



Bamboo

The bamboo plant can be used to make textile fibres. Generally this is done in two ways.

In some cases bamboo fibres are mechanically processed and treated with a retting process, similar to flax (or linen).

More common is the use of bamboo to produce fibres using the viscose process. In this guidance we focus on bamboo viscose

Viscose is the best known cellulosic fibre. Variants are modal, Lyocell, cupro and acetate. The cellulose that is needed to produce these fibres is extracted from pine, beech, or eucalyptus trees. Fibres can also be extracted from the bamboo plant. The wood pulp from the trees (or bamboo) is treated chemically and dissolved in different ways to spin the cellulose fibre. The processing facility plays a role on quality, safety and sustainability. For example: LCA-studies show a higher environmental performance of viscose from Lenzing Austria compared to its Asian counterpart. Furthermore, legislation, among other factors, can play a significant role in environmental performances.

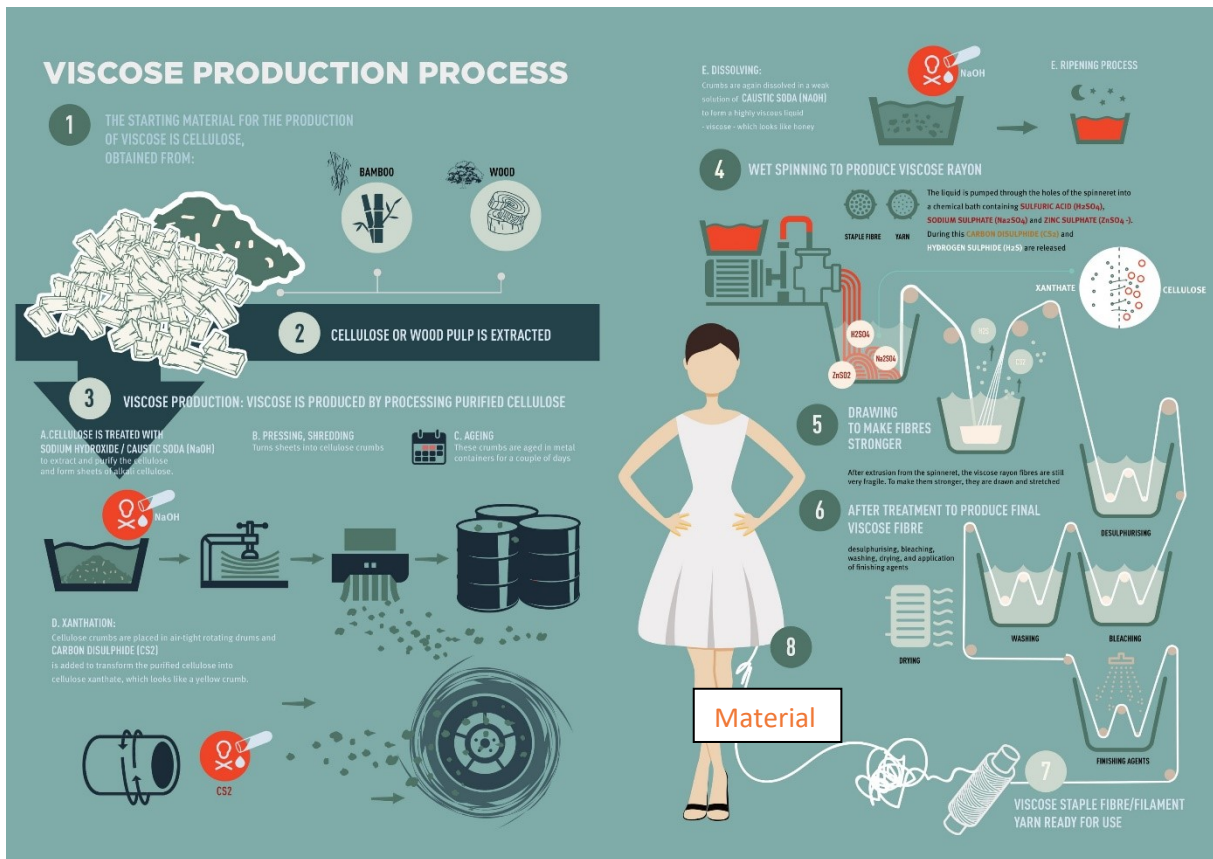
On a garment composition label, bamboo viscose must be labelled as viscose (bamboo), not as bamboo.

Raw material: Feedstock for viscose can be a renewable resource. Sustainable managed forestry (e.g. FSC) will take care of the natural balance. Unsustainable managed forestry can lead, for example, to deforestation.

The production process: Cellulose is purified, bleached and pressed in solid sheets, dissolved in sodium hydroxide and, after ripening, extruded through fine spinnerets. The production generates **emissions** to air, like sulphur and nitrous oxides and to water with major potential for creating environmental burden if discharged untreated. The process is **chemical and energy intensive**.

Alternative materials: **Lyocell**, a cellulose fibre that is produced in a closed system. Lyocell can be made from bamboo as well.

The process:



https://changingmarkets.org/wp-content/uploads/2018/02/Roadmap_towards_responsible_viscose_and_modal_fibre_manufacturing_2018.pdf

Steps:

1. Map the supply chain from wood to material. (This will require a dialogue with your fabric or garment supplier, explaining why you need this information)



2. Ask each actor in the chain to fill in the Modint supplier form for wet processing facilities
3. Review the returned forms and follow up verification (permits, certifications etc.).
Example certificates: FSC (sustainable forestry), Waste water test reports, OekoTex SteP, ZDHC Man-Made Cellulosic Fibres (MMCF) Guidelines.

Useful links & reference documents:

- [Modint Fibre Matrix](#)
- [Modint Sustainable Material Guide](#)
- [Modint Supplier questionnaire wet processing](#)
- [https://changingmarkets.org/ZDHC Man-Made Cellulosic Fibres \(MMCF\) Guidelines](https://changingmarkets.org/ZDHC-Man-Made-Cellulosic-Fibres-(MMCF)-Guidelines)

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