

LAMPIRAN 3

HASIL PERHITUNGAN PENGUJIAN BENDING KOMPOSIT

1. SERAT KENAF/PP

No. Sps	Var.	L (mm)	d (mm)	b (mm)	F (N)	D (mm)	m (N/mm)	σ (MPa)	ϵ (%)	E (GPa)
1	PP	80	3.16	12.73	58.29	24.3	6.08	80.95	7.191	1.872
2		80	3.14	12.72	55.07	22	6.00	71.64	6.469	1.845
3		80	2.98	12.72	58.26	21.8	6.25	75.37	6.084	1.922
4		80	2.95	12.74	56.32	21.8	6.66	72.86	6.029	2.051
5		80	2.97	12.72	56.91	22.9	6.25	75.92	6.376	2.461
Min								71.64	6.029	1.845
Max								80.95	7.191	2.461
Rata-rata								75.35	6.430	2.030
Standar Deviasi								3.59	0.384	0.253

2. SERAT KENAF/HDPE

No. Sps	Var.	L (mm)	d (mm)	b (mm)	F (N)	D (mm)	m (N/mm)	σ (MPa)	ϵ (%)	E (GPa)
1	HDPE	80	3.42	12.73	50.13	22.8	6.67	66.69	7.317	1.845
2		80	3.25	12.72	42.18	22.5	6.88	55.64	6.863	1.538
3		80	3.36	12.73	43.61	21.2	6.67	55.49	6.685	1.538
4		80	3.45	12.73	44.22	22.5	7.27	58.33	7.270	1.367
5		80	3.57	12.72	46.32	23.6	7.06	63.04	7.906	1.692
Min								55.49	6.685	1.367
Max								66.69	7.906	1.845
Rata-rata								59.84	7.208	1.596
Standar Deviasi								4.90	0.307	0.181

3. SERAT KENAF/(PP:HDPE) 1 : 1

No. Sps	Var.	L (mm)	d (mm)	b (mm)	F (N)	D (mm)	m (N/mm)	σ (MPa)	ε (%)	E (GPa)
1	PP1:1 HDPE	80	3.18	12.71	46.62	24.2	6.66667	64.55	7.207	1.538
2		80	3.18	12.71	45.44	23	6.42857	60.79	6.864	1.384
3		80	3.21	12.73	50.65	20.6	7.36842	63.40	6.193	1.999
4		80	3.28	12.72	52.19	22.2	7.36842	68.27	6.833	1.845
5		80	3.17	12.72	46.6	23.7	6.66667	63.60	7.036	1.640
Min								60.79	6.193	1.384
Max								68.27	7.207	1.999
Rata-rata								64.13	6.827	1.681
Standar Deviasi								2.70	0.319	0.244

4. SERAT KENAF/(PP:HDPE) 1 : 2

No. Sps	Var.	L (mm)	d (mm)	b (mm)	F (N)	D (mm)	m (N/mm)	σ (MPa)	ε (%)	E (GPa)
1	PP1:2 HDPE	80	3.1	12.72	40.84	24	7.69	56.23	6.983	1.709
2		80	3.11	12.72	43.75	22	7.27	56.91	6.421	1.538
3		80	3.26	12.72	48.34	23	7.00	64.67	7.037	1.476
4		80	3.1	12.73	48.2	22.2	7.69	63.05	6.452	1.922
5		80	3.14	12.71	45.29	23.7	6.92308	61.82	6.969	1.457
Min								56.23	6.421	1.457
Max								64.67	7.037	1.922
Rata-rata								60.54	6.772	1.620
Standar Deviasi								3.77	0.464	0.196

5. SERAT KENAF/(PP:HDPE) 2 : 1

No. Sps	Var.	L (mm)	d (mm)	b (mm)	F (N)	D (mm)	m (N/mm)	σ (MPa)	ϵ (%)	E (GPa)
1	PP2:1 HDPE	80	3.25	12.74	58.29	21	7.14	73.76	6.392	2.171
2		80	3.18	12.73	53.36	23.3	7.06	72.00	6.946	1.999
3		80	3.06	12.74	42.63	22.5	6.84	56.24	6.462	1.538
4		80	3.13	12.73	47.32	23.5	7.41	64.22	6.888	1.692
5		80	3.17	12.74	50.1	24	7.27273	68.97	7.125	1.692
Min								56.24	6.392	1.538
Max								73.76	7.125	2.171
Rata-rata								67.04	6.763	1.818
Standar Deviasi								7.04	0.473	0.259

