

Bedrock 3D Standard Natural TPU 85A Natural

MaterialID MAT0255



3DPiceland Labs
Generated with 3DPiceland Engineering Platform v70.0.4
DIRECT-IMPACT-METHODOLOGY - Izod and Charpy
Methodology
2026-10-04 18:10:39

Traceability boundary: canonical per-module measured dates are shown below. Session identifier, time of day, operator, printer/slicer profile and environmental conditions are Not recorded and are never inferred.

Measurement provenance

Canonical SQLite measured dates use ISO format; missing dates remain Not recorded.

Module	Measured date
Tensile	Not recorded
Impact	Not recorded
Izod	Not recorded
Charpy	Not recorded
Stiffness	Not recorded

Rigid test status
No native results

Rigid result
modules
0/6

Rigid
specimen/result
records
0

Public details
Approved

Rigid specimen and result quality

Module	Orientation	Average	Std. dev.	CV	Specimens	Confidence	Validation
Tensile	Upright	n/a	n/a	n/a	0	n/a	OK

Module	Orientation	Average	Std. dev.	CV	Specimens	Confidence	Validation
Tensile	Flat	n/a	n/a	n/a	0	n/a	OK
Impact	Upright	n/a	n/a	n/a	0	n/a	OK
Impact	Flat	n/a	n/a	n/a	0	n/a	OK
Stiffness	Three-point bend	n/a	n/a	n/a	0		OK

Recorded native inputs

Module	Input set	Recorded values
Tensile	Upright force inputs (N)	
Tensile	Flat force inputs (N)	
Impact	Upright needle inputs (%)	
Impact	Flat needle inputs (%)	
Stiffness	Revolutions / degrees	

Approved test notes

Method and equipment context

Purpose-built tensile, pendulum impact and three-point bend apparatus are used with the governed Settings Manager constants consumed by ResultsService. Results are comparative and do not claim accredited-laboratory equipment.

[Testing methodology](#) ·
 [Engineering methodology whitepaper](#) ·
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Flexible Material Testing

Comparative in-house measurements; n = independent specimens. Separate test groups; Overall unchanged.

Method	Result	Condition	Mean	n	SD	CV %	Range	Not reached
eaacea91	Apparent Compressive Stress at 20% Strain (MPa)	10 s hold · 2 mm displacement · cycle 1	2.977	10	0.072	2.416	2.861–3.097	0
eaacea91	Apparent Compressive Stress at 20% Strain (MPa)	30 s hold · 2 mm displacement · cycle 1	2.848	10	0.067	2.353	2.735–2.955	0
eaacea91	Compression Force at 20% Strain (N)	10 s hold · 2 mm displacement · cycle 1	189.4	10	4.575	2.416	182–197	0
eaacea91	Compression Force at 20% Strain (N)	30 s hold · 2 mm displacement · cycle 1	181.2	10	4.264	2.353	174–188	0
eaacea91	Force reduction from 10 s to 30 s at 20% Strain (%)	first compression only · 2 mm displacement	4.328	10	0.38	8.778	3.684–4.813	0
eaacea91	Force retention at 20% Strain (%)	10–30 s · 2 mm displacement · cycle 1	95.672	10	0.38	0.397	95.187–96.316	0
eaacea91	Residual height loss after recovery (%)	20% compression · 30 s compressed hold · 60 s rest · 10 mm initial height · cycle 1	1.2	10	0.2	16.667	0.9–1.6	0
ed381ba8	Shore A Hardness (Shore A)	10 s reading · 8 mm	84.8	1	—	—	84.8–84.8	0

Shore location statistics

Within each specimen; specimen numbers are local to each test group. SD uses the sample formula. These readings do not increase independent n.

Method	Scale	Condition	Specimen	Readings	Mean	Location SD	Location CV %
ed381ba8	Shore A Hardness	10 s reading · 8 mm	1	5	84.8	1.304	1.538

reports/test-sessions/MAT0255/

