

Methods for the Characterization of Polyetherimide Based Materials Processed by Fused Deposition Modelling

Claudio Tosto¹, Lorena Saitta¹, Eugenio Pergolizzi¹, Ignazio Blanco¹, Giovanni Celano¹ and Gianluca Cicala^{1*}

¹ Department of Civil Engineering and Architecture, University of Catania, Viale Andrea Doria 6, 95125 Catania, Italy

* Correspondence to: gianluca.cicala@unict.it; Tel.: +39-095-738-2760 (G.C.)

Received: date; Accepted: date; Published: date

Table S1. Tensile test experimental results obtained from 20 runs.

Standard order	Run order	Factor A: Material	Factor B: Geometry	Response 1: Young's Modulus [GPa]	Response 2: UTS [MPa]
1	6	Tan	Type I	2.14	61.061
2	16	Tan	Type I	2.17	59.863
3	9	Tan	Type I	2.22	61.983
4	20	Tan	Type I	2.24	60.657
5	1	Tan	Type I	2.13	58.545
6	7	Black	Type I	2.17	57.522
7	12	Black	Type I	2.2	59.065
8	19	Black	Type I	2.15	57.817
9	14	Black	Type I	2.17	57.61
10	3	Black	Type I	2.21	60.552
11	17	Tan	Type IV	2.32	64.08
12	2	Tan	Type IV	2.16	48.99
13	11	Tan	Type IV	2.34	57.389
14	13	Tan	Type IV	2.33	60.004
15	15	Tan	Type IV	2.31	61.845
16	4	Black	Type IV	2.08	59.717
17	18	Black	Type IV	2.05	59.352
18	5	Black	Type IV	2.08	59.579
19	8	Black	Type IV	2.16	58.974
20	10	Black	Type IV	2.15	58.332

Table S2. Flexural test experimental results obtained from 20 runs.

Standard order	Run order	Factor A: Material	Factor B: Geometry [mm]	Response 1: Flexural Strength [MPa]
1	1	Tan	122	94.09
2	13	Tan	122	98.3
3	9	Tan	122	112.9
4	17	Tan	122	101
5	19	Tan	122	95.19
6	8	Black	122	85.07
7	15	Black	122	96.39
8	14	Black	122	102.09
9	3	Black	122	101.2
10	6	Black	122	86.2
11	7	Tan	165	108.02
12	20	Tan	165	97.54
13	5	Tan	165	95.93
14	10	Tan	165	106.98
15	16	Tan	165	92.81
16	2	Black	165	106.54
17	12	Black	165	77.48
18	11	Black	165	85.55
19	18	Black	165	96.5
20	4	Black	165	77.96

Table S3. SBS test experimental results obtained from 20 runs.

Standard order	Run order	Factor A: Material	Factor B: Geometry [mm]	Response: ILSS [MPa]
1	9	Tan	122	12.66
2	5	Tan	122	12.6
3	17	Tan	122	12.68
4	16	Tan	122	12.76
5	10	Tan	122	12.46
6	19	Black	122	16
7	11	Black	122	16.06
8	4	Black	122	16.74
9	7	Black	122	14.75
10	12	Black	122	14.99
11	18	Tan	165	11.82
12	20	Tan	165	11.99
13	6	Tan	165	12.32
14	15	Tan	165	11.92
15	2	Tan	165	12.44

16	3	Black	165	15.96
17	1	Black	165	15.65
18	8	Black	165	16.62
19	14	Black	165	15.35
20	13	Black	165	15.54