

Winkle Standard Tough PLA Tough Black

MaterialID MAT0159



3DPiceland Labs
Generated with 3DPiceland Engineering Platform v60.0.6
WORKFLOW-RELIABILITY - Bug Fixes and Workflow
Reliability
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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
Stiffness	Not recorded

Status Complete	Result modules 3/3	Specimen/result records 40	Public details Approved
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Specimen and result quality

Module	Orientation	Average	Std. dev.	CV	Specimens	Confidence	Validation
Tensile	Upright	12,535 MPa	5,249 MPa	0,419%	10	10/10	OK
Tensile	Flat	38,144 MPa	5,611 MPa	0,147%	10	10/10	OK

Module	Orientation	Average	Std. dev.	CV	Specimens	Confidence	Validation
Impact	Upright	207,157 kJ/m ²	10,617 kJ/m ²	0,051%	9	9/10	OK
Impact	Flat	922,58 kJ/m ²	35,389 kJ/m ²	0,038%	10	10/10	OK
Stiffness	Three-point bend	2335,598 MPa	n/a	n/a	1	Complete	OK

Recorded native inputs

Module	Input set	Recorded values
Tensile	Upright force inputs (N)	54, 57, 28, 46, 101, 106, 134, 90, 116, 83
Tensile	Flat force inputs (N)	274, 236, 234, 262, 233, 270, 267, 281, 266, 157
Impact	Upright needle inputs (%)	11,50, 11,50, 12,00, 12,00, 13,00, 13,00, 12,00, 13,00, 12,00,
Impact	Flat needle inputs (%)	62,00, 65,00, 56,00, 58,00, 57,00, 55,00, 58,00, 56,00, 60,00, 58,00
Stiffness	Revolutions / degrees	2 / 70

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](#) · [Download PDF](#)

reports/test-sessions/MAT0159/