Article

Transforming Denim Waste: Super Glue-Enhanced Composite Materials

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Supplementary Materials

Individual specimen dimensions (gauge length, thickness, and width) together with the corresponding ultimate tensile strength (UTS) and Young's modulus (E) used for the calculation of the average values reported in the manuscript. The cross-sectional dimensions of each specimen were measured individually prior to tensile testing and were used for the calculation of tensile stress.

Table S1. Individual geometric characteristics and tensile properties of the tested denim–cyanoacrylate composite specimens with different B_4C contents (0, 4, 7, and 10 wt%).

Specimen ID	Gauge length (mm)	Thickness (mm)	Width (mm)	UTS (MPa)	Young's modulus (GPa)
DSG-1	45	2.15	17	16.79	0.89
DSG-2	45	2.15	17	15.84	0.75
DSG-3	45	2.15	17	17.02	0.85
DSGB-4 wt%_1	45	1.95	16.5	19.06	1.19
DSGB-4 wt%_2	45	2.15	16.5	14.32	1
DSGB-4 wt%_3	45	2.07	16.5	18.86	0.89
DSGB-7 wt%_1	45	2.07	15	20.8	1.22
DSGB-7 wt%_2	45	2.04	15	18.82	0.88
DSGB-7 wt%_3	45	2	17	21.37	1.4
DSGB-10 wt% _1	51	2.5	16.5	9.11	0.71
DSGB-10 wt% _2	51	2.5	16.5	14.66	0.84
DSGB-10 wt% _3	51	2.5	16.5	11.2	0.95

Mean values ± standard deviation (SD) of the specimen geometry (gauge length, thickness, and width) and the corresponding tensile properties (ultimate tensile strength and Young's modulus), calculated from three independent specimens for each composition.

Table S2. Mean geometric characteristics and tensile properties of the tested denim–cyanoacrylate composite specimens with different B_4C contents (0, 4, 7, and 10 wt% B_4C).

Specimen Designation	Number of Specimens (N)	Gauge length (mm)	Thickness (mm)	Width (mm)	UTS (MPa)	Young's modulus (GPa)
DSG	3	45.0 ± 0.00	2.15 ± 0.00	17.0 ± 0.00	16.55 ± 0.63	0.83 ± 0.07
DSGB-4 wt%	3	45.0 ± 0.00	2.06 ± 0.10	16.5 ± 0.00	17.41 ± 2.68	1.03 ± 0.15
DSGB-7 wt%	3	45.0 ± 0.00	2.04 ± 0.04	15.7 ± 1.15	20.33 ± 1.33	1.17 ± 0.27
DSGB-10 wt%	3	51.0 ± 0.00	2.50 ± 0.00	16.5 ± 0.00	11.66 ± 2.80	0.83 ± 0.12

The values of ultimate tensile strength (UTS) and Young's modulus are presented as mean values calculated from three tested specimens for each composition (n = 3). Data are presented as mean ± standard deviation (SD) for n=3. Dimensions were measured using a digital handheld caliper (resolution: 0.01" mm"). Where repeated measurements of specimen geometry yielded identical values within the practical resolution/precision of the digital caliper, standard deviation indicated as SD = 0.00" mm" to reflect zero measurable variance across replicates.