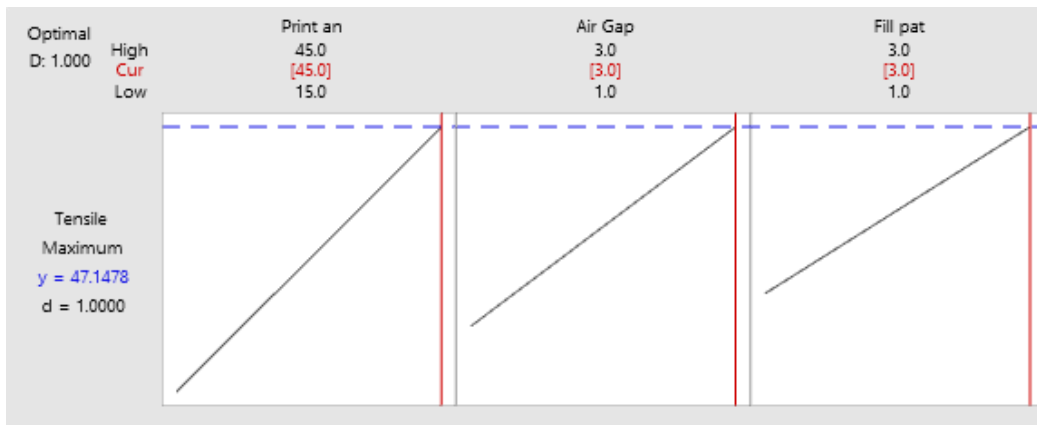


(b)

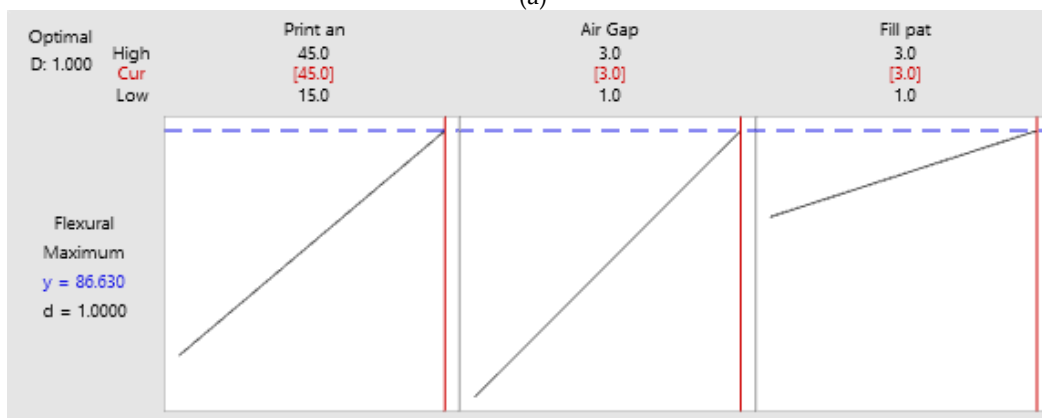


(c)

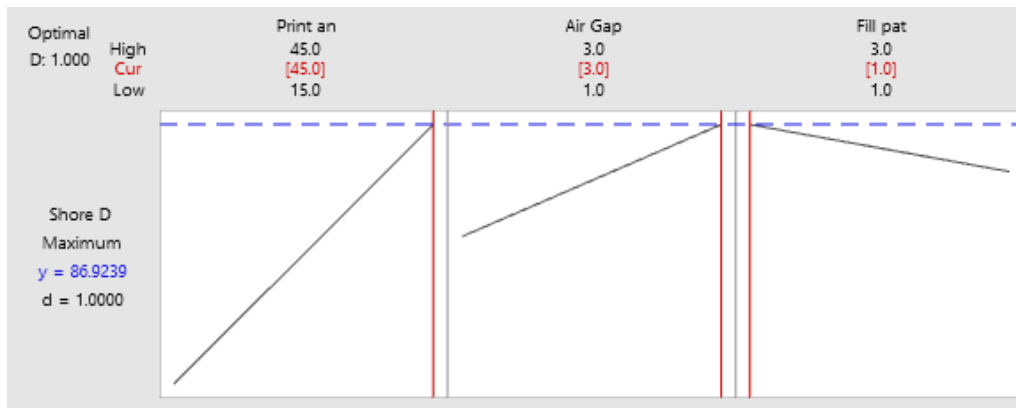
Figure S4. Plots for wear rate



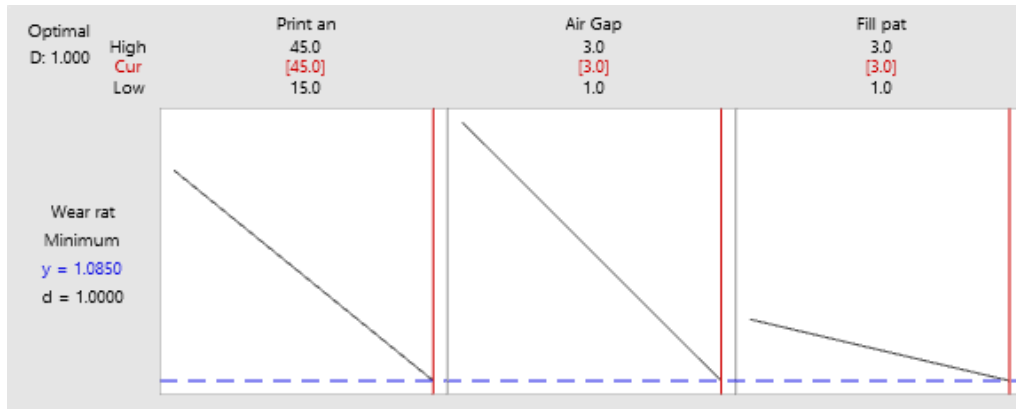
(a)



(b)



(c)



(d)

Figure S5. Optimized responses for each mechanical properties

Table S1. ANOVA table for tensile test

Source	DF	Adj SS	Adj MS	F-Value	P-Value
Regression	3	6.4775	2.15917	64.65	0
Print angle	1	3.3004	3.30042	98.82	0
Air Gap	1	1.8704	1.87042	56	0.001
Fill pattern	1	1.3067	1.30667	39.12	0.002
Error	5	0.167	0.0334		
Total	8	6.6445			

Table S2. Summary table for tensile test

S	R-sq	R-sq(adj)	R-sq(pred)
0.182751	97.49%	95.98%	90.99%

Table S3. ANOVA table for flexural test

Source	DF	Adj SS	Adj MS	F-Value	P-Value
Regression	3	13.9329	4.6443	29.26	0.001
Print angle	1	5.4721	5.4721	34.47	0.002
Air Gap	1	7.6614	7.6614	48.26	0.001
Fill pattern	1	0.7994	0.7994	5.04	0.075
Error	5	0.7937	0.1587		
Total	8	14.7266			

Table S4. Summary table for flexural test

S	R-sq	R-sq(adj)	R-sq(pred)
0.398422	94.61%	91.38%	79.94%

Table S5. ANOVA table for Shore D hardness

Source	DF	Adj SS	Adj MS	F-Value	P-Value
Regression	3	13.8704	4.6235	72.44	0
Print angle	1	11.3713	11.3713	178.16	0
Air Gap	1	2.1242	2.1242	33.28	0.002

Fill pattern	1	0.375	0.375	5.88	0.06
Error	5	0.3191	0.0638		
Total	8	14.1896			

Table S6. Summary table for Shore D hardness

S	R-sq	R-sq(adj)	R-sq(pred)
0.252642	97.75%	96.40%	92.25%

Table S7. ANOVA table for Wear rate

Source	DF	Adj SS	Adj MS	F-Value	P-Value
Regression	3	0.099683	0.033228	86.68	0
Print angle	1	0.0384	0.0384	100.17	0
Air Gap	1	0.058017	0.058017	151.35	0
Fill pattern	1	0.003267	0.003267	8.52	0.033
Error	5	0.001917	0.000383		
Total	8	0.1016			

Table S8. Summary table for Wear rate

S	R-sq	R-sq(adj)	R-sq(pred)
0.019579	98.11%	96.98%	92.20%