

QUALITY CHECKLIST · PDF DOWNLOAD

Overlock vs. Flatlock: Seam Verification Checklist

Use this checklist to verify true flatlock (ISO 4915 stitch 607) against overlock (stitch 514), block mock-flatlock substitution, and confirm every seam before cutting continues.

For: Brand founders, product managers & procurement teams

Based on: LeelineWear factory tests on 250 gsm spandex

Standards: ISO 4915 · ASTM D1683 · AQL 2.5

1 Write the Spec Before Production

Tech pack callouts — no vague language

- ☐ Stitch type specified: **6-thread flatlock, ISO 4915 stitch 607** (or 4-thread overlock, stitch 514)
- ☐ Stitch width written into the tech pack: **4–7 mm** (recommended 5.5 mm ± 0.5)
- ☐ SPI recorded: **12–16**, matched to fabric weight and stitch type
- ☐ Thread spec: polyester or nylon, color-matched
- ☐ Seam allowance defined (e.g., 8 mm raw edge)
- ☐ Tolerance stated: **no grinning at 150% extension**
- ☐ CAD drawing with seam callouts attached to the pack

2 Pre-Production Verification — Kill Mock-Flatlock Risk

Before bulk cutting

- ☐ Request clear **machine setup photos** before production
- ☐ Confirm a **true flatlock machine** (4-needle / 6-thread) — not a coverstitch flattening an overlock seam
- ☐ Demand **actual seam cross-section photos** or physical samples
- ☐ Write "true 6-thread flatlock" + exact stitch width into the PO
- ☐ Seal a **physical reference seam** in the approval package

3 Inline QC During Production

Record under AQL 2.5, with photos

- ☐ Pull inline samples **every 2–3 hours** from each machine
- ☐ Check SPI and seam width **under magnification**
- ☐ Inspect for **needle pinholes / fabric damage** (especially on flatlock)
- ☐ Stretch test at **150–200% extension**; check for seam grinning
- ☐ Approve / reject seam construction **before cutting continues**

4 Mock Flatlock Spot-Check

Look at the seam back

- ☐ **4 distinct interlocking needle threads** on the back → true flatlock
- ☐ Simple **chainstitch or coverstitch** pattern visible → fake, reject

- ☐ Seam bulk under **1 mm**, lays flush on both sides
- ☐ Good recovery under **repeated stretch** (no snap, no grinning)

Why it matters: mock flatlock feels bulky, has poor recovery, and fails quickly under heavy squats or lateral movement — even though it looks flat in photos.

5 Test Data Reference

ASTM D1683 · 250 gsm spandex · 96-hr wash (AATCC 135)

Stitch	Result	Failure mode
Overlock — ISO 4915 stitch 514	90 lbs	Thread break (safe)
Flatlock — ISO 4915 stitch 607	82 lbs	Fabric tear (needle holes)

Takeaway: overlock is stronger in absolute terms and faster; flatlock wins on comfort, flush profile, and premium appearance. Use flatlock on skin-contact zones, overlock on structural seams.