

Extrudr DuraPro ASA Red

Material Engineering Report
MaterialID MAT0016

3DPiceland Engineering Platform
3DPiceland Labs

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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

\$21.97 USD/kg

Material identity

MaterialID	MAT0016
Material	Extrudr DuraPro ASA Red
Manufacturer	Extrudr
Product line	DuraPro
Base material	ASA
Category	Engineering
Variant / finish	—
Reinforcement	—
Color	Red

Governed engineering profile

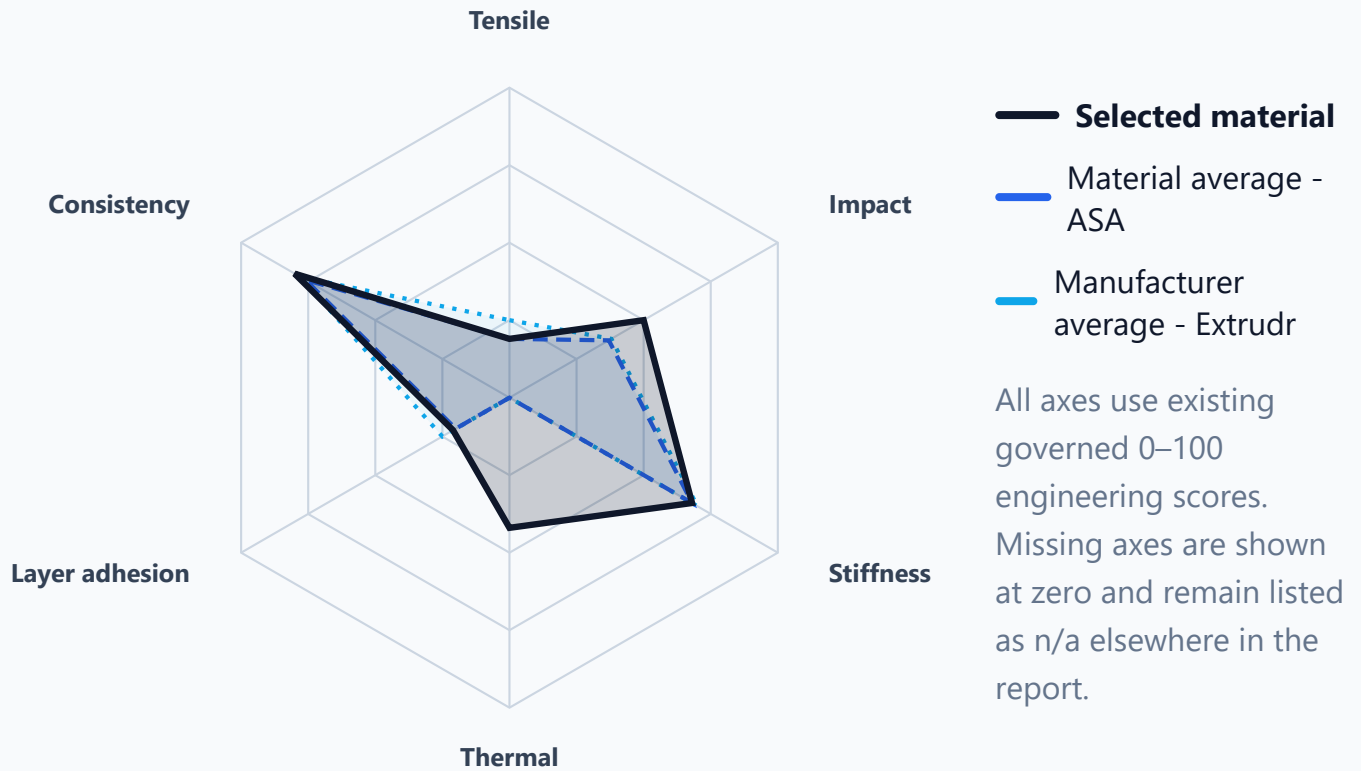
Overall	48/100
Tensile	19/100

Impact	50/100
Stiffness	68/100
Consistency	80/100
Layer adhesion	21/100
Thermal	42/100
Best available axis	consistency

Engineering score profile



Engineering radar



Fixture thermal result

83 °C · score 42/100 · method 3dp-thermal-deflection-fixture-v1
Nearby BlueDOT probe-indicated fixture temperature from a non-standard comparative 3DPlceland 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	48/100	44/100	47/100
Tensile	19/100	19/100	25/100
Impact	50/100	37/100	38/100
Stiffness	68/100	68/100	70/100
Consistency	80/100	76/100	78/100
Layer adhesion	21/100	20/100	25/100
Thermal	42/100	—	—

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	5.429 MPa	2.392 MPa	44%	10	10/10
Tensile flat	25.271 MPa	4.947 MPa	19.6%	10	10/10
Impact upright	170.753 kJ/m ²	18.415 kJ/m ²	10.8%	10	10/10
Impact flat	825.032 kJ/m ²	33.119 kJ/m ²	4%	10	10/10
Stiffness modulus	2050.136 MPa	—	—	—	—
Stiffness deflection	2.647 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 ASA Red has a specialized or limited engineering profile. It is above its material-family average by 3,6 points and above its manufacturer average by 0,6 points. Its strongest measured axis is Consistency, while the weakest axis is Tensile.

Data-driven review: Extrudr DuraPro ASA Red is best understood as a repeatable material for cosmetic, concept and low-load prototype work. Compared with the current verified dataset, it ranks better than 55% overall, is above the material-family average by 3,6 points, and is roughly aligned with the manufacturer average. 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 55%
106 / 234

Strengths

- Consistency: 80/100. Repeatability is one of the stronger signals in this material profile.
- Impact: 50/100. Impact behavior is competitive against the material-family context.

Limitations

- Tensile: 19/100. Avoid using this as the primary choice for tensile-loaded parts.
- Layer adhesion: 21/100. Z-axis performance should be treated with caution.

Engineering trade-offs

- Good repeatability does not compensate for low tensile capability in load-bearing designs.
- The report should be read as a suitability warning rather than a general-purpose recommendation.

Recommended applications

- 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	48/100	106 / 234	Better than 55%
Tensile	19/100	190 / 226	Better than 16%
Impact	50/100	25 / 226	Better than 89%

Metric	Score	Rank	Percentile
Stiffness	68/100	150 / 223	Better than 33%
Consistency	80/100	75 / 231	Better than 68%
Layer adhesion	21/100	130 / 226	Better than 43%
Thermal	42/100	41 / 209	Better than 81%

Decision guidance

- Use this material mainly for low-load, visual or experimental parts.
- Review the listed alternatives if the application needs stronger overall performance.
- Do not choose it as a tensile-strength benchmark material.

Better alternatives

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
MAT0014	Extrudr DuraPro Emerald Green ASA Green	Extrudr	51/100	21/100	49/100

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
MAT0014	Extrudr DuraPro Emerald Green ASA Green	Extrudr	51/100	21/100	49/100
MAT0015	Prusa3D Prusament ASA Pro Green	Prusa3D	48/100	23/100	44/100
MAT0211	Eryone Standard Black ASA High Speed Black	Eryone	48/100	19/100	50/100
MAT0148	Thorwell Standard ASA ASA Yellow	Thorwell	46/100	22/100	56/100
MAT0216	Eryone Standard White ASA White	Eryone	46/100	23/100	51/100
MAT0017	Yasin Standard White ASA White	Yasin	46/100	21/100	51/100

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
MAT0179	BambuLab Standard Blue ASA Blue	BambuLab	45/100	22/100	45/100
MAT0012	Prusa3D Prusament Galaxy Black ASA Black	Prusa3D	45/100	18/100	42/100

Public links

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

Methodology and limitations

Results are comparative 3DPIceland 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](#)