KARCEM TEKSTİL · KNOWLEDGE HUB

Product-Based Knit Fabric Selection Guides

Knowing what structures such as single jersey, interlock or pique are is not enough on its own; the real question is which fabric, weight and fibre recipe to choose for which product. This guide ties structural knowledge to product-based decisions.

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The final hand, drape and durability of a collection are not determined by a single parameter: knit structure, weight, yarn type, finishing and certification together form a *recipe*. The same single jersey gives a light summer T-shirt with 130 g/m² combed yarn, while with 200 g/m² ring-spun yarn it produces an entirely different premium product. For this reason, instead of asking "which fabric is better", you should ask "which recipe for this product, this use and this target audience". This pillar page is the gateway to the detailed guides organised by product category, and it defines the common framework you can use when making a choice.

Which five criteria should I evaluate in order when selecting a knit fabric?

> In order, you evaluate end use, weight, fibre/yarn recipe, finishing and certification. First define how the product will be worn and washed; this determines the weight and knit type. Fibre and finishing set the hand and performance, while certification governs market access. Skipping a step leads to a flawed recipe.

A good fabric decision is made not through an abstract "quality" debate but by stacking five concrete layers. The first layer is **end use**: is the product an everyday T-shirt, an intensely sweaty training piece, or a baby bodysuit in contact with sensitive skin? This frames everything else. The second layer is **weight** (g/m²); within the same knit type, weight determines the product's heft, opacity and seasonality. For detailed thresholds you can refer to the weight and GSM guide.

The third layer is the **fibre and yarn recipe**: combed or carded, ring-spun or open-end, and will viscose, modal, polyester or elastane be blended with cotton? The fourth layer is **finishing** (finishing); the same greige fabric is transformed into a completely different product through brushing, mercerisation or compacting (Sanforising). The fifth layer is **certification**; if the target market requires OEKO-TEX, GOTS or GRS, this decision must be made at the very outset because it retroactively affects yarn sourcing.

Layer	Defining question	Typical output
End use	How will it be worn, washed, how often?	Knit type and weight class
Weight	Is a light, medium or heavy hand wanted?	Target g/m² range
Fibre / yarn	What is the priority: hand, strength, stretch?	Cotton/blend, combed/carded, ring/OE
Finishing	Softness, lustre or stability — which one?	Brushing, mercerised, Sanfor, finish
Certification	What does the target market mandate?	OEKO-TEX / GOTS / GRS / OCS

Which knit structure and weight range suit which product?

> For T-shirts, single jersey (120-200 g/m²) is generally preferred; for premium T-shirts and products requiring shape, interlock (180-220); for polos, pique (180-240); for sweatshirts, 2-thread (220-320); for hoodies, brushed 3-thread (280-420); and for leggings and activewear, elastane interlock/jacquard (220-320). These are sector norms; the final value is clarified according to the end use.

There are established pairings between product category and knit structure, because each knit behaves differently in drape, stretch and surface. Single jersey is single-layer, light and fluid; it is therefore the natural home of the T-shirt. Interlock, with its double-layer, balanced structure, gives a fuller fabric that is smooth on both faces; it stands out in premium T-shirts and pieces expected to hold their shape. You can find the distinction between the two in detail in the single jersey versus interlock comparison.

In polo shirts, the cellular surface of pique knit provides both breathability and collar shape retention. In the sweatshirt family, two- and three-thread structures are brushed with a single fleece yarn fed inward to create a napped, warm inner surface; three-thread is thicker and more insulating. In activewear, interlock or jacquard structures containing elastane are required for four-way stretch and recovery.

Product	Typical knit	Typical weight (g/m²)	Standout property
Basic T-shirt	Single jersey	120-200	Lightness, drape
Premium T-shirt	Interlock	180-220	Fullness, shape
Polo	Pique	180-240	Surface, collar stability
Sweatshirt	2-thread (brushed)	220-320	Soft inner face
Hoodie	3-thread (brushed)	280-420	Warmth, volume
Legging / activewear	Elastane interlock / jacquard	220-320	Stretch, recovery

These ranges are indicative; brand positioning can differ even within the same category. For example, while a promotional T-shirt is built on a cost-driven basis with 150 g/m² carded single jersey, a boutique brand's identical silhouette offers a completely different hand with 200 g/m² combed single jersey. For how weight tolerance is managed in production, take a look at the GSM tolerance concept and the weight guide.

How does fibre and yarn choice change the product's hand and durability?

> Combed yarn gives a smoother, more lustrous and more durable surface because it combs out the long fibres; carded is more economical and rustic. Ring-spun yarn is soft and voluminous, while open-end is more robust and lower in cost. Modal/viscose added to cotton brings drape, polyester brings durability, and elastane brings stretch. The recipe is determined by the product's priority.

At the same knit and weight, two fabrics can be perceived very differently purely because of yarn choice. In the combed process the short fibres are removed by combing, so the yarn is cleaner, lint-free and stronger; this means less pilling (pilling) and a smoother print surface. Carded yarn skips this combing step and therefore gives a more affordable but hairier hand. The choice between ring and

open-end spinning systems similarly balances softness against cost/robustness.

The fibre blend, in turn, fundamentally determines the product's character. Pure cotton offers comfort and breathability; modal and viscose add a more fluid, silky drape; Tencel brings the advantage of moisture management and sustainability. Polyester and especially rPET provide durability, fast drying and a recycled-content claim. Elastane/spandex is decisive for stretch and shape retention even at proportions of just a few per cent; you can examine its effect in the knit structure in the elastane and spandex guide.

Choice	What it brings	Cost / caution
Combed vs carded	Smooth, lustrous, durable surface	Higher yarn cost
Ring vs open-end	Soft, voluminous handle	OE is stronger but harsher
Modal / viscose addition	Fluid drape, silky hand	Wet strength and dimensional control
Polyester / rPET	Durability, fast drying	Moisture feel, anti-static need
Elastane / spandex	Stretch and recovery	Dyeing and heat-setting sensitivity

How do finishing and dye/print decisions affect fabric selection?

> Finishing is the final layer that determines the hand and stability of greige fabric: brushing softens and warms, mercerisation adds lustre and strength, and Sanforising controls shrinkage. The dyeing method (reactive, disperse, pigment) depends on the fibre type. These decisions are part of fabric selection, not a step added afterwards.

A fabric's final hand is shaped far more in the finishing and finish processes than in its greige state coming off the knitting machine. Brushing naps and warms the inner surface of a sweatshirt, while mercerisation gives cotton lustre, dye uptake and strength. Sanforising and compacting manage dimensional stability, reducing the risk of shrinkage in washing. For this reason finishing is not an afterthought to fabric selection but a central component of the recipe.

The dyeing method, meanwhile, depends directly on fibre chemistry: reactive dyeing for cotton and cellulosic fibres, disperse dyeing for polyester, and pigment or garment-dye for surface effects and a vintage look. If colour consistency is critical, the colour fastness and ΔE side of the process must be defined from the outset; at KARCEM the target is carried from lab-dip approval through to production with a tolerance of ΔE<1. You can find how this entire dye, print and finishing chain is structured in the dyeing and printing guide.

How do certification and sustainability requirements prioritise the choice?

> If the target market mandates a certification, this decision must be made at the very outset, because it retroactively determines yarn sourcing. GOTS carries the claim of organic content, GRS/RCS of recycling, and OEKO-TEX of safety from harmful substances. Regulations such as ESPR and DPP are making traceability mandatory.

Sustainability certifications are not merely marketing labels; they are structural decisions that bind the supply chain retroactively. GOTS certifies organic content and the audit of the whole chain, GRS and RCS the recycled-content claim, and OEKO-TEX Standard 100 the harmful-substance limits in the finished product. Because these certifications begin with certified yarn, adding them midway through a project is usually not possible; they therefore sit at the very top layer of the selection framework.

In the European market, regulations such as ESPR and the Digital Product Passport are moving towards making traceability mandatory; MRSL/ZDHC compliance, meanwhile, governs chemical management. We address how to integrate these requirements into collection planning in the sustainability and regulation guide, and the carbon-footprint side of the certifications in our GOTS, RCS and carbon article.

How is the fabric decision finalised during the sampling and ordering process?

> The right recipe is finalised not on paper but with a lab-dip and a sewing sample. First the target weight, fibre and finishing are defined; then colour is confirmed with the lab-dip and hand and drape with the sample fabric. MOQ, lead time and delivery terms are clarified according to the order; concrete figures should therefore be discussed on a project basis.

Even when the selection framework is completed on paper, final approval comes with physical verification. The lab-dip stage confirms the colour, while the sewing sample confirms the hand, drape and stitching behaviour. If these steps are skipped, costly-to-reverse surprises can arise in production. MOQ, lead time and delivery terms vary according to product complexity, number of colours and certification requirements, so rather than a fixed list they are clarified per project; you can find how this process works on the MOQ, sampling and delivery process page and in the sourcing guide.

KARCEM's vertically integrated structure provides a decisive advantage here: because knitting, dyeing, printing and finishing are under one roof, every layer of the fabric recipe — weight, fibre, finishing, colour — is optimised within a single flow and responsibility is not dispersed. This preserves consistency in the transition from sample to bulk production. For details specific to your product category you can move to the relevant guide from the cards above, and for the general fabric family you can review the knit fabric guide and our fabric portfolio.

> **With KARCEM:** Share your product's use scenario; let us determine together the right knit, weight, fibre recipe and finishing combination, and obtain colour approval with a lab-dip at a target of ΔE<1. Let us clarify concrete weight, MOQ and lead time values according to your order via a sample or quote request.