

Public test session report

Coex 3D Standard Scarlet Red PLA Red

MaterialID MAT0265



3DP Iceland Labs

Generated with 3DP Iceland 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	2026-09-25
Impact	2026-09-26
Izod	2026-09-28
Charpy	2026-09-28
Stiffness	2026-09-25

Rigid test status
Complete

Rigid result
modules
6/6

Rigid
specimen/result
records
41

Public details
Approved

Rigid specimen and result quality

Module	Orientation	Average	Std. dev.	CV	Specimens	Confidence	Validation
Tensile	Upright	23,579 MPa	4,054 MPa	0,172%	10	10/10	OK

Module	Orientation	Average	Std. dev.	CV	Specimens	Confidence	Validation
Tensile	Flat	38,744 MPa	7,844 MPa	0,202%	10	10/10	OK
Impact	Upright	5,345 kJ/m ²	0,716 kJ/m ²	0,134%	10	10/10	OK
Impact	Flat	8,347 kJ/m ²	0,734 kJ/m ²	0,088%	10	10/10	OK
Stiffness	Three-point bend	3127,326 MPa	n/a	n/a	1	Complete	OK

Recorded native inputs

Module	Input set	Recorded values
Tensile	Upright force inputs (N)	121, 122, 168, 173, 167, 168, 107, 184, 161, 162
Tensile	Flat force inputs (N)	185, 325, 182, 280, 278, 195, 311, 237, 259, 267
Impact	Upright needle inputs (%)	4,5, 7, 7, 6, 7, 7, 6, 7, 7, 7,5
Impact	Flat needle inputs (%)	9, 11, 11,5, 9,5, 9, 11, 10,5, 10, 10, 11
Stiffness	Revolutions / degrees	1 / 230

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](#)

Izod and Charpy Impact Strength

Charpy Impact Strength · 2026-09-28
Instrument readings in kJ/m²
Mean 2.659 kJ/m²; Std. Dev 0.373 kJ/m²; CV 14.039%; Samples 10; Confidence 10
No break 0; invalid 0; excluded 0.
Comparative measurements; standard conformity unverified.

Izod Impact Strength · 2026-09-28

Instrument readings in kJ/m²

Mean 3.198 kJ/m²; Std. Dev 0.186 kJ/m²; CV 5.808%; Samples 10; Confidence 10

No break 0; invalid 0; excluded 0.

Comparative measurements; standard conformity unverified.

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