

SHIVPRIYA TEXCHEM · KNOWLEDGE SERIES

Modal.

The softness specialist.

Beechwood to a fibre engineered for one thing: lasting softness against skin. A working guide to modal — the high-wet-modulus cellulosic that owns innerwear and loungewear.

2×

softer than cotton by common hand-feel panels — and it stays soft after washing

HWM

high wet modulus — the technical upgrade over standard viscose

100%

beech-based, biodegradable cellulosic fibre



Bridging world-class spinning mills and your needs, since 2003.

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CHAPTER 01

What exactly is modal?

Modal is a second-generation viscose: a high-wet-modulus cellulosic spun mainly from beechwood, modified for higher strength, lower shrinkage and a softness that survives repeated laundering.

GRADE	PRODUCER / BRAND	WHAT IT SIGNIFIES
TENCEL™ Modal	Lenzing, Austria	The reference brand; beechwood, certified sourcing
MicroModal™	Lenzing	Micro-denier modal — the luxury innerwear standard
Birla Modal	Birla Cellulose, India	Domestic modal supply within the Liva ecosystem
Modal air / speciality	Lenzing	Ultra-light grades for premium knits
Generic modal	Asian producers	Commodity HWM fibre; verify specification and consistency

Buyer's note. “Modal” on a label spans a wide quality band. Branded modal carries certified wood sourcing and tight dtex control; generic HWM fibre may not. For innerwear programmes where softness is the product, the fibre brand is part of the specification.

Raw material

Predominantly beechwood pulp from managed European forests.

Process

Modified viscose route with higher-strength regeneration.

Supplied as

Staple 0.8–1.3 dtex; micro grades below 1.0 dtex.

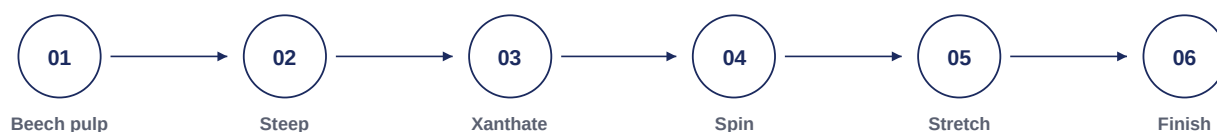
End of life

Biodegradable and compostable.

CHAPTER 02

Beech to fibre: viscose, refined

Modal follows the viscose route with modified steeping, spinning and stretching that produce a rounder, stronger, more stable fibre — the difference is in the parameters, not the flowchart.



01 Beechwood pulping

Beech delivers a uniform, fine-structured pulp that underwrites modal's consistency.

02 Modified steeping

Adjusted caustic treatment preserves higher degrees of polymerisation for strength.

03 Xanthation and dissolving

As viscose, with tighter control of ripening for the HWM structure.

04 Spinning

Modified acid-bath composition regenerates a rounder, denser cross-section.

05 High-stretch drawing

Greater stretch orients molecules — the source of modal's wet modulus.

06 Micro-denier option

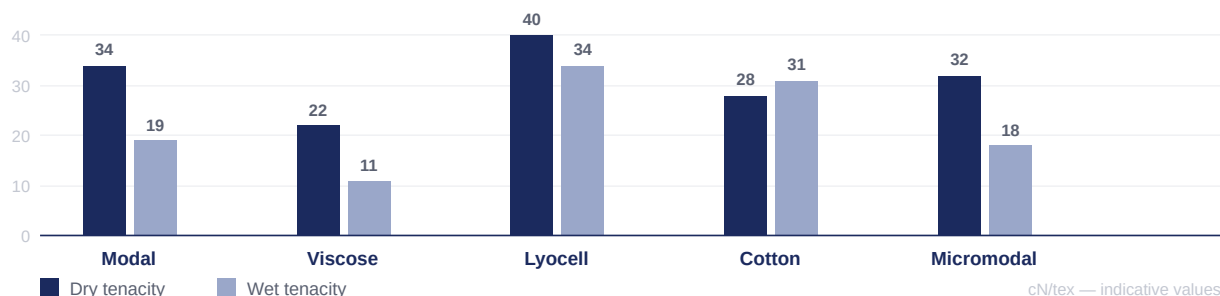
Fine spinnerets produce sub-1.0 dtex micro modal for luxury hand.

PARAMETER	STANDARD VISCOSE	MODAL
Wet modulus	Low — stretches wet	High — stable wet
Wet tenacity	~11 cN/tex	~19 cN/tex
Shrinkage	High	Moderate — better dimensional hold
Hand	Fluid, soft	Softer still, and it lasts

CHAPTER 03

What the fibre actually does

Modal sits deliberately between viscose and lyocell: stronger and more stable than viscose, softer than either, at a mid price.



PROPERTY	TYPICAL VALUE	COMMERCIAL MEANING
Dry tenacity	32–36 cN/tex	Fine counts spinnable with confidence
Wet tenacity	17–20 cN/tex	Roughly double viscose — survives laundering far better
Wet modulus	High	Fabrics keep dimensions through wash cycles
Moisture regain	11–13%	Absorbent, cool, comfortable next to skin
Softness	Exceptional, durable	The category-defining property — and it survives 50 washes
Lustre	Gentle sheen	Premium appearance without brightness
Dyeing	Reactive	Deep, even shades; excellent with cotton in blends
Pilling	Low in quality knits	Micro grades need quality spinning to control

Process caution for your mill. Micro modal punishes careless carding and high drafting tensions with neps and pilling complaints. Slow down, control humidity, and treat sub-1.0 dtex fibre as the delicate material it is — the price premium of the finished garment justifies the slower frame.

CHAPTER 04

Modal against the alternatives

A like-for-like view of the fibres competing for the same programme. Ratings are indicative and read horizontally, not as absolute laboratory values.

PARAMETER	MODAL	VISCOSE	LYOCELL	COTTON	MICROMODAL
Softness	Exceptional	Very good	Very good	Good	Best in class
Softness after 50 washes	Retained	Declines	Retained	Declines	Retained
Wet strength	Moderate	Poor	Excellent	Good	Moderate
Dimensional stability	Good	Weak	Excellent	Moderate	Good
Price	Mid	Value	Premium	Volatile	Premium
Drape	Excellent	Outstanding	Silk-like	Matte	Excellent
Biodegradable	Yes	Yes	Yes	Yes	Yes

The honest trade-off

Modal costs more than viscose and lacks lyocell's wet strength — it wins only where enduring softness is the actual product. In innerwear and loungewear, that is exactly the case.

The direction of travel

Premiumisation of Indian innerwear is modal's tailwind: as the market moves from commodity cotton briefs to branded comfort-wear, modal and micro modal are the trade-up fibres by design.

CHAPTER 05

A concentrated, brand-led supply

Modal supply is narrower than viscose: a handful of producers, led by one brand owner, with specification and marketing tightly coupled.

THE SUPPLY BASE

Lenzing

TENCEL™ MODAL

The category creator and reference; beechwood sourcing with European chain-of-custody.

Lenzing

MicroModal

LUXURY GRADE

Sub-1.0 dtex fibre behind premium innerwear brands worldwide.

Birla Cellulose

INDIA

Domestic modal within the Liva programme; shortens the supply chain for Indian mills.

Generic HWM

ASIA

Commodity modal exists; verify wet modulus and dtex before committing programmes.

Innerwear is premiumising

Branded comfort-wear is the fastest-upgrading apparel category in India — modal is its fibre.

Softness is measurable

Hand-feel panels and wash trials show modal's durable-softness edge; the claim survives testing.

Blends carry it to price

Modal-cotton delivers most of the hand at accessible price points.

Loungewear arrived

Post-2020 loungewear and sleepwear growth made modal a volume fibre, not a niche.

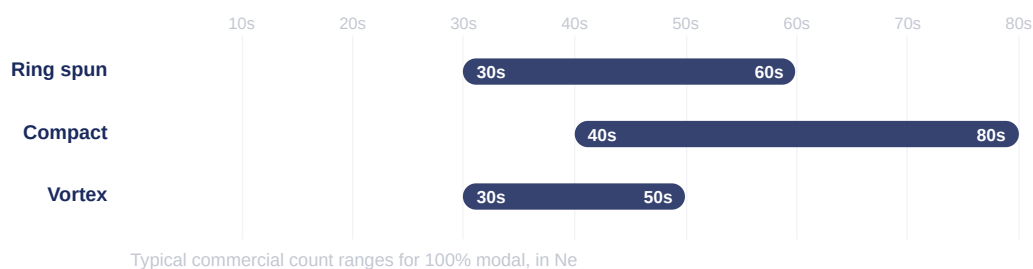
What this means for the yarn trade. Modal programmes are specification-led: fibre brand, dtex, blend ratio and spinning route all appear on the buyer's tech pack. We connect brands and fabricators to mills with proven modal and micro-modal experience.

All company and brand names referenced are the property of their respective owners and are used for identification and informational purposes only; no affiliation or endorsement is implied unless stated.

CHAPTER 06

100% modal yarn: engineered for hand

Modal spins like a refined viscose — and is judged almost entirely on the knitted hand and pilling behaviour of the finished fabric.



YARN TYPE / SYSTEM	USUAL RANGE	WHERE IT FITS
Ring spun	30s – 60s Ne	The standard route for innerwear knits
Compact	40s – 80s Ne	Finest counts; cleanest surface for luxury programmes
Vortex	30s – 50s Ne	Low-pilling knits with high productivity
Core / plated	Programme based	Modal face over elastane for stretch comfort
Micro modal	50s – 100s Ne	Sub-1.0 dtex luxury hand; demands premium spinning

Specification to order

- Fibre brand and dtex stated explicitly (e.g. TENCEL™ Modal 1.0 dtex)
- Micro grades only from mills with proven micro experience
- Combed-quality preparation even though fibre is uniform
- Knitting yarn on soft packages with controlled tension

Processing discipline

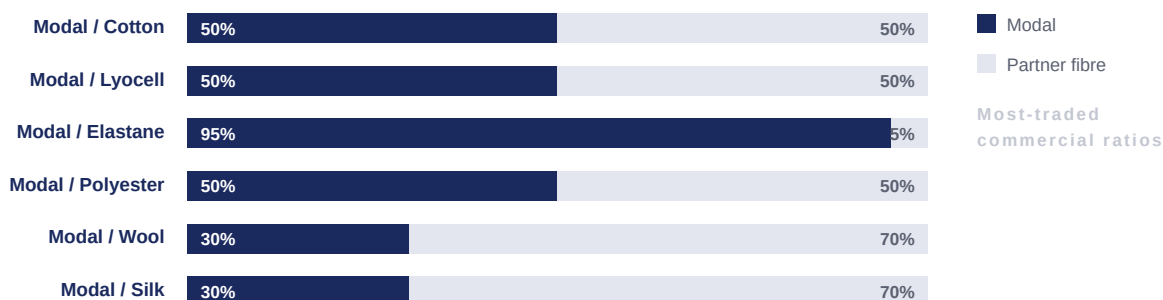
- Gentle carding; low point loads to avoid neps
- Humidity control tighter than cotton practice
- Low-tension knitting for hand retention
- Mild wet processing; softness is the product — protect it

CHAPTER 07

Blends: spreading the softness

Modal blends exist to put its hand into fabrics at better economics or with added performance — cotton is the natural partner.

BLEND	COMMON RATIOS	WHAT IT DELIVERS	PRIMARY END USE
Modal / Cotton	50:50, 60:40	Durable softness with cotton familiarity	Innerwear, T-shirts, loungewear
Modal / Lyocell	50:50	All-cellulosic premium hand with wet strength	Luxury knits, sleepwear
Modal / Elastane	95:5 plated	Stretch comfort with modal face	Briefs, camisoles, leggings
Modal / Polyester	50:50	Stability and price with softened hand	Value loungewear, linings
Modal / Wool	30:70	Softened, cooler fine-gauge knitwear	Premium sweaters
Modal / Silk	15:85 – 30:70	Accessible luxury hand	High-end knits and accessories



The commercial logic in one line. Wherever a knit must feel premium against skin at a commercial price, a modal-cotton blend is the first candidate. The blend is the volume market; 100% micro modal is the halo.

CHAPTER 08

Where modal is being used

Modal's applications cluster around one property delivered relentlessly: soft, cool, stable next-to-skin comfort.



Innerwear

The defining category — briefs, vests, camisoles and bras in modal and micro modal.



Loungewear

Sleep sets, lounge tees and joggers — the post-2020 growth engine.



Premium tops

Fluid woven blouses and dresses using modal's drape and sheen.



Bed linen

Softness-led sheeting and duvet programmes at the premium end.



Socks and basics

Modal-cotton-elastane for soft, absorbent everyday wear.



Athleisure

Soft-hand layers where synthetic feel is a negative.



Baby and sensitive skin

Gentle surface and absorbency for baby wear.



Linings

Luxury garment linings with breathable comfort.



MICRO MODAL · INNERWEAR



MODAL / COTTON · LOUNGE



MODAL WOVEN · TOPS

Segment to watch in India. Branded loungewear. The category barely existed a decade ago; it is now a national retail fixture — and its fabric brief reads like modal's datasheet.

CHAPTER 09 · OUR VIEW

Modal rides India's comfort premiumisation

As Indian consumers trade up from commodity basics to branded comfort, modal is the fibre that upgrade is made of.

01 Innerwear upgrades relentlessly

Branded innerwear grows ahead of apparel overall — and differentiates on fabric hand.

02 Loungewear is a permanent category

Work-from-home normalised premium at-home wear; modal owns its fabric brief.

03 Domestic fibre shortens the chain

Birla modal availability reduces import lead times for Indian mills.

04 Blends democratise the hand

Modal-cotton puts durable softness into mass-market price points.

05 The claim survives testing

Durable softness is verifiable in wash trials — a marketing claim QA can defend.

What to be realistic about

Modal is a specialist, not a generalist; outside comfort-led categories, viscose and lyocell usually price better.



HOW SHIVPRIYA TEXCHEM CAN HELP

Authorised agent and strategic partner to India's leading spinning mills since 2003, trusted by **2,500+ customers** across polyester, viscose, cotton, PC/PV, fancy and recycled yarns. For modal and modal-blend programmes we support mill identification and capability matching, count and blend development, sampling and trial lots, mill-direct commercial terms, and delivery through our pan-India network.

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Fibre Intelligence 05
Circulated to customers & partners
Figures are indicative
industry estimates, 2026