



Extrudr DuraPro Neon Green PC/PBT Green

Material Engineering Report
MaterialID MAT0031

3DPiceland Engineering Platform
3DPiceland Labs
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WORKFLOW-RELIABILITY - Bug Fixes and Workflow Reliability
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Public-data contract: This static report contains only allowlisted material identity, public links, canonical MSRP and existing Verified Material Summary / governed score outputs. It excludes raw specimen rows and non-public operational data.

TEST COVERAGE

Complete

ENGINEERING AXES

6/6

PUBLIC MSRP

\$45.64 USD/kg

Material identity

MaterialID	MAT0031
Material	Extrudr DuraPro Neon Green PC/PBT Green
Manufacturer	Extrudr
Product line	DuraPro
Base material	PC/PBT
Category	Engineering
Variant / finish	—
Reinforcement	—
Color	Green

Governed engineering profile

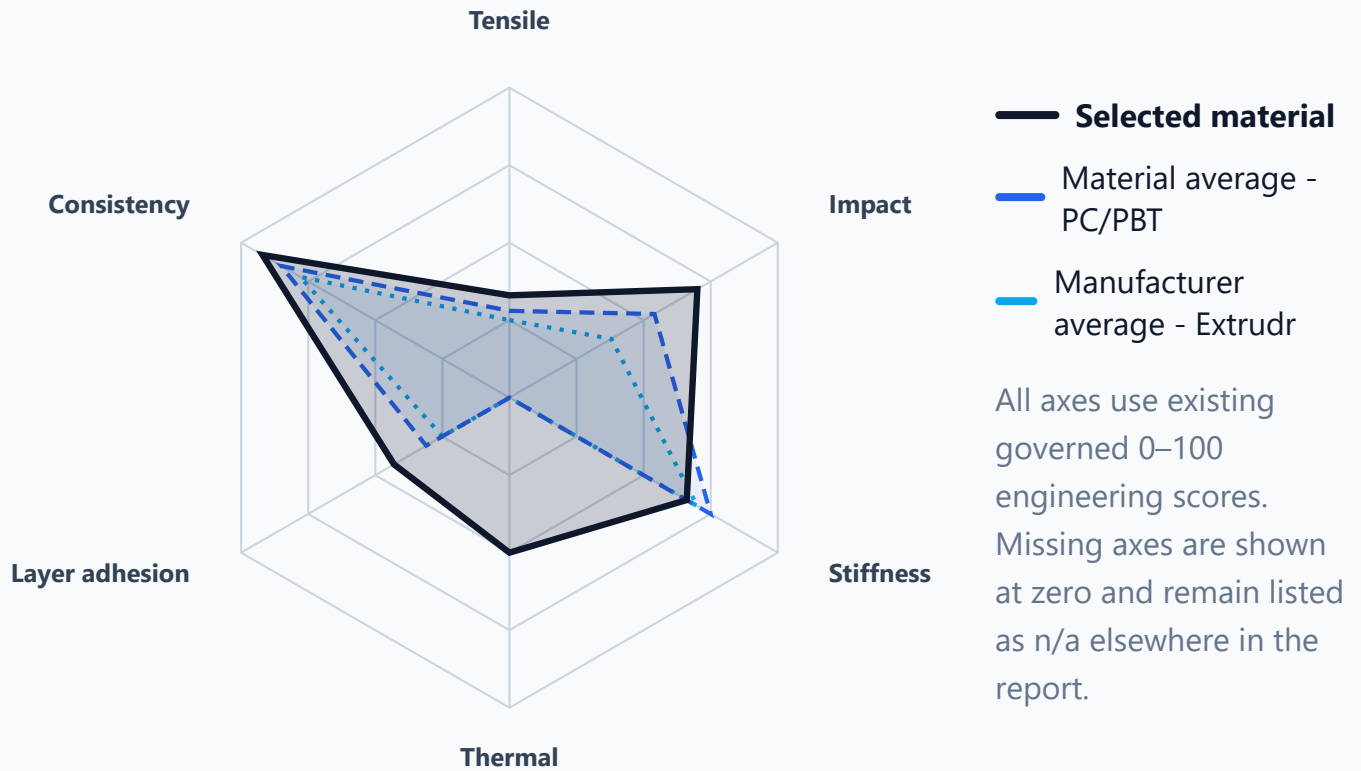
Overall	61/100
Tensile	33/100

Impact	70/100
Stiffness	66/100
Consistency	92/100
Layer adhesion	43/100
Thermal	50/100
Best available axis	consistency

Engineering score profile



Engineering radar



Fixture thermal result

99 °C · score 50/100 · method 3dp-thermal-deflection-fixture-v1
Nearby BlueDOT probe-indicated fixture temperature from a non-standard comparative 3DPIceland method; not ASTM D648, ISO 75, specimen temperature, certified HDT or a manufacturer limit.

Material and manufacturer context

Metric	Selected material	Material average	Manufacturer average
Overall	61/100	55/100	47/100
Tensile	33/100	28/100	25/100
Impact	70/100	54/100	38/100
Stiffness	66/100	75/100	70/100
Consistency	92/100	85/100	78/100
Layer adhesion	43/100	31/100	25/100
Thermal	50/100	—	—

Verified measurement results

Existing Verified Material Summary outputs. The public renderer does not read raw specimen rows or recalculate these values.

Measurement	Average	Std. deviation	CV	Samples	Confidence
Tensile upright	15.765 MPa	2.344 MPa	14.9%	10	10/10
Tensile flat	36.56 MPa	1.562 MPa	4.3%	10	10/10
Impact upright	215.375 kJ/m ²	25.669 kJ/m ²	11.9%	10	10/10
Impact flat	1175.216 kJ/m ²	5.976 kJ/m ²	0.5%	10	10/10
Stiffness modulus	1984.002 MPa	—	—	—	—
Stiffness deflection	2.735 mm	—	—	—	—

Measurement provenance

Canonical per-module measured dates from SQLite, shown in unambiguous ISO format. Missing dates are not inferred.

Module	Measured date
Tensile	Not recorded
Impact	Not recorded
Stiffness	Not recorded
Thermal	Not recorded

Engineering interpretation

Summary: Extrudr DuraPro Neon Green PC/PBT Green has a balanced mid-range engineering profile. It is above its material-family average by 6,2 points and above its manufacturer average by 13,5 points. Its strongest measured axis is Consistency, while the weakest axis is Tensile.

Data-driven review: Extrudr DuraPro Neon Green PC/PBT Green is best understood as a balanced material for general functional prototypes. Compared with the current verified dataset, it ranks better than 97% overall, is above the material-family average by 6,2 points, and is above the manufacturer average by 13,5 points. Its strongest engineering signal is Consistency, while Tensile is the main limitation to consider before using it for demanding applications.

BEST FEATURE

Consistency

MAIN LIMITATION

Tensile

DATASET POSITION

Better than 97%
8 / 234

Strengths

- Layer adhesion: 43/100. Z-axis bonding is better than the material-family context.
- Consistency: 92/100. Repeatability is one of the stronger signals in this material profile.
- Impact: 70/100. Impact behavior is competitive against the material-family context.
- Tensile: 33/100. Tensile behavior is competitive against the material-family context.

Limitations

- Tensile: 33/100. Avoid using this as the primary choice for tensile-loaded parts.

Engineering trade-offs

- Good repeatability does not compensate for low tensile capability in load-bearing designs.

Recommended applications

- Impact-aware parts where toughness matters
- Repeatable print jobs and production-style batches
- Cosmetic parts, concept models or low-load prototypes
- Avoid high tensile load applications

Metric rankings and percentiles

Metric	Score	Rank	Percentile
Overall	61/100	8 / 234	Better than 97%
Tensile	33/100	72 / 226	Better than 69%
Impact	70/100	2 / 226	Better than 100%
Stiffness	66/100	164 / 223	Better than 27%
Consistency	92/100	1 / 231	Better than 100%
Layer adhesion	43/100	39 / 226	Better than 83%
Thermal	50/100	16 / 209	Better than 93%

Decision guidance

- Use this material for moderate requirements after checking the weakest axis.
- Do not choose it as a tensile-strength benchmark material.

Better alternatives

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
No stronger same-base-material alternatives were identified in the current governed dataset.					

Peer context

Highest-scoring same-base-material peers from the current governed dataset. This context is descriptive and is not recalculated by the public renderer.

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
MAT0030	Extrudr DuraPro PC/PBT CF Black	Extrudr	48/100	23/100	39/100

Public links

[Manufacturer website](#) [Video review](#) [Download PDF](#)

Methodology and limitations

Results are comparative 3DPlceland measurements from home-built test equipment. Thermal is a nearby BlueDOT probe-indicated fixture temperature, not ASTM D648, ISO 75 or specimen temperature. Missing evidence remains n/a. Scores and test results are not recalculated by this publishing layer and do not replace certified manufacturer datasheets or accredited laboratory testing.

- [Testing methodology](#)
- [Engineering methodology whitepaper](#)