

TECHNICAL DATA SHEET

Polar Fleece

Weight	180-400 g/m ² (5.3-11.8 oz/yd ²)
Composition	100% polyester (recycled rPET versions common).
Knit type	Polar fleece · Polar Fleece
Use class	Outer / structured
Stretch	Mechanical stretch
Knit	After the circular-knit ground, the face(s) are raised and sheared on a brushing machine; usually double-brushed, soft napped texture.
Hand	Soft, napped, lofty; a raised, warm-feeling surface, medium-soft drape.
Typical use	Fleece jackets/tops · inner lining/mid-layer · blankets/home textile · beanies-gloves
Strength	The economical, durable classic insulator — high warmth for its weight and fast drying.
Watch for	Low-grade/unfinished fleece can pill and flatten over time; it is wind-permeable, so wind protection as an outer is limited.

CERTIFICATIONS

- ISO 9001
- ISO 14001
- ISO 45001
- OEKO-TEX STEP
- STANDARD 100
- GRS · RCS

Width, gauge, finishing options and test standards are shared on request.

Typical technical ranges

Weight tolerance	±5% (typical); on raised/napped fleece ±5-7% is more realistic, up to ±7% on light micro-fleece
Width	Open width ~150-190 cm (typically 160-180); tubular ~70-95 cm. Varies with machine diameter/cut, weight and stenter draw
Shrinkage (wash)	Length/width ~±2-4% (typical after proper heat-set); may reach ~5% in length if setting/finishing is weak. A ≤±3% target is common
Color fastness	Wash 4-5; rubbing (dry) 4-5, (wet) 3-4; light 4-6 (typical disperse-dyed PES). Minimum ~4 targeted; wet rub drops to the low end on deep/bright shades
Abrasion / pilling	Pilling 2-3 (raw/unfinished) → 3-4 with anti-pill shearing/finish, up to 4 in good cases. Martindale abrasion is usually not reported for fleece; if reported, ~15,000-30,000 cycles order of magnitude (construction/yarn dependent)
Gauge / yarn	Machine gauge ~E18-E24 (typically E20-E22; heavy/lofty polar down to E16-E18); yarn typically 100-300 denier textured (DTY) PES (coarser denier or plied feed for nap/loft; ~75 denier microfilament on micro-fleece)

These ranges are industry-TYPICAL / indicative values based on construction and fiber, not Fersan's binding QC measurements. Exact values are confirmed per order, approved sample and lot-based QC report.

Related reading: [Fleece and Scuba: Structured Polyester Knits](#) ·

[Brushed, Unbrushed and Fleece: Where Warmth Comes From in Polyester Knits](#) ·

[The Weight Map: Which Knit Goes Where, from 80 to 400 g/m²](#) ·

[Thermophysiological Comfort: Ret, Rct and the Sweating Hot Plate](#)