

# Prima Creator Select Black TPU Black

MaterialID MAT0257



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   | 2026-09-14    |
| Impact    | Not recorded  |
| Izod      | Not recorded  |
| Charpy    | Not recorded  |
| Stiffness | Not recorded  |

Rigid test status  
**No native results**

Rigid result  
modules  
**0/6**

Rigid  
specimen/result  
records  
**0**

Public details  
**Approved**

## Rigid specimen and result quality

| Module  | Orientation | Average | Std.<br>dev. | CV  | Specimens | Confidence | Validation |
|---------|-------------|---------|--------------|-----|-----------|------------|------------|
| Tensile | Upright     | n/a     | n/a          | n/a | 0         | n/a        | OK         |

| Module    | Orientation      | Average | Std. dev. | CV  | Specimens | Confidence | Validation |
|-----------|------------------|---------|-----------|-----|-----------|------------|------------|
| Tensile   | Flat             | n/a     | n/a       | n/a | 0         | n/a        | OK         |
| Impact    | Upright          | n/a     | n/a       | n/a | 0         | n/a        | OK         |
| Impact    | Flat             | n/a     | n/a       | n/a | 0         | n/a        | OK         |
| Stiffness | Three-point bend | n/a     | n/a       | n/a | 0         |            | OK         |

## Recorded native inputs

| Module    | Input set                 | Recorded values |
|-----------|---------------------------|-----------------|
| Tensile   | Upright force inputs (N)  | .....           |
| Tensile   | Flat force inputs (N)     | .....           |
| Impact    | Upright needle inputs (%) | .....           |
| Impact    | Flat needle inputs (%)    | .....           |
| Stiffness | Revolutions / degrees     |                 |

## 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](#)

## Flexible Material Testing

Comparative in-house measurements; n = independent specimens. Separate test groups; Overall unchanged.

| Method   | Result                                              | Condition                                                                           | Mean   | n  | SD    | CV %   | Range         | Not reached |
|----------|-----------------------------------------------------|-------------------------------------------------------------------------------------|--------|----|-------|--------|---------------|-------------|
| eaacea91 | Apparent Compressive Stress at 20% Strain (MPa)     | 10 s hold · 2 mm displacement · cycle 1                                             | 1.767  | 10 | 0.032 | 1.789  | 1.713–1.823   | 0           |
| eaacea91 | Apparent Compressive Stress at 20% Strain (MPa)     | 30 s hold · 2 mm displacement · cycle 1                                             | 1.712  | 10 | 0.026 | 1.527  | 1.666–1.761   | 0           |
| eaacea91 | Compression Force at 20% Strain (N)                 | 10 s hold · 2 mm displacement · cycle 1                                             | 112.4  | 10 | 2.011 | 1.789  | 109–116       | 0           |
| eaacea91 | Compression Force at 20% Strain (N)                 | 30 s hold · 2 mm displacement · cycle 1                                             | 108.9  | 10 | 1.663 | 1.527  | 106–112       | 0           |
| eaacea91 | Force reduction from 10 s to 30 s at 20% Strain (%) | first compression only · 2 mm displacement                                          | 3.109  | 10 | 0.43  | 13.831 | 2.679–3.571   | 0           |
| eaacea91 | Force retention at 20% Strain (%)                   | 10–30 s · 2 mm displacement · cycle 1                                               | 96.891 | 10 | 0.43  | 0.444  | 96.429–97.321 | 0           |
| eaacea91 | Residual height loss after recovery (%)             | 20% compression · 30 s compressed hold · 60 s rest · 10 mm initial height · cycle 1 | 0.644  | 9  | 0.142 | 22.097 | 0.4–0.8       | 0           |
| ed381ba8 | Shore A Hardness (Shore A)                          | 10 s reading · 8 mm                                                                 | 77.7   | 1  | —     | —      | 77.7–77.7     | 0           |

### Shore location statistics

Within each specimen; specimen numbers are local to each test group. SD uses the sample formula. These readings do not increase independent n.

| Method   | Scale            | Condition           | Specimen | Readings | Mean | Location SD | Location CV % |
|----------|------------------|---------------------|----------|----------|------|-------------|---------------|
| ed381ba8 | Shore A Hardness | 10 s reading · 8 mm | 1        | 5        | 77.7 | 0.908       | 1.169         |

reports/test-sessions/MAT0257/

