

Coex 3D Prime Scarlet
Red PLA Red

3DP Iceland
— Labs —

MaterialID MAT0264

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	2026-09-25
Impact	2026-09-26
Izod	2026-09-29
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	13,104 MPa	2,958 MPa	0,226%	10	10/10	OK

Module	Orientation	Average	Std. dev.	CV	Specimens	Confidence	Validation
Tensile	Flat	40,605 MPa	5,883 MPa	0,145%	10	10/10	OK
Impact	Upright	3,997 kJ/m ²	0,778 kJ/m ²	0,195%	10	10/10	OK
Impact	Flat	9,794 kJ/m ²	1,88 kJ/m ²	0,192%	10	10/10	OK
Stiffness	Three-point bend	3024,791 MPa	n/a	n/a	1	Complete	OK

Recorded native inputs

Module	Input set	Recorded values
Tensile	Upright force inputs (N)	67, 90, 103, 97, 110, 43, 90, 76, 88, 88
Tensile	Flat force inputs (N)	259, 289, 241, 223, 200, 249, 316, 304, 255, 304
Impact	Upright needle inputs (%)	4,5, 3, 4, 5,5, 5, 5, 5, 5,5, 6,5, 5,5
Impact	Flat needle inputs (%)	17, 10, 14, 10,5, 13, 11, 12, 9, 11,5, 12
Stiffness	Revolutions / degrees	1 / 250

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 2.277 kJ/m²; Std. Dev 0.053 kJ/m²; CV 2.346%; Samples 10; Confidence 10
No break 0; invalid 0; excluded 0.
Comparative measurements; standard conformity unverified.

Izod Impact Strength · 2026-09-29

Instrument readings in kJ/m²

Mean 3.754 kJ/m²; Std. Dev 0.222 kJ/m²; CV 5.914%; Samples 8; Confidence 8

No break 0; invalid 0; excluded 0.

Comparative measurements; standard conformity unverified.

[reports/test-sessions/MAT0264/](#)