

# Bedrock 3D Standard Black PET CF Black

MaterialID MAT0251



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   | 2026-09-06    |
| Impact    | 2026-09-11    |
| Izod      | 2026-09-29    |
| Charpy    | 2026-09-28    |
| Stiffness | 2026-09-06    |

Rigid test status  
**Complete**

Rigid result  
modules  
**6/6**

Rigid  
specimen/result  
records  
**38**

Public details  
**Approved**

## Rigid specimen and result quality

| Module  | Orientation | Average      | Std.<br>dev. | CV     | Specimens | Confidence | Validation |
|---------|-------------|--------------|--------------|--------|-----------|------------|------------|
| Tensile | Upright     | 2,439<br>MPa | 1,135<br>MPa | 0,465% | 7         | 7/10       | OK         |

| Module    | Orientation      | Average                  | Std. dev.               | CV     | Specimens | Confidence | Validation |
|-----------|------------------|--------------------------|-------------------------|--------|-----------|------------|------------|
| Tensile   | Flat             | 36,253 MPa               | 9,882 MPa               | 0,273% | 10        | 10/10      | OK         |
| Impact    | Upright          | 6,208 kJ/m <sup>2</sup>  | 1,564 kJ/m <sup>2</sup> | 0,252% | 10        | 10/10      | OK         |
| Impact    | Flat             | 13,145 kJ/m <sup>2</sup> | 1,77 kJ/m <sup>2</sup>  | 0,135% | 10        | 10/10      | OK         |
| Stiffness | Three-point bend | 4612,806 MPa             | n/a                     | n/a    | 1         | Complete   | OK         |

## Recorded native inputs

| Module    | Input set                 | Recorded values                                  |
|-----------|---------------------------|--------------------------------------------------|
| Tensile   | Upright force inputs (N)  | 22, 15, 28, 16, 15, 8, 7, , ,                    |
| Tensile   | Flat force inputs (N)     | 252, 320, 117, 236, 244, 242, 148, 261, 218, 319 |
| Impact    | Upright needle inputs (%) | 9,5, 6, 7,5, 6, 6, 6,5, 7, 12, 8, 8              |
| Impact    | Flat needle inputs (%)    | 14, 16, 15, 18, 14, 17, 15, 13,5, 20, 18         |
| Stiffness | Revolutions / degrees     | 1 / 40                                           |

## 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/m<sup>2</sup>  
Mean 8.932 kJ/m<sup>2</sup>; Std. Dev 1.51 kJ/m<sup>2</sup>; CV 16.904%; Samples 9; Confidence 9  
No break 0; invalid 0; excluded 0.  
Comparative measurements; standard conformity unverified.

Izod Impact Strength · 2026-09-29

Instrument readings in kJ/m<sup>2</sup>

Mean 7.8 kJ/m<sup>2</sup>; Std. Dev 1.24 kJ/m<sup>2</sup>; CV 15.892%; Samples 10; Confidence 10

No break 0; invalid 0; excluded 0.

Comparative measurements; standard conformity unverified.

reports/test-sessions/MAT0251/