



Textile
Exchange

Materials Benchmark

Raw Materials Calculation Guide

Contents

1	Purpose of this guide	4
2	Reporting scope	4
	2.1 Scope of the reporting companies	4
	2.2 Reporting period	5
	2.3 Raw materials in scope	5
	2.4 Product’s material composition reporting	6
	2.5 Products in scope	6
	2.6 Product components in scope	7
	2.7 Resource inflow versus outflow	7
3	Raw Materials Portfolio: How to report raw material weights	8
	3.1 Use of proxies and estimation	8
	3.2 Raw materials list and estimated shares	8
	3.3 Raw material programs list	9
	3.4 Guidance for raw material sustainability programs reporting	9
	3.5 Raw material weight details	11
	3.5.1 Reporting tiers and conversion to (processed) raw material weights	12
	3.5.2 Product type	14
	3.5.3 Reported metrics	14
	3.5.4 Conversion factors	14
	3.5.5 Updates on raw hides weights reporting	15
	3.6 Additional breakdowns of weights and evidence	15
	3.6.1 Traceability	15
	3.6.2 Evidence	16
	3.6.3 Country of origin	16
	3.6.4 Producer mapping	16
	3.7 Additional reporting at raw material level	16
	3.7.1 Recycled feedstock and textile feedstock (for recycled raw materials only)	16
	3.7.2 Additional reporting on manmade cellulosic fiber producers (if used)	17
	3.8 Raw material trends	17
	3.9 Raw material targets	17
	3.10 Metadata	17
4	Appendices	19
	4.1 Calculation examples	19
	4.1.1 Basic calculation	19

4.1.2 Advanced calculations 21

4.2 Product weights..... 23

4.2.1 Product weight proxies apparel 23

4.2.2 Product weight proxies home textiles 29

4.3 Conversion factors 31

4.3.1 Data sources, updates, and assumptions..... 31

4.3.2 Overview of conversion factors 33

4.3.3 Cotton and other plant-fiber conversion factors 34

4.3.4 Synthetic fiber conversion factors 35

4.3.5 Manmade cellulose fiber conversion factors 35

4.3.6 Animal fiber conversion factors 35

4.3.7 Leather to raw hides and recycled leather fiber conversion factors..... 36

4.3.8 Natural and synthetic rubber conversion factors 37

4.3.9 Other non-fiber raw materials conversion factor 37

5 Acknowledgments..... 37

6 Version history and change log..... 38

7 Use and copyright..... 38

1 Purpose of this guide

Textile Exchange aims to increase the accuracy and comparability of raw material weights submitted by reporting companies through its Materials Benchmark¹. The raw material weight reporting takes place in the Materials Benchmark survey section titled the Raw Materials Portfolio.

This guide shares best practices and recommendations for raw material weight reporting for Textile Exchange's Materials Benchmark. It aims to establish a framework and guidance for reliable and comparable raw material reporting for the textile, clothing, leather, and footwear (TCLF) industry.

The Raw Materials Portfolio is used to report raw materials weights for different Textile Exchange purposes (for example, Textile Exchange Membership Progress Tracking, the 2025 Sustainable Cotton Challenge, the 2025 Recycled Polyester Challenge, Deforestation-Free Call to Action for Leather, and Climate+ progress tracking). It also supports raw materials reporting for other purposes (for example, the EU Corporate Sustainability Reporting Directive and the Higg Brand and Retailer Module).

While Textile Exchange works in partnerships to continuously improve and harmonize data reporting requirements, different tools or reporting mechanisms may differ in scope and requirements. If companies report their raw material weights in other contexts, they should follow the latest requirements applicable to those specific contexts.

2 Reporting scope

This section provides scoping guidance for the raw materials reporting within Textile Exchange's Materials Benchmark by sharing best practices and guidance for the scope of the reporting companies, reporting period, raw materials, weights calculation, products, and product components in scope, as well as resource inflow versus outflow reporting options.

2.1 Scope of the reporting companies

Brands and retailers and Tier 1–3 suppliers can report through the Materials Benchmark. Tier 4 suppliers and other organizations are not currently in scope.

Companies should clearly specify for which entity they are reporting their raw materials.

Within the Materials Benchmark, brands and retailers can report as:

- An independent company
- A subsidiary brand
- A group/holding company reporting on multiple subsidiary brands

It's important to note that only retailers with private brands are allowed to report through the Materials Benchmark, and they should only report on their private labels.

¹ The guidance was originally developed in 2019 in cooperation with the Partnership for Sustainable Textiles (textilbuendnis.com), the Waste & Resources Action Programme's (WRAP) Sustainable Clothing Action Plan (wrap.org.uk/sustainable-textiles/seap) and the Global Organic Textile Standard (global-standard.org/).

2.2 Reporting period

Companies should follow a consistent annual reporting cycle, that covers a continuous 12-month period. They shall report the data based on either the calendar year (January 1 to December 31), the raw material weight used in specific collections or product seasons (for example, spring–summer and fall–winter), or any other consistent cycle, such as the company’s financial year. The reporting period should always be specified².

The reporting period for the Materials Benchmark is always the previous year (respective 12-month period), but we encourage companies to report trend data wherever possible.

2.3 Raw materials in scope

Textile Exchange’s Materials Benchmark is a tool for companies to report weights of raw materials used for textiles, clothing, leather, and footwear products³.

Please note that raw materials used for other products beyond textile, clothing, leather, and footwear products, such as wood used for furniture, are outside of the scope of the Materials Benchmark.

Companies can select the following raw materials in the Materials Benchmark survey:

Acetate	Guanaco	Polylactic acid (PLA)
Acrylic	Hemp	Polypropylene
Alpaca	Jute	Polyurethane (fiber)
Angora	Kapok	Polyurethane (non-textile)
Bamboo	Lama	Polyvinyl chloride (PVC)
Camel	Leather fiber [recycled]	Protein
Cashmere	Lyocell	Raw hides—bovine
Coir	Modal	Raw hides—goat
Cotton	Mohair	Raw hides—pig
Cupro	Natural rubber	Raw hides—sheep
Down	Nettle	Vicuna
Elastane (spandex)	Polyamide (nylon)	Viscose (rayon)
Ethylene-vinyl acetate (EVA)	Polyester	Wool
Flax (linen)	Polyethylene	Yak

If companies use raw materials for textiles, clothing, leather, and footwear products not listed separately, they can select from the following categories:

- Raw hides—other
- Other animal fiber
- Other manmade cellulosic fiber
- Other plant fiber
- Other synthetic fiber
- Other fiber
- Other raw material [non-fiber]

² Materials Benchmark > Introduction > Question IN-1-5

³ Materials Benchmark > Raw Materials Portfolio > Raw materials overview > MP-1-1

If any of these categories for other raw materials is selected, a field will appear to specify the name. Companies should follow the official labeling regulations for these other fibers and non-fiber raw materials.

We encourage companies to select the specific other category (for example, “Other animal fiber”) if possible. If the fiber category is unknown, please report under the general category “Other fiber”/ “Other raw material [non-fiber]”.

2.4 Product’s material composition reporting

Most products are made of multiple materials. Please note that the Materials Benchmark collects the material weights (and not the product weights). How companies can calculate and report the material weights is specified in [the calculation examples in the appendix](#).

Please also note that raw materials weights are reported at the program level. If the product contains below 100% material covered by the program, **only the partial product weight covered by the specific program should be counted** (not the total product weight). Because finished products, fabrics, and yarns may include multiple materials in their composition (for example, 50% cotton, 40% polyester, 10% elastane), companies are expected to calculate the materials’ weights before reporting into the Materials Benchmark.

2.5 Products in scope

The Materials Benchmark includes raw materials used for textiles, clothing, leather, and footwear products as defined and classified below. Raw materials used for other products not listed below are not in the scope of the Materials Benchmark reporting.

Products in scope	Definition
Textiles	Product which is composed of textile fibers (based on EU Regulation 1007/2011)
<ul style="list-style-type: none"> Apparel textile/clothing 	“Apparel textile” means a textile product worn as clothing or a clothing accessory by a person to clothe or adorn, principally to protect from the outer environment and very often to express their personal identity and/or belonging to a specific social group, with symbolic meanings and aesthetic values. (EC 2024. Preparatory study on textiles for product policy instruments)
<ul style="list-style-type: none"> Home/interior textiles 	Textile products intended for household use.
<ul style="list-style-type: none"> Technical textiles 	Technical textiles are textile products meeting technical rather than aesthetic criteria, even if, for certain markets like workwear or sports equipment, both types of criteria are met. Technical textiles bring a functional answer to a wide range of specific requirements: lightness, resistance, reinforcement, filtration, fire retardancy, conductivity, insulation, flexibility, absorption, and so on. The definition does not depend on the raw material, the fiber, or the technology used, but on the end use of the product itself. Technical textiles can be used by professionals or not. Apparel textiles meeting the definition above are defined as technical apparel textiles. (EC 2024. Preparatory study on textiles for product policy instruments)
Leather products	Products made of a hide or skin with its original fibrous structure more or less intact and tanned so it does not rot. (Based on <i>EU Directive 94/11/EC</i> , <i>ISO 15115</i> , and <i>EN 15987:2015</i>)
Footwear	Article(s) made of a sole (outsole) and an upper in different materials designed to protect or cover the foot (Source: <i>ISO 19952:2005</i> , 68)

2.6 Product components in scope

Reporting companies shall, at a minimum, include all main components of all products within scope. Any excluded components should be specified in the methodology document that should be uploaded in the [Metadata section](#)⁴.

Main components include the major structural and aesthetic components of a product. Minor components include (but are not limited to) badges, logos, belt loops, neck tapes, candle wicks, packaging, drawcords, pocketing, embellishments, shoe liners, fillings*, threads, interlinings, trims, laces, and waistbands.

*Except where these are a major product component, such as fillings in bedding.

Reporting companies are encouraged to include all components of products in scope where data is available.

2.7 Resource inflow versus outflow

Reporting companies shall measure their raw materials consumption in order of preference, based on either (i) products purchased or produced by the reporting company (for example, resource inflow), (ii) products sold to customers (resource outflow), or (iii) a combination of both. Submissions to Textile Exchange must clearly state which option is used in the methodology document, which should be uploaded in the [Metadata section](#)⁵.

When measuring raw material consumption, it is preferable to use data that accurately reflects all raw materials in products sourced by the reporting company (for example, raw material inflow). **Unsold products, such as returns or those donated to charities, should be included when measuring raw material consumption, as these are part of the reporting company's procurement.** Reporting companies may use product sales data where product purchase data is unsuitable, or where other concerns exist (for example, data quality) that prevent the use of product purchase data.

If the latter applies, companies should consistently account for unsold products, returns, and donations, which might otherwise not be mapped.

⁴ Materials Benchmark > Metadata > Question MP-6-1

⁵ Materials Benchmark > Metadata > Question MP-6-1

3 Raw Materials Portfolio: How to report raw material weights

This section provides guidance and support on how to compile data for the Raw Materials Portfolio section of the Materials Benchmark⁶ and how to report weights according to Textile Exchange's methodology.

Companies should:

- Step one: List all the raw materials used, provide estimated shares for all the listed raw materials, and confirm which raw materials the company will report by weight (as detailed in the [Raw materials list and estimated shares](#) section).
- Step two: For each raw material, list the raw material programs (as detailed in [Raw materials programs list](#) section).
- Step three: For each program, provide weights and additional details (as detailed in the [raw material weight details](#) and the [additional breakdowns of weights and evidence](#) sections).

3.1 Use of proxies and estimation

To start, we want to acknowledge that companies may not have specific data for all the raw materials and related programs they would like to report. **For this reason, companies are invited to provide proxies or estimations if needed.** Materials Benchmark reporting is designed as an incremental improvement process, particularly for companies that are new to the topic or participating in reporting for the first time.

3.2 Raw materials list and estimated shares

Companies are **encouraged to voluntarily follow the reporting requirements** that will become mandatory in 2027:

Companies are required to report the **weights of at least 80% of the raw materials used in their textiles, clothing, leather, and footwear products**, with a strong ambition to achieve **100% coverage**, using estimates or proxies where needed.

To assess whether companies report on at least 80% of their portfolio, **they are required to list all raw materials that account for more than 1%** of total raw material use and provide estimated shares for each. Reporting on materials below the 1% threshold remains optional.

Textile Exchange's six priority materials (cotton, wool, bovine leather, manmade cellulosic fibers⁷, polyester, and polyamide) must be reported if they account for more than 1% of the total raw materials used.

⁶ Please note that Raw material program list, Raw material weights, Additional breakdowns of weights and evidence, Additional reportign at raw material level, Raw material trends and Raw material targets will be replicated for all the raw materials companies decided to report weights for.

⁷ Manmade cellulosic fibers (MMCFs) includes Viscose, Lyocell, Modal, Acetate, Cupro and other manmade cellulosic fibers made from pulp.

3.3 Raw material programs list

Companies will need to select from the raw material-specific dropdown all the raw material programs used (both sustainability programs and conventional/unknown)⁸.

The **list of sustainability programs** includes all the key raw material programs and the combinations of them commonly used by the industry. The list is regularly reviewed. Only programs covering Tier 4 raw material production and primary processing are listed. Programs covering other supply chain stages (for example, tanning) are not listed here. For all raw materials, the option called “Other” enables companies to report on other programs that are not currently listed.

Raw materials can be covered by multiple programs simultaneously. If it is covered by a listed program and an unlisted one, it should be reported under the listed program (for example, branded manmade cellulosic fibers should only be reported under “FSC and/or PEFC certified and/or controlled”, not “Other”). This helps to ensure consistency across companies and avoid double-counting. More detailed guidance on how to report on sustainability programs is provided in [3.4 Guidance for raw material sustainability programs reporting](#).

Please note that for manmade raw materials, the classification also includes the feedstock type used (for example, “Recycled, Recycled Claim Standard (RCS)” and “Biobased, ISCC”).

If companies want to report weights that are not covered by a sustainability program—or if they are unsure whether they are covered by a sustainability program—they should select “Conventional/unknown.” For synthetics and manmade cellulosic fibers, the corresponding options are: “Fossil-based/unknown” and “Forest-based/unknown”).

Please note that “Conventional/unknown”, “Fossil-based/unknown”, and “Forest-based/unknown” are listed by default to remind companies to report weights if used. This helps to limit selective reporting on the raw materials volumes covered by sustainability programs only.

Once programs are listed and companies confirm they can report weights for the reporting year, a pop-up opens to report weights and breakdowns of weights per traceability system, country of origin, and producer mapping:



3.4 Guidance for raw material sustainability programs reporting

All raw material programs have different chain-of-custody, verification, and claims requirements. The following section provides initial guidance to help companies compile program-specific weight data and the related evidence options. However, **each company is responsible for checking the latest regulatory and standard-specific requirements when reporting on raw material sustainability programs.**

Please note that this overview is not comprehensive and will be expanded over time. It’s currently in the pilot stage and we welcome feedback and additional input to continuously improve the guidance on reporting for raw materials sustainability programs.

⁸ Materials Benchmark > Materials Portfolio > Question MP-2-1

Examples

Program	Weight data source	Claims policy	Eligibility criteria to make off-product claims/evidence
Better Cotton (Mass Balance and Physical Traceability)	<p>Companies can access their aggregated weight data via the Better Cotton Platform (BCP) to collect BCCUs (Login)</p> <p>Country of origin in BCP is only available when using the Physical Traceability system.</p>	Better Cotton Claims Framework (Link)	<ul style="list-style-type: none"> • Better Cotton Statement of Membership (Link to Login) • Better Cotton Outcome Declaration and Conformity Assessment, independently assessed every three-years (find out more here).* <p>*Exceptions for the independent assessment requirement: Companies being members for less than one year and for very small companies.</p>
USCTP	<p>Companies can access their weight data in the USCTP Protocol Platform (login).</p> <p>Country of origin is USA.</p>	USCTP Claims Framework (link)	<ul style="list-style-type: none"> • USCTP Statement of Membership (link) • Proof that the volume data has been approved by the USCTP program managers (upload).
ISCC EU	<p>The amount of certified material must be reported by the certified company and documented in the main audit report, which is not publicly available.</p> <p>The certified material weights are verified during the audit.</p> <p>Country of origin is specified in the Summary Audit Report.</p>	ISCC 208: Logos & Claims (link)	<ul style="list-style-type: none"> • ISCC Certification (link) • ISCC License (link) • For more details, see the <i>Summary Audit Report</i> <p>There is no need to provide both certification and a license, one is sufficient. However, it is a prerequisite to using the license that the product is not fundamentally altered by the licensee.</p>
Regenerative Organic Certified	<p>Textile Product Claimed Material Worksheet (template)</p> <p>Country of origin available on the worksheet.</p>	ROC Labeling Guidelines & Terms of Use (link)	<ul style="list-style-type: none"> • Signed ROA License Agreement (template) • Approved ROA Textile Product Claimed Material Worksheet (template)
Cotton made in Africa (HIP and MB), Cotton made in Africa Organic (HIP)	<p>Aggregated data available in the Sustainable Cotton Tracker—SCOT (login)—with a breakdown by HIP and MB, per year.</p> <p>Country of origin is not directly in the system but can be compiled by mapping the cotton producers to the respective countries (only if HIP).</p>	Cotton made in Africa Claims Framework (link)	<ul style="list-style-type: none"> • Signed CmiA License Agreement • Download evidence from SCOT
MyBMP	<p>See Better Cotton</p> <p>Country of origin is Australia.</p>	No standalone claims possible	To be reported as Better Cotton because myBMP currently doesn't offer a chain-of-custody and claims mechanism.
Responsible Brazilian Cotton	<p>Farm to product traceability allowed by blockchain technology called SouABR.</p> <p>Aligned with Better Cotton requirements.</p> <p>Country of origin is always Brazil.</p>	On-product QR code	<ul style="list-style-type: none"> • Download evidence from SouABR Partner Brand Platform.

Program	Weight data source	Claims policy	Eligibility criteria to make off-product claims/evidence
OCS/RCS/GRS /RWS/RAS	Trackit (link) Transaction Certificates Country of origin on transaction certificate (Declared Geographic Origin)	TE-301 Standards Claims Policy (link)	<ul style="list-style-type: none"> TE_ID (link) Scope certificate <p>We encourage non-certified organizations to start using TE_ID.</p>
Good Cashmere Standard	Aggregated data only on TextileGenesis from 2025 onward*. Traceability allowed up to cashmere producer but not farm. Country of origin is not directly in the system but it's by default Inner Mongolia (China). *Until 2024 GSC used CATS to track up to spinning mill.	GCS Chain of Custody Guidelines (link) GCS Logo Manual and the Communication Guidelines (Link)	<ul style="list-style-type: none"> Signed licensing agreement for The Good Cashmere Standard (GCS) with ATAKORA. Registration on TextileGenesis tracking system Paid annual license fee
FSC Certified Important: This should not include FSC Controlled	As of December 2025, weights data and country of origin can be accessed through FSC Trace , accessible by all certificate holders who have a valid Electronic Trademark Licence Agreement (eTLA). Country of origin on transactional documents.		<ul style="list-style-type: none"> FSC Promotional License (link) or Chain of Custody Certification (link) Download evidence from FSC Trace
PEFC Certified Important: This should not include PEFC Controlled	Needs to be aggregated based on transactional documents (for example, invoices and delivery documents) that they receive from their suppliers (there are no special transaction certificates for PEFC). Country of origin on transactional documents.	PEFC Trademark Rules—Requirements (link) Accepted abbreviation and translations of the PEFC International chain of custody claims (link).	<ul style="list-style-type: none"> PEFC Trademark Usage License (link) or PEFC Chain of Custody Certification (link) Print PDF with a valid chain of custody certification number for each of your direct supplier(s) (link).

Important note:

- For all programs, we ask for the **right to share the submitted weight data with the program owners** for accuracy checks.
- For all programs, we are currently exploring options to enable **reporting companies to authorize programs to directly share data with Textile Exchange**, where available, to reduce manual effort.

3.5 Raw material weight details

In this section, companies are required to report the actual weights per program.

Companies can add as many rows as needed to report weights from different reporting tiers and product types. All required data must be completed to enable the correct conversion factor to be applied.

Reporting Tier	Product Type	Weight	Metric	Default Conversion Factor	Company Specific Conversion Factor	Confirm conversion factor*	Final raw material weight (tonnes)
<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value="0"/>	<input type="text" value=""/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="checkbox"/>	<input type="text" value="0"/>

NOTE: The above image is taken from the Data Reporting Portal and is included here as an example to show how raw materials weights should be reported. The structure can differ slightly depending on the material type.

3.5.1 Reporting tiers and conversion to (processed) raw material weights

Companies may have the material weights available extracted from different supply chain tiers (for example, final product, fabric, directly procured fiber weights).

Companies shall report the data in order of preference based on the following reporting tier options and select the one(s) they would like to report weights on:

- Tier 4: (processed) raw material weight (for example, lint cotton)
- Tier 3: Intermediate material (for example, yarn)
- Tier 2: Finished material (for example, fabric)
- Tier 1: Finished product: (for example, T-shirt)

If the reporting company does not have access to the (processed) raw material weight, the reported finished product, finished material, or intermediate material weights need to be converted back to (processed) raw material weights.⁹ For more information, please see the chapter on [Conversion factors](#).

Textile Exchange encourages companies to report at Tier 4 (processed) raw material weights if possible. This will record the most accurate data and avoid any conversion. To ensure consistency and allow comparability, Tier 1–3 volumes are converted into Tier 4 (processed) raw material weights (for example, fiber, down, and raw hides).

The Materials Benchmark measures the weight of processed raw materials (for example, lint cotton, scoured wool, and raw hides) and not the unprocessed raw materials (for example, seed cotton, greasy wool, and animals). For more information, please see the [Supply Chain Taxonomy](#).

Each material type has different supply chain and reporting tiers, so material type-specific reporting tiers are included in the Materials Benchmark.

Reporting fiber and textile product weights

For fiber and fiber-based products (textiles), weight data can be reported on four reporting tiers (product, fabric, yarn, and fiber). If the reporting tier is the product, fabric, or yarn tier, the weights need to be converted back to fiber level.

In summary, the reporting tiers are defined as follows:

⁹ The Materials Benchmark is currently not designed for pre-fiber or equivalent processed raw materials (for example, pulp producers).

- **Product:** Refers to the final manufactured goods, for which all stages of processing have been completed and that are ready for sale.
- **Fabric:** Refers to the finished fabric, for which all stages of processing have been completed (for example, dyeing and finishing) and that is ready for cut, make, and trim.
- **Yarn:** Refers to the finished yarn that is ready to be knitted or woven into fabric. In the case of polyester and manmade cellulose, yarn includes both drawn textured yarn (DTY) as well as staple yarn. For wool, it refers to yarn that has been spun.
- **Fiber:** Is the baseline measure used in this methodology to track the weights of conventional and non-conventional fibers. For cotton, it refers to lint cotton—sometimes referred to as ginned cotton. For polyester and manmade cellulose, it covers both filament and staple fiber. For wool, it refers to clean wool.

Reporting down and feather weights

For down, weight data can only be reported as down. For down, no conversion factors are applied.

- **Down:** The weight of the down in tonnes.

Reporting raw hide and recycled leather fiber weights

For leather and raw hides, weight data can be reported on the following reporting tiers: finished leather, raw hides, and recycled leather fiber. If the reporting tier is finished leather, the weights are converted back to raw hides.

- **Finished leather:** The surface area in square meters, square inches, square feet, or tonnes.
- **Raw hides:** The weight of the untanned raw hide in tonnes.
- **Recycled leather fiber:** The weight of the recycled leather fiber in tonnes.

All finished leather entries are reverted to the mass of raw hide.

Reporting natural rubber

For natural rubber (for example, rubber obtained from the latex of the rubber tree), weight data can be reported on the following reporting tiers: finished product or raw rubber. If the reporting tier is the finished product, the weights are converted back to raw rubber.

- **Product:** The weight of the rubber in the finished product (for example, the sole of a shoe)
- **Raw rubber:** The weight of the dried raw rubber (for example, the rubber content extracted from the latex in the form of pre-vulcanized rubber sheets)

For example, if an outsole is composed of 60% natural rubber, 35% silica, and 5% filler, the total weight of the outsole should be distributed across the components accordingly.

NOTE: Natural rubber reporting is in the pilot stage, and we welcome feedback on how to improve the guidance and framework.

Reporting synthetic rubber

For synthetic rubber,¹⁰ weight data can be reported on the following reporting tiers: finished product or raw rubber. If the reporting tier is the finished product, the weights are converted back to raw rubber.

¹⁰ Common types of synthetic rubber include styrene-butadiene rubber (SBR), butadiene rubber (BR), and ethylene-propylene-diene monomer (EPDM).

- **Product:** The weight of the rubber in the finished product (for example, the sole of a shoe)
- **Raw rubber:** The weight of the dried raw rubber (for example, the pre-vulcanized rubber sheets)

For example, if an outsole is composed of 60% synthetic rubber, 35% silica, and 5% filler, the total weight of the outsole should be distributed across the components accordingly.

NOTE: Synthetic rubber reporting is in the pilot stage, and we welcome feedback on how to improve the guidance and framework.

Reporting other non-fiber raw materials

For other non-fiber raw materials such as polyurethane (PU), thermoplastic polyurethane (TPU), ethylene-vinyl acetate (EVA), polyvinyl chloride (PVC), weight data can be reported on the finished product or raw material reporting tiers. If the reporting tier is the finished product, the weights are converted back to raw material.

- **Product:** The weight of the rubber in the finished product (for example, the sole of a shoe)
- **Raw material:** The weight of the (processed) raw material.

NOTE: Other non-fiber raw materials reporting is in the pilot stage, and we welcome feedback on how to improve the guidance and framework.

3.5.2 Product type

Companies need to select the product type when providing weights. Companies should, at a minimum, specify whether the raw material is used for apparel, home, footwear, accessories, or other products. If possible, companies should select the specific product type (for example, apparel or knit). If unknown, select “Mixed” as a general category.

NOTE: The list is not comprehensive of all the product types for each raw material type but aims to cover the main products on the market. Select “Other” for products that are not on the existing list.

3.5.3 Reported metrics

Weights can be reported the following metrics:

- **For all raw materials (except hides):** kilograms, tonnes, and pounds (US). If possible, reporting in tonnes is recommended.
- **For raw hides:** tonnes of raw hides or square meters/inches/feet and tonnes of finished leather.

To create comparability among reporting companies, we convert all weights into tonnes of (processed) raw materials for the results.

3.5.4 Conversion factors

Conversion factors (also called “multipliers”) are used to convert the weight of an output in one tier of the supply chain into the weight of an input in another tier and to aggregate material losses. Estimating material losses is critical, as nearly every stage of the supply chain generates raw materials that are not embedded in the final product (for example, cutting waste when fabric is cut for finished products). There is significant variability in how companies estimate material losses throughout the supply chain to calculate back to the weights of raw materials (for example, for cotton, back to the equivalent weight of cotton lint).

Since the start of the Materials Benchmark, Textile Exchange has worked to provide industry-aligned conversion factors and has partnered with many organizations to provide up-to-date and reliable

conversion factors. However, these remain industry averages and are not company-specific. Textile Exchange encourages companies to use their own data and conversion factors for their calculations.

When a company selects a reporting tier and product type, Textile Exchange's raw material-specific conversion factor will be shown by default. Companies may edit the conversion factor to use their own, subject to the following rules:

- If a company reports weights at the fiber, raw hides, or any level where the conversion factor equals 1, the conversion factor cannot be edited (as 1 is the only correct value). Companies are required to confirm that correct conversion factors were applied during the calculations outside of the system.
- If a company reports weights at any level where the conversion factor is not 1, they may edit the conversion factor using their specific values. The conversion factor will be highlighted in yellow so Textile Exchange can track when a company's conversion factors are used instead of Textile Exchange's default values. If the conversion factor is outside the min/max range of 20%, a flag will appear and companies have the possibility to review and potentially adjust the conversion factor if incorrect.

Please refer to the [Conversion Factors](#) section in the appendix if supply chain-specific conversion factors are not available.

3.5.5 Updates on raw hides weights reporting

In 2026, Textile Exchange worked to improve the weights reporting for raw hides. Below are the main updates and improvements:

- Reporting moved from generic raw hides to species-specific (bovine, goat, pig, sheep, and other).
- Companies have the possibility to report weights in raw hides or finished leather. For finished leather, either surface area or weights can be reported.
- Species and product type-specific conversion factors have been provided. For more details, please see the [Conversion Factors](#) in the appendix.
- The Uptake Calculator has been embedded in the Raw Materials Portfolio section¹¹.

3.6 Additional breakdowns of weights and evidence

Companies are encouraged to break down reported weights and provide additional details for each listed program. Please note that more guidance is provided directly in the survey to support accurate and complete responses.

3.6.1 Traceability

The aim of the questions is to collect information on how companies track the raw materials weights across the supply chain. For each program, companies shall provide a breakdown of the total weight according to the following categories:

¹¹ Reporting as per previous uptake calculator is no longer offered because it was not taking in consideration the product compositions and species-specific hides with different conversion factors, leading only to estimated weights. Calculations need to be done before reporting into the Materials Benchmark.

- Percentage tracked through a program-owned traceability system
- Percentage tracked through certificates obtained from suppliers
- Percentage tracked through other traceability systems
- Percentage based on information provided by suppliers
- Percentage that is unknown or unspecified

3.6.2 Evidence

Companies are encouraged to provide supporting evidence to confirm the use of a specific program and related weights. Companies can:

- Select the type of evidence
- Upload the evidence as a document and/or add a weblink
- Provide additional explanation/description to support the evidence provided

3.6.3 Country of origin

Companies are asked to report from which country the raw material has been produced. **Country of origin refers to the raw material production country (for example, farming, forestry, extraction, or collection and sorting of secondary raw materials).** It should not be confused with the country where the direct supplier is based. For each program, companies will need to list the raw materials countries of origin and estimate the % in terms of weight sourced from each of the countries. If the country of origin isn't known, companies can report it as unknown.

For more information, please see [Textile Exchange's Supply Chain Taxonomy](#) (Tier 4 Extraction, Production, Collection).

3.6.4 Producer mapping

Companies are asked to report if they know the raw material producer. In this context, producer refers to the producer of (processed) raw materials (for example, lint cotton, scoured fibers, manmade staple fibers or filament, raw hides, or down). It's not asking about the (unprocessed) raw material producers (for example, farmers, forestry, or oil and gas extraction companies), nor the first processors (for example, flake or pulp producers) in cases where several steps are needed to transform the raw material into commodity state (for example, fiber). For each program, companies must break down the reported weight by known and unknown Tier 4 producers.

For more information, please see [Textile Exchange's Supply Chain Taxonomy](#) (Tier 4 Primary Processing).

3.7 Additional reporting at raw material level

Companies may also need to complete several questions at the raw material level and not at the program level, specifically if they report on any recycled raw materials or on manmade cellulosic fiber.

3.7.1 Recycled feedstock and textile feedstock (for recycled raw materials only)

If companies report on any recycled raw materials, two sub-questions will appear:

1. Break down the weight by type of recycled feedstock, for example, if a recycled feedstock is textile or non-textile.
2. If textile feedstock is reported, specify the proportion of each type, for example, pre-consumer, post-consumer, and unknown.

3.7.2 Additional reporting on manmade cellulosic fiber producers (if used)

If companies report viscose, modal, lyocell, acetate, cupro, and/or other manmade cellulosic fiber weights, a sub-question on manmade cellulosic fiber producers will appear. This question was developed in collaboration with Canopy as part of the raw material reporting alignment in 2026. Companies should break down weights by fiber producer(s) as listed in the dropdown. The answers will be used to estimate the % of manmade cellulosic fibers covered by the different types of Canopy Hot Button Shirts.

3.8 Raw material trends

Once companies have reported the raw material weights for the reporting period, a year-on-year trend table is shown. The table includes the following elements:

- **Historical weights:** Shows the weights per program from the year a company first started reporting (currently showing from 2019 onward). **Companies should backward adjust data in their trend tables if needed** (for example, if new data is available, methodological changes were made, or there were mistakes in previous years). Companies are also strongly encouraged to fill data gaps where possible, new companies can add previous years' weights if known directly into the trend table. Unexpected trends are also highlighted in the table for companies to review.
- **Weights per reporting tier:** Shows the weights broken down for the reporting tier (for example, fiber, yarn, fabric, or product) that they reported in the raw material weights section. This enables companies to verify the accuracy of trends according to the reporting tier used internally. The final converted raw material weight will show the Tier 4 (processed) raw material weight.
- **Metric filter:** This filter has been added to the table to show the different metrics (kg, pounds, or tonnes). Only raw hides will show all the reporting tiers with associated metrics.

NOTE: The methodology to report on weights will be updated annually if needed, and this will consequentially result in updated trends.

If companies adjust the weights in the trend table, further questions will need to be completed to explain the reason and confirm the accuracy of the data.

3.9 Raw material targets

Companies will need to specify whether they have set targets to increase the weights for the selected raw materials covered by programs. This question is important for all companies participating in Textile Exchange 2025 Sustainable Cotton Challenge and 2025 Recycled Polyester Challenge and the selection must align with the commitment stated in the sign-up form.

3.10 Metadata

The Metadata section is used to collect contextual information on the reporting data. This is important for Textile Exchange to understand how companies performed the weight calculations and which methodology was used.

Companies should:

- Upload their internal calculations sheet, methodology documentation, and provide the source of these calculations.
- Specify whether the weights are based on a direct measurement or estimates. Include the assumptions used and indicate and explain any incomplete calculation.

- Specify if the calculations have been reviewed by a third party and if they have been published.

4 Appendices

4.1 Calculation examples

4.1.1 Basic calculation

Below is an example of a fiber weight calculation, based on product-level data. This is a “basic” calculation, as the method for estimating fiber weights uses a basic ratio for each material type. Different types of fabric and products have different efficiencies. Therefore, a more advanced and more accurate calculation methodology is also available.

Step 1: Identify the quantity of unique products for the desired date range:

The data source is likely to be the ERP system, or logistics databases

Date	Ship-to	Customer number	Style and color	Quantity
1/1/18	DE	123	111111-001	100,000
8/24/18	FR	456	222222-500	300,000
12/31/18	NL	789	333333-901	500,000

Step 2: Identify the composition of the unique products (this is likely to be a “style and color code”):

The data source is likely to be the PLM system or product labeling teams.

Style and color	Gender/age	Category	Silhouette	Composition
111111-001	Menswear	Tops	Polo shirt	88% polyester, 12% elastane
222222-500	Womenswear	Bottoms	Jeans	100% cotton
333333-901	Babywear	All-in-one	Sleepsuit	95% cotton, 5% elastane

Step 3: Identify product weights:

The data source is likely to be PLM system or logistics.

Style and color	Min weight (g)	Max weight (g)	Average weight (kg)
111111-001	350	450	0.4
222222-500	350	650	0.5
333333-901	75	275	0.175

Step 4: Merge the datasets and calculate the weight of fiber at product level

Date	Style and color	Quantity	Average weight (kg)	Fiber 1	%	Weight fiber 1 (kg)	Fiber 2	%	Weight fiber 2 (kg)
1/1/18	111111-001	100,000	0.4	Polyester	88	35,200	Elastane	12	4,800
8/24/18	222222-500	300,000	0.5	Cotton	100	150,000		0	
12/31/18	333333-901	500,000	0.175	Cotton	95	83,125	Elastane	5	4,375

Fiber sub-totals at product level (kg)	
Cotton	233,125
Elastane	9,175
Polyester	35,200

Step 5: Integrate sustainability program criteria if it is not embedded in the composition information:

Style 222222-500 is confirmed to be made entirely of certified organic cotton (100% cotton composition) by validating the scope and transaction certificates. Therefore, the 150,000kg of cotton is classified as organic cotton.

Fiber	Weight at product level (kg)
Conventional cotton	83,125
Organic cotton	150,000
Elastane	9,175
Polyester	35,200

Step 6: Apply conversion factors to estimate the raw material input

In the example below, the reporting company has identified specific conversion factors for their products. See [Estimating Fiber Loss in Production](#) for support identifying fiber loss values for your calculation.

Fiber	Weight at product level (in kg)	Conversion factor: Product to fiber	Weight at fiber level (in kg)
Conventional cotton	83,125	1.63	135,493.75
Organic cotton	150,000	1.63	244,500
Elastane	9,175	1.5	13,762.5
Polyester	35,200	1.4	49,280

4.1.2 Advanced calculations

Below is an example of a fiber weights calculation, based on product-level data. This is an “advanced” calculation example, as the method for estimating fiber weights specifies sub-totals for types of fabric and some types of products. If the level of detail is not available for this year’s calculation, see the basic example for weights calculation.

Step 1: Identify the quantity of the unique product for the desired date range:

The data source is likely to be ERP system, or logistics databases

Date	Ship-to	Customer number	Style and color	Quantity
1/1/18	DE	123	111111-001	100,000
8/24/18	FR	456	222222-500	300,000
12/31/18	NL	789	333333-901	500,000

Step 2: Identify the composition of the unique products (this is likely to be a style and color code). Also, identify the fabric type (this will be used for the fiber loss calculation).

The data source is likely to be PLM system or product labeling teams.

Style and color	Gender/age	Category	Silhouette	Composition	Fabric type
111111-001	Menswear	Tops	Polo shirt	88% polyester, 12% elastane	Woven
222222-500	Womenswear	Bottoms	Jeans	100% cotton	Denim
333333-901	Babywear	All-in-one	Sleepsuit	95% cotton, 5% elastane	Knit

Step 3: Identify the product weights

The data source is likely to be PLM system or logistics.

Style and color	Min weight (g)	Max weight (g)	Average weight (kg)
111111-001	350	450	0.4
222222-500	350	650	0.5
333333-901	75	275	0.175

Step 4: Merge datasets and calculate the weight of fiber uptake by fabric type at product level

Date	Style and color	Quantity	Average weight (kg)	Fiber 1	%	Weight fiber 1 (kg)	Fiber 2	%	Weight fiber 2 (kg)
1/1/18	111111-001	100,000	0.4	Polyester	88	35,200	Elastane	12	4,800
8/24/18	222222-500	300,000	0.5	Cotton	100	150,000		0	
12/31/18	333333-901	500,000	0.175	Cotton	95	83,125	Elastane	5	4,375

Fiber sub-totals by fabric type at product level (kg)		
Knit	Cotton	83,125
	Elastane	4,375
Denim	Cotton	150,000
Woven	Elastane	4,800
	Polyester	35,200

Step 5: Integrate the sustainability program criteria if it is not embedded in composition information:

Style 222222-50 is confirmed to be entirely made of certified organic cotton (100% cotton composition) by validating the scope and transaction certificates. Therefore, the 150,000kg of cotton are classified as organic cotton.

Fiber sub-totals by fabric type at product level (kg)		
Knit	Cotton	83,125
	Elastane	4,375
Denim	Organic cotton	150,000
Woven	Elastane	4,800
	Polyester	35,200

Step 6: Apply fiber loss values (or conversion factors) to estimate the raw fiber input

In the below example, the brand has identified specific conversion factors for the fabric types of their products. See [Estimating Fiber Loss in Production](#) for support identifying fiber loss values for your calculation.

Fiber sub-totals by fabric type at product level (kg)			Conversion factor	Fiber sub-totals at fiber level (kg)
Knit	Cotton	83,125	1.65	137,156.25
	Elastane	4,375	1.50	6,562.50
Denim	Organic cotton	150,000	1.35	202,500.00
Woven	Elastane	4,800	1.60	7,680.00
	Polyester	35,200	1.70	59,840.00

Fiber	Total at fiber level (kg)
Cotton	137,156.25
Elastane	14,242.50
Organic Cotton	202,500.00
Polyester	59,840.00

4.2 Product weights

If companies report at the product level, they should use actual product weights if available.

Actual weights for unique styles are ideal, using data from product lifecycle management systems (PLM) or logistics teams.

If actual product weights are not available, the next best option is to use company-specific average weights derived from actual products. If neither of these methods is feasible, industry-wide average weight tables are accepted.

We advise using actual product weights. Reporting at the individual stock keeping unit (SKU) level is recommended over reporting at the style level, as different colorways of the same style often use different fabrics (and therefore have different compositions) and may vary in weight.

While Textile Exchange encourages the use of actual product weights, some brands and retailers may choose to use a generic product weight table. In such cases, companies may use the average product weights provided in the appendix: Product weight proxies apparel and Product weight proxies home textiles.

4.2.1 Product weight proxies apparel

The table below provides an overview of average product weights that can be used as a proxy if the specific product weights are not available.

The product weights are based on WRAP and Better Cotton data. If a company is using these product weights, the company must reference WRAP and/or Better Cotton as the source.

Please note that the WRAP product weights exclude cutting waste while the Better Cotton product weights include cutting waste.

WRAP Item	Weight (grams) excluding cutting waste	Better Cotton silhouette	Weight (grams) including cutting waste
Womenswear			
Dressing gowns heavy weight	1080	Dressing gowns (toweling)	1500
Dressing gowns light weight	306		
Pajamas light weight	371		
Pajamas heavy weight	452		
Jersey nightwear	344	Nightwear	150
Knickers/pants	29	Knickers/pants	45
Bras—padded underwired	112		
Bras—lace underwired	80		
Bras—non-wired	39		
Slips	112		
Swimsuit	146		
Bikini top	64		
Bikini briefs	59		
Tankini top	71		
Tankini briefs	53		
Socks	31	Socks	31

WRAP Item	Weight (grams) excluding cutting waste	Better Cotton silhouette	Weight (grams) including cutting waste
Tights 15 denier	24		
Tights 40 denier	36		
Tights 60 denier	43		
Heavy tights	73		
Winter vest (thermal)	109		
Vests jersey cami	95	Underwear vests	90
Thick strap vests	120		
Knitwear heavy weight	402	Knitwear	375
Knitwear summer weight	159		
Knitwear light knit	226		
Knit formal top	296		
Hoody	489		
Sweat tops/rugby tops	432	Sweat tops/rugby tops	420
Sweat jacket	495		
T-shirt long sleeve	176	T-shirt	190
T-shirt short sleeve	140		
Woven formal/casual shirt long sleeve	130	Woven formal/casual shirt	135
Woven formal/casual shirt short sleeve	130		
Winter heavyweight coat (main fabric only)	1056	Jacket	420
Winter heavyweight coat (lining)	200		
Winter raincoat/mac (main fabric only)	1052		
Winter raincoat/mac (lining)	200		
Spring midweight coat (main fabric only)	633		
Spring midweight coat (lining)	200		
Lightweight mac (main fabric only)	362		
Lightweight mac (lining)	200		
Tailored jacket (main fabric only)	300		
Tailored jacket (lining only)	100		
Waistcoat (main fabric only)	150		
Waistcoat (lining)	50		
Formal suit dress (main fabric only)	350		
Formal suit dress (main fabric only)	100		
Tailored trousers	317		
Tailored skirt	270		
Maxi dress	433		

WRAP Item	Weight (grams) excluding cutting waste	Better Cotton silhouette	Weight (grams) including cutting waste
Standard dress	263		
Knitted dress	255		
Fleece jacket	327		
Casual jacket	653		
Casual skirt	197	Skirt	115
Casual trouser	364		
Cargo trouser	243	Cargo trouser	275
Jogger pant	353	Jogger	420
Jean	478	Jean	560
Playsuit (long)	228		
Playsuit (short)	214		
Leggings	130		
Menswear			
Dressing gowns (toweling, velour, fleece)	1127	Dressing gowns (toweling)	1600
Dressing gowns (lightweight)	536		
Knickers/pants	77	Knickers/pants	90
Fitted boxer	75		
Loose fit boxer	63		
Brief	51		
Pajamas heavyweight	493	Pajamas	300
Pajamas lightweight	358		
Socks	36	Socks	35
Underwear vests	103	Underwear vests	110
Ties	36		
Suit jacket (main fabric only)	500		
Suit jacket (lining)	125		
Suit trouser	402		
Jackets (main fabric only)	500		
Jackets (lining)	125		
Formal trousers	350		
Heavy weight knitwear	650	Knitwear	500
Lightweight knitwear	283		
Hoody	646		
Polo shirt	229	Polo shirt	370
Rugby tops	442	Sweat tops/rugby tops	470
Sweat top	500		
Jogger	532	Jogger	500
T-shirt long sleeve	266	T-shirt	190

WRAP Item	Weight (grams) excluding cutting waste	Better Cotton silhouette	Weight (grams) including cutting waste
T-shirt short sleeve	258		
Swimwear shorts	196		
Fleece jacket	323		
Outerwear jackets—lightweight	701		
Outerwear Jackets—lightweight lining	150		
Outerwear jackets—midweight	927		
Outerwear jackets—midweight lining	150		
Outerwear coats/jackets—heavyweight	1369		
Outerwear coats/jackets—heavyweight lining	150		
Woven formal/casual shirt short sleeve	225	Woven formal shirt poly cotton (65%, 35%)	240
Woven formal/casual shirt long sleeve	243	Woven formal shirt 100% cotton	285
Casual trouser	514	Casual corduroy trouser	630
		Casual chino trouser	485
Lightweight shorts	164		
Casual shorts	276	Casual shorts	320
Jean	718	Jean	650
Jogger	462		
Babywear			
Bodysuits	85	Bodysuits	114
Sleepsuits	125		
Bib	24		
Blanket	194		
Sleeping bag	228		
Dress	72		
Jogger	78		
Snowsuit	471		
Fleece bodysuit	189		
Socks	13		
Younger girls (1–7 years)			
Lightweight jacket	182		
Coat heavyweight jacket	275		
T-shirt short sleeve	87	T-shirt	70
T-shirt long sleeve	96		
Vest	36		
Swimwear	50		

WRAP Item	Weight (grams) excluding cutting waste	Better Cotton silhouette	Weight (grams) including cutting waste
Jumper	120		
Jeans	207	Jean, trouser, jogger, hoody	200
Trousers	213		
Joggers	177		
Hoody	218		
Sweatshirt/hoody	242		
Dungarees	292		
Shorts	145		
Dress	106	Dress	84
Socks	15	Socks	13
Leggings	84	Leggings	97
Skirts	90	Skirts	63
Older girls (6–14 years)			
Socks	25	Socks	26
Skirts	133	Skirts	127
Shorts	139		
Jeans	321	Jean, trouser, jogger, hoody	400
Trousers	311		
Joggers	209		
Hoody	345		
T-shirt long sleeve	123	T-shirt	140
T-shirt short sleeve	94		
Vest	67		
Sports bra	20		
Pants	20		
Swimming costume	65		
Bikini	53		
Tops	96		
Dress	161	Dress	169
Leggings	134	Leggings	194
Knitwear heavyweight	244		
Knitwear lightweight	182		
Jacket lightweight	172		
Heavyweight coats	723		
Younger boys (1–7 years)			
Socks	15	Socks	15
T-shirt long sleeve	98	T-shirt	90
T-shirt short sleeve	109		

WRAP Item	Weight (grams) excluding cutting waste	Better Cotton silhouette	Weight (grams) including cutting waste
Polo	117		
Vest	36		
Swim trunks	14		
Coat/jacket	323		
Shorts	114		
Knitwear	220		
Jeans	219	Jean, trouser, jogger, hoody	200
Trousers	193		
Joggers	202		
Hoody	245		
Woven shirt	79	Woven shirt	90
Sweat tops/rugby tops	172	Sweat tops/rugby tops	190
Older boys (6–14 years)			
Socks	25	Socks	30
T-shirt long sleeve	146	T-shirt	180
T-shirt short sleeve	135		
Polo shirt	160		
Vests	47		
Pants	25		
Swim trunks	121		
Jeans	341	Jean, trouser, jogger, hoody	400
Trousers	361		
Joggers	322		
Hoody	364		
Coat/jacket	588		
Shorts	177		
Knitwear	323		
Woven shirt	139	Woven shirt	180
Sweat tops/rugby tops	338	Sweat tops/rugby tops	380
Schoolwear			
Socks	22	Socks	10
Skirts	187	Skirts	38
Shorts	150		
Joggers	355		
Coats	736		
T-shirt long sleeve	99	T-shirt, blouses	63
T-shirt short sleeve	97		
Shirt long sleeve	128		

WRAP Item	Weight (grams) excluding cutting waste	Better Cotton silhouette	Weight (grams) including cutting waste
Shirt short sleeve	104		
Blouse	64		
Polo shirt	114		
Dress	117	Dress	100
Trouser	218	Trouser	92
Knitwear jumper	137	Knitwear	125
Knitwear cardigan	145		

4.2.2 Product weight proxies home textiles

The table below provides an overview of the average product weights for home textiles based on Better Cotton data. These average product weights can be used as a proxy if the specific product weights are not available.

For these homeware products specifically, it is assumed that there is no cutting waste. Different weights are provided based on approximate GSM or grams of fabric per square meter. To accurately match products to the average weight for each towel category, the following average dimensions are used:

Face cloth	31.5 cm x 31.5 cm
Guest towels	65 cm x 40 cm
Hand towels	95 cm x 50 cm
Bath towel	130 cm x 70 cm
Bath sheet	167 cm x 100 cm

Product category	Products	Grams
Towels	Face cloth 420 GSM	42
Towels	Face cloth 500 GSM	50
Towels	Face cloth 570 GSM	57
Towels	Face cloth 640 GSM	64
Towels	Face cloth 670 GSM	66
Towels	Face cloth 800 GSM	79
Towels	Kitchen tea towel	100
Towels	Guest towel 420 GSM	109
Towels	Guest towel 500 GSM	130
Towels	Guest towel 570 GSM	148
Towels	Guest towel 640 GSM	166
Towels	Guest towel 670 GSM	174
Towels	Guest towel 800 GSM	380

Product category	Products	Grams
Towels	Hand towel 420 GSM	200
Towels	Hand towel 500 GSM	238
Towels	Hand towel 570 GSM	271
Towels	Hand towel 640 GSM	304
Towels	Hand towel 670 GSM	318
Towels	Hand towel 800 GSM	380
Towels	Bath towel 420 GSM	382
Towels	Bath towel 500 GSM	455
Towels	Bath towel 570 GSM	519
Towels	Bath towel 640 GSM	582
Towels	Bath towel 670 GSM	610
Towels	Bath towel 800 GSM	728
Towels	Bath sheet 420 GSM	701
Towels	Bath sheet 500 GSM	835
Towels	Bath sheet 570 GSM	952
Towels	Bath sheet 640 GSM	1069
Towels	Bath sheet 670 GSM	1119
Towels	Bath sheet 800 GSM	1336
Bedding	Duvet/quilt cover (150 X 200 cm)	750
Bedding	Duvet/quilt cover (200 X 200 cm)	1000
Bedding	Duvet/quilt cover (240 X 220 cm)	1320
Bedding	Duvet/quilt cover (260 X 220 cm)	1430
Bedding	Fitted sheet (135 x 190 x 20 cm)	500
Bedding	Fitted sheet (140 x 200 x 20 cm)	540
Bedding	Fitted sheet (160 x 200 x 20 cm)	600
Bedding	Fitted sheet (180 x 200 x 20 cm)	660
Bedding	Fitted sheet (200 x 200 x 20 cm)	720
Bedding	Fitted sheet (90 x 200 x 20 cm)	420
Bedding	Flat sheet (150 X 260 cm)	350
Bedding	Flat sheet (180 X 260 cm)	420
Bedding	Flat sheet (220 X 260 cm)	500
Bedding	Flat sheet ET (240 X 260 cm)	560
Bedding	Flat sheet (265 x 275 cm)	650
Bedding	Flat sheet (280 x 290 cm)	730
Bedding	Duvet/quilt (outer fabric)—150 X 200 cm	630
Bedding	Duvet/quilt (outer fabric)—200 X 200 cm	840
Bedding	Duvet/quilt (outer fabric)—240 X 200 cm	1000

Product category	Products	Grams
Bedding	Pillow (outer fabric)	150
Bedding	Pillowcase	150
Bedding	Valance sheet (140 x 200 cm)	500
Curtains and carpets	Bathmat	483
Curtains and carpets	Curtains 300 cm X 145 cm 600 GSM	2610

4.3 Conversion factors

4.3.1 Data sources, updates, and assumptions

Data sources and updates

In 2019, over 50 datasets were collected from certification bodies, suppliers, manufacturers, and brands for the development of the raw material conversion factors. Data points were also extracted from past benchmarking surveys for triangulation and cross reference. Collected datasets comprised a single data point (for example, recycled polyester fiber to yarn) or were vertically complete (for example, organic cotton fiber to apparel). The datasets were analyzed on range, average, median, and mode. Given that it was not possible to establish a sample size that accurately reflected market share, median rather than average data points were applied. Following the initial analysis, discussions were held internally with external initiatives (for example, the Better Cotton Initiative). To ensure a more consistent sector-wide approach, some data points were aligned across organizations based on these discussions. The final conversion methodology was presented to the Advisory Committee and other stakeholders for comments and feedback.

Leather conversion factors were added in 2021.

In 2025, the **cotton conversion factors** were amended slightly to fully align with the Better Cotton conversion factors. The complete set of conversion factors, multipliers, and methodology can be found [here](#). Conversion factors for natural and synthetic rubber were added, along with a proxy conversion factor for other non-fiber raw materials (for example, EVA). The reporting tier for recycled leather fiber was limited to the fiber level and removed the conversion factors.

In 2025, we also initiated a project to strategically review and update the conversion factors and add conversion factors for additional fibers and raw materials.

In 2026, the **leather to raw hides conversion factors** were updated to improve accuracy of raw hides data reporting.

Feedback suggests that the conversion factors we use are the best in the industry. However, we welcome data from any industry stakeholder to help us continuously improve the modeling of conversion factors.

Dependencies

There are inherent dependencies between the raw material characteristics, how they are processed, and the final product. In developing conversion factors from the finished product, finished material, and intermediate material to (processed) raw material, these dependencies need to be accounted for. The table below provides a broad overview of these dependencies. Fiber length determines the yarn type, which in turn determines whether it is suitable for knit or woven fabrics, ultimately influencing the types of products it can be used for.

Table 2: Cotton profile and product suitability

Cotton	Fiber length	Yarn count (Ne)	Yarn type	Cultivation country (organic)	Product suitability	Broad classification
Gossypium Arboreum	Short	3–20	OE, K	Benin, Bukian Faso, India, Mali, Pakistan, Peru, Senegal, Tanzania, Uganda, USA	Denim/jeans, home, canvas, non-wovens, medical, industrial textiles	Home textile/apparel woven/ denim
Gossypium Herbaceum	Short	3–20	OE, K	Benin, Bukian Faso, India, Mali, Pakistan, Peru, Senegal, Tanzania, Uganda	Denim/jeans, home, canvas, non-wovens, medical, industrial textiles	
Gossypium Hirsutum (upland)	Medium, long	18–45	K, C, CK	Benin, Brazil, Bukina Faso, China, Colombia, India, Madagascar, Mali, Pakistan, Peru, Senegal, Tajikistan, Tanzania, Turkey, Uganda, USA	Denim/jeans, home, T-shirts, yoga wear, leisure wear, casual wear, under wear, industrial, smart, geo textiles	Apparel knitted/woven (less)
Gossypium Barbardense	Long, extra long	40–130	K, C, CK	China, Egypt, India, Israel, Kyrgyzstan, Madagascar, Peru, Turkey, USA	High-end (fine apparel, underwear/intimates), high-end home	

OE—Open end/rotor yarn | K—ring spun carded yarn | C—ring spun combed yarn | CK—Ring spun combed compact yarn

Source: *Organic Cotton: A Fiber Classification Guide*

It is worth noting that the more information a brand has on its supply chain, the more accurate the estimated conversion calculation will be. For example, being able to differentiate between knit or woven fabric, or the spinning type used in production, enables a more nuanced calculation, allowing companies to estimate raw material uptake more accurately.

Assumptions

To balance accuracy with data availability:

- Companies should, at the least, specify whether the uptake is used for apparel, home textiles, footwear, or any other products.
- For cotton, open-end (OE) and carded (K) yarn is commonly used for home textiles, woven apparel, and denim products. Meanwhile, carded (K) and combed (CK) yarn is commonly used for knitted apparel and, to a lesser extent, woven apparel.
- For polyester and manmade cellulose, filament is commonly used for home textiles, woven apparel, and denim products. Staple yarn is commonly used for knitted apparel and, to a lesser extent, woven apparel.
- For wool, woolen-spun yarn is commonly used for home textiles and apparel products (such as jersey and knitwear), and worsted yarn is commonly used for apparel (such as tailored garments and suits).
- The material loss for cut, make, and trim (CMT) is similar between cotton, polyester, polyamide, and manmade cellulosic products but not for wool products, due to the way the garment is manufactured.

Limitations and constraints

Textile Exchange’s conversion factors are intended as a tool to support companies in estimating their product, finished material, and intermediate material uptake back to the (processed) raw material baseline measure. **Where possible, companies are encouraged to apply their own conversion factors. The Textile Exchange raw material conversion factors are offered only as standardized approximations of conversions with the following limitations:**

- **Datasets:** Certification bodies, suppliers, and brands or retailers are asked to volunteer conversion values. These can either be an average or a range. The values should cover product-to-finished material, finished material-to-intermediate material, and intermediate material-to-(processed) raw material. Key processes involved should be taken into consideration. The values reported are

assumed to be true and accurate. Furthermore, due to the time and resource limitations, data is sourced from companies who are open and able to volunteer this information.

- **Processes:** While key processes are included in the conversion factor calculation, they don't cover all possible processes.
- **Region, country, and product variation:** Conversion factors may differ significantly from country to country, producer to producer, and even product to product. We have attempted to gather information from sources across different regions and stakeholders, but we acknowledge that these sources may not be complete. Additionally, the averages have not been weighted against the share of these markets and/or products.

4.3.2 Overview of conversion factors

To calculate material loss in the supply chain, Textile Exchange refers to the **conversion factors** between an input in one tier and an output in another tier. For example, the yarn-to-fiber conversion factor of 1.17 denotes the conversion of "1 yarn: 1.17 fiber". Put simply, 1.17 units of fiber are required to produce 1 unit of yarn.

The conversion factors are currently available for the following materials:

- Cotton and recycled cotton (proxy for the other plant fibers)
- Polyester and recycled polyester (proxy for all the other synthetic fibers)
- Manmade cellulosics and "recycled" cellulosics
- Wool (proxy for all the other animal-based fibers)
- Raw hides
- Proxies for rubber, and other non-fiber raw materials used for textile, clothing, leather, and footwear products

Unlike cotton, where one fiber conversion factor is developed for virgin, and another is developed for recycled, a single fiber conversion factor covering both virgin and recycled has been developed for polyester, nylon, and manmade cellulosics. This approach has been taken because the processing variation between virgin and recycled polyester, nylon, and manmade cellulosics predominantly occurs pre-fiber. As no significant variation occurs post-fiber, the conversion factor for both virgin and recycled is treated as the same.

Down and recycled down have been excluded because down uptake volumes (in grams) are generally collected at the material level. Companies reporting on recycled wool and recycled down who require conversions are requested to use the virgin conversion factors as equivalent proxies.

The following conversion factors for textile products are made available:

Products	Home textiles	denim	Apparel—woven	Apparel—knitted
Fabric processing	Mix		Mix	Mix
Knitting/weaving	Woven		Woven	Knitting
Yarn—cotton	OE*		OE, K*	C, CK*
Yarn—polyester	Filament		Filament	Staple
Yarn—MMCF	Filament/spun		Staple	Staple
Yarn—wool	Woolen—spun		Worsted	Worsted

*Spinning and yarn types and acronyms used:

- OE: Open-end/rotor
- K: Ring (carded yarn)
- C: Ring (combed yarn)
- CK: Ring (combed compact yarn)
- DTY: Drawn textured yarn

For example, the conversion factor for “spinning—OE” denotes the rate of loss that occurs for open-end spinning when fiber is made into yarn.

4.3.3 Cotton and other plant-fiber conversion factors

Cotton fiber conversion factors (proxy for all the other plant-based fibers)¹²

Products	Apparel—woven	Apparel—denim	Apparel—knit	Apparel—mixed	Home textiles	Accessories	Footwear	Other
Product-to-fiber	1.54	1.43	1.75	1,70	1.31	1,70	1,70	1,70
Fabric-to-fiber	1.27	1.21	1.44	1,39	1.25	1,39	1,39	1,39
Yarn-to-fiber	1.14	1.14	1.26	1,22	1.11	1,22	1,22	1,22

In 2025, the conversion factors for cotton were slightly amended to fully align with the Better Cotton conversion factors. The overall conversion factors, multipliers, and methodology can be found [here](#).

Recycled cotton fiber conversion factors (proxy for all the other recycled plant fibers)⁵

Products	Apparel—woven	Apparel—denim	Apparel—knit	Apparel—mixed	Home textiles	Accessories	Footwear	Other
Product-to-fiber	1,65	1,39	1,74	1,70	1,39	1,70	1,70	1,70
Fabric-to-fiber	1,32	1,32	1,40	1,36	1,32	1,36	1,36	1,36
Yarn-to-fiber	1,14	1,14	1,20	1,18	-	1,18	1,18	1,18

Based on an LCA provided by one European recycled cotton supplier, spinning losses for mechanically recycled cotton are low compared with the loss rate for Indian suppliers which is generally much higher. The spinning loss is modeled by using a blended worldwide rate. Recycled cotton applies only to mechanically recycled cotton, which typically has a higher fabric processing loss compared to cotton.

¹² Other plant fibers include bamboo, coir, hemp, jute, kapok, flax (linen), nettle, ramie, sisal, and other plant fibers.

4.3.4 Synthetic fiber conversion factors

Products	Apparel—woven	Apparel—knit	Apparel—mixed	Home textiles	Accessories	Footwear	Other
Product-to-fiber	1,43	1,59	1,53	1,20	1,53	1,53	1,53
Fabric-to-fiber	1,14	1,27	1,22	1,14	1,22	1,22	1,22
Yarn-to-fiber	1,03	1,10	1,06	1,03	1,06	1,06	1,06

The synthetic fiber conversion factors are based on polyester fiber conversion factors that are used as a proxy for all synthetic fibers.

4.3.5 Manmade cellulosics fiber conversion factors

Products	Apparel—woven	Apparel—knit	Apparel—denim	Apparel—mixed	Home textiles	Accessories	Footwear	Other
Product-to-fiber	1.46	1.53	1,46	1,49	1.23	1,49	1,49	1,49
Fabric-to-fiber	1.17	1.22	1,17	1,19	1.17	1,19	1,19	1,19
Yarn-to-fiber	1.02	1.05	1,02	1,03	1.02	1,03	1,03	1,03

The above conversion factors are derived from virgin manmade cellulosic production. Chemically recycled cotton or chemically recycled manmade cellulosics typically have a lower fabric processing waste compared to mechanically recycled cotton. Textile Exchange therefore recommends using factors for manmade cellulosics as a proxy if no further information on conversion factors is available.

4.3.6 Animal fiber conversion factors¹³

Products	Apparel—woolen	Apparel—worsted	Apparel—knit	Apparel—mixed	Home textiles	Accessories	Footwear	Other
Product-to-fiber	2,49	1,84	2,13	2,13	2,37	2,13	2,13	2,13
Fabric-to-fiber	2,27	1,69	1,95	1,95	2,27	1,95	1,95	1,95
Yarn-to-fiber	2,16	1,60	1,85	1,85	2,16	1,85	1,85	1,85

Cut, make, and trim (CMT) for wool is considered differently and separately from the other fibers because the manufacturing process, using knitting machines, generally has lower processing losses than other fibers.

Scouring and topmaking are the most significant contributors to the high conversion factor in wool. Scouring refers to the process of removing oil from animal hair. In cooler climates, where animal hair contains more oil, the processing loss can be up to 50%.

¹³ Animal fibers include wool, alpaca, angora, cashmere, camel, guanaco, lama, mohair, silk, vicuna, yak, and other animal fibers.

4.3.7 Leather to raw hides and recycled leather fiber conversion factors

Hides bovine					
Products	Accessories—mixed	Apparel—mixed	Footwear—mixed	Home—mixed	Other—mixed
Finished leather m ² —raw hides tonnes	0,0057400	0,0057400	0,0074100	0,0070600	0,0065870
Finished leather inches ² —raw hides tonnes	0,0000037	0,0000037	0,0000048	0,0000046	0,0000040
Finished leather feet ² —raw hides tonnes	0,0005333	0,0005333	0,0006884	0,0006559	0,0006120
Finished leather tonnes—raw hides tonnes	0,2250000	0,2250000	0,2250000	0,2250000	0,2250000

Hides goat					
Products	Accessories—mixed	Apparel—mixed	Footwear—mixed	Home—mixed	Other—mixed
Finished leather m ² - raw hides tonnes	0,0024200	0,0024200	0,0024200	0,0024200	0,0024200
Finished leather inches ² - raw hides tonnes	0,0000016	0,0000016	0,0000016	0,0000016	0,0000016
Finished leather feet ² - raw hides tonnes	0,0002248	0,0002248	0,0002248	0,0002248	0,0002248
Finished leather tonnes - raw hides tonnes	0,1350000	0,1350000	0,1350000	0,1350000	0,1350000

Hides sheep					
Products	Accessories—mixed	Apparel—mixed	Footwear—mixed	Home—mixed	Other—mixed
Finished leather m ² - raw hides tonnes	0,0037900	0,0037900	0,0030600	0,0037900	0,0035250
Finished leather inches ² - raw hides tonnes	0,0000024	0,0000024	0,0000020	0,0000024	0,0000024
Finished leather feet ² - raw hides tonnes	0,0003521	0,0003521	0,0002843	0,0003521	0,0003270
Finished leather tonnes - raw hides tonnes	0,1350000	0,1350000	0,1350000	0,1350000	0,1350000

Hides pig					
Products	Accessories—mixed	Apparel—mixed	Footwear—mixed	Home—mixed	Other—mixed
Finished leather m ² - raw hides tonnes	0,0057400	0,0057400	0,0074100	0,0070600	0,0065870
Finished leather inches ² - raw hides tonnes	0,0000037	0,0000037	0,0000048	0,0000046	0,0000040
Finished leather feet ² - raw hides tonnes	0,0005333	0,0005333	0,0006884	0,0006559	0,0006120
Finished leather tonnes - raw hides tonnes	0,2250000	0,2250000	0,2250000	0,2250000	0,2250000

Mixed product types (for example, apparel—mixed and footwear—mixed) have been provided here as examples. Complete information on conversion factors for other specific product types is provided within the survey.

Leather conversion factors have been updated to include different species (bovine, goat, pig, sheep, and raw hides—other) as well as the various product categories to which they are applied¹⁴. All conversion factors have been fully integrated into the platform, and the final quantity of raw hides, expressed in tonnes, is calculated automatically¹⁵.

Recycled leather fiber can only be reported as recycled leather fiber. Due to the wide variety of blends, the specific composition of each recycled leather fiber containing composite materials must be applied.

4.3.8 Natural and synthetic rubber conversion factors

Products	Finished product
Product-to-raw material	2.37

Rubber conversion factors are currently a rough proxy in the pilot stage. We welcome feedback and data points to refine the rubber conversion factor over time.

4.3.9 Other non-fiber raw materials conversion factor¹⁶

Products	Finished product
Product-to-raw material	2.37

The other non-fiber raw material conversion factor is currently a rough proxy in the pilot stage. We welcome feedback and data points to refine the rubber conversion factor over time.

If companies want to report on complex composite materials that consist of multiple raw materials (for example, 50% fossil-based polyurethane, 20% recycled polyurethane, 20% pineapple fiber, 10% other/unknown), they should report them under the respective raw materials.

5 Acknowledgments

The development of this guide would not have been possible without the input and feedback provided by many industry stakeholders, including all companies who responded to the Materials Benchmark. We would like to thank all the brands, retailers, certification bodies, industry initiatives, suppliers and manufacturers for their transparency and openness in sharing information to create a valuable resource for broader industry use.

¹⁴ Previous conversion factors were generalized proxies applied across all product types and species-specific leathers. Specifically, they were 0.00833 for conversion from m² to tonnes, 0.81152 from in² to tonnes, and 0.08814 from ft² to tonnes.

¹⁵ The conversion factors have been developed using data and methodologies provided by the [PEFCR](#) (Product Environmental Footprint Category Rules) and the [EU Environmental Footprint Category Rules for Leather](#).

¹⁶ Other non-fiber raw materials include thermoplastic polyurethane (TPU), ethylene-vinyl acetate (EVA), polyvinyl chloride (PVC), polyurethane (PU), and other non-fiber raw materials used for textile, clothing, leather, and footwear products.

6 Version history and change log

Document revision history		Document revision notes
March 2026	TE-MB-GUI-503-V2026.0	<p>Document title update to <i>Raw Material Calculation Guide</i>.</p> <p>Major update of leather conversion factors.</p> <p>New guidance added for reporting breakdowns of weights (country of origin, traceability, and producer mapping) and weight-related targets.</p> <p>New reference to new Textile Exchange members reporting requirements.</p> <p>Improvement, including making the guide more user-friendly.</p>
April 2025	TE-MB-GUI-503-V2025.0	<p>Document title update to <i>Materials Benchmark: Uptake Calculation Guide</i>.</p> <p>Minor update of cotton conversion factors to fully align with Better Cotton.</p> <p>New guidance for raw material sustainability program reporting.</p> <p>Specification of non-textile raw materials and related guidance.</p> <p>Improvements, including making the guide more user-friendly.</p>
October 2019	Version 1.1	<p>Document title update to <i>Fiber Uptake Calculations and Reporting Best Practices Guide 2019</i>.</p> <p>Minor updates and rebranding.</p>
March 2019	Version 1.0	<p>Document title update to <i>Fiber Uptake Calculations and Reporting Best Practices Guide 2019</i></p>

7 Use and copyright

The content of this guide is designed to provide general information only. While every effort has been made to ensure that the information provided is accurate, it does not constitute legal or other professional advice. Textile Exchange cannot be held responsible for the contents of this guide or any subsequent loss resulting from the use of the information contained herein.

As a continual work in progress, this guide will be reviewed on a regular basis. We invite readers to provide feedback and suggestions for improvement, particularly with regards to data where new and improved sources are likely to emerge over time.

Please contact benchmark@textileexchange.org with your suggestions and comments.

All rights reserved. Textile Exchange ©2026