



Birla
purcelTM
because we care



**Pioneering
Innovations**
for a Sustainable Future

DEFINE WHO WE ARE

- To give back more than we take.

Birla Purocel is a 100% nature-based cellulosic fibres ideal for non-woven applications like - next to skin products.

Purocel offers a wide range of fibres for nonwoven applications with a focus on sustainability, innovation and partnership.



The background of the slide features three hands holding small green seedlings with soil. One hand is on the left, one at the top center, and one on the bottom right. The hands are cupped, gently holding the plants. The background is a vibrant green with subtle, overlapping circular patterns in varying shades of green.

giving back
to our planet
more than we take
because we care

Renewable

Cellulosic fibres are derived from renewable raw material wood

Sustainable

Strict control measures to source only from sustainable plantations and processes to ensure minimal environmental impact

Natural

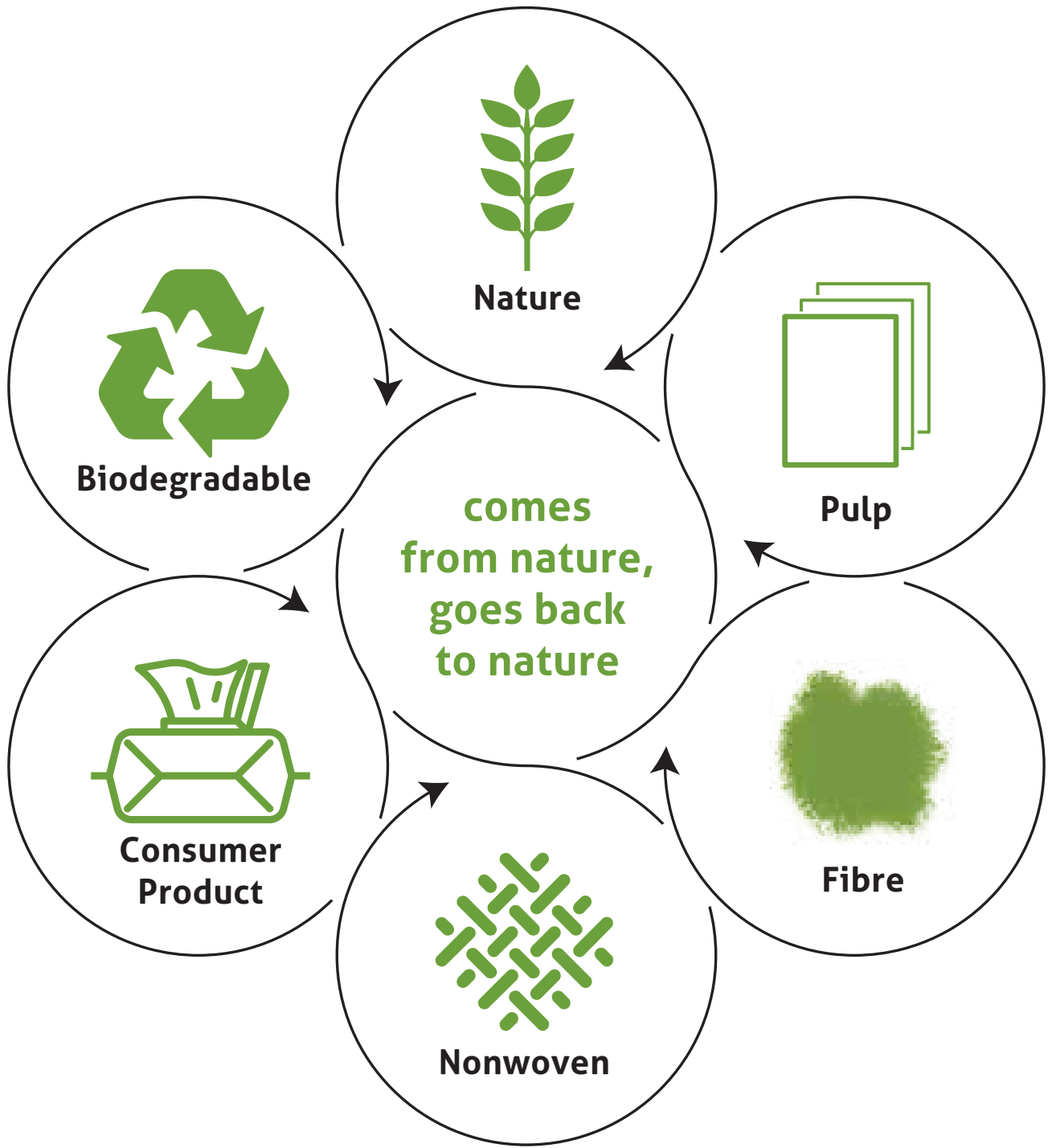
Fibres are certified compostable and biodegradable, going back to nature - naturally

Social

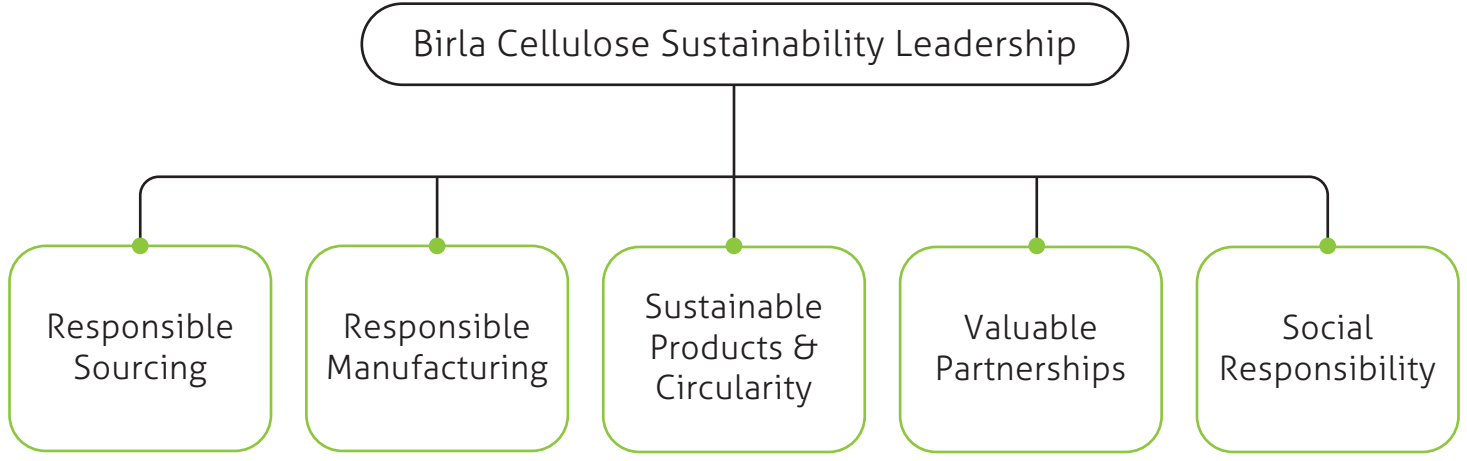
Working with the communities to help bring societies closer

360° APPROACH OUR SUSTAINABILITY FRAMEWORK

Sustainability is at the heart of every action that Birla Cellulose undertakes. Birla Cellulose fibres come from nature and go back to nature, leaving a positive footprint on the environment.



Birla Cellulose™ has five-pillars of sustainability strategy:



RESPONSIBLE SOURCING: FORESTRY AND WOOD

Birla Cellulose™ has a comprehensive best-in-class forestry management system. The policies are compliant to global standards & partakes in conservation of endangered forests, High Conservation Value (HCV) forests & biodiversity.

Birla Cellulose has a stringent 'Wood Sourcing Policy' and procures wood & pulp following the global standards such as FSC® or PEFC.

The business engages closely with leading not-for-profit Canopy based in Canada for its wood sourcing practices. We have achieved the 1st position in Canopy's Hot Button Report 2024 and retained the 'Dark Green Shirt' for the 5th consecutive year. This rating is the result of our continuous efforts on the conservation of ancient and endangered forests, and robust initiatives to scale circular business model.

RESPONSIBLE MANUFACTURING

Responsible Manufacturing is the mainstay of our business and this is achieved by adapting the best available technologies, applying benchmark best practices and strengthening of the closed-loop manufacturing processes.

VALUE CHAIN PARTNERSHIPS

Birla Cellulose has formed a first-of-its-kind Value Chain Integration & Engagement Platform, called LIVA Accredited Partner Forum (LAPF). This has helped facilitate the development of the entire textile value chain by bringing the partners together & jointly improving on quality, service, innovation and environment footprint across the entire value chain.

Similar initiatives are done for Nonwovens value chain, such as ConvergeX 2018, to bring the partners together to unleash newer opportunities.

Multiple sustainability-focussed programs related to transparency & traceability of the value chain are implemented to support requirements of global brands & markets.



SUSTAINABLE PRODUCTS

Sustainable Products are the outcomes when we listen to our customers and give them innovative solutions, while minimizing the negative impact on human and environment health and promote circularity.

Our fibers have been crafted to provide excellent sustainable advantages like reduction of greenhouse gas emissions, effluent discharge, water consumption as well as accommodate the usage of recycled textile waste.

SOCIAL RESPONSIBILITY

Social Responsibility is a way of life and aims for inclusive growth and development of the communities, our employees, our partners and the under-developed section of society who need it the most.

Guided by the 'We Care' philosophy of the Aditya Birla Group (ABG), Birla Cellulose's socio-economic interventions have helped to transform the lives of communities.

Birla Cellulose's projects focus on education, healthcare, sustainable livelihood, infrastructure development and social reform, epitomizing a holistic approach to inclusive growth.

INNOVATION PROCESS IN INNOVATIONS PRODUCT IN

PROCESS INNOVATION

PRODUCT INNOVATIONS

Our process innovation centres are working on innovating processes at each step right from plantations to pulp production to final fibre production.

This is helping to improve the processes and make them more sustainable and at the same time creating newest quality benchmarks to benefit customers and end consumers.

Birla Cellulose has unmatched global leadership and capability in terms of product & application development centres. This allows us to work jointly with our partners to develop new products and validate them in respective applications.



Forest Research Institute
Sapling to Plantation



Birla Research Institute
Pulp to Fibre



Pulp Research Institute
Plantation to Pulp



ABSTC
Fibre & Application
Research



ABCFC
Unique Viscose Scale-up
R&D facility



TRADC
Application Development
Centre

Forest

GRASIM FOREST RESEARCH INSTITUTE

Harihar, India

The institute focuses on pulpwood tree improvement educating farmers in tree cultivation, and genetic engineering for improved yields from plantations.

Pulp & Fibre

PULP RESEARCH INSTITUTE & BIRLA RESEARCH INSTITUTE DOMSJO

Sweden & Nagda, India

ABSTC

Mumbai, India

This is a premier research institute focused on developing product innovations and process improvements relating to rayon-grade wood pulp and viscose technology.

Fabric & Garments

TRADC

Kharach, India

The Textile Research And Development Centre (TRADC) brings innovation to the textile and fashion industry. In addition, TRADC offers many services that assist our value chain partners in bringing cellulosic fibre products to market.

Nonwoven & wipes

ABSTC & ABCFC

Mumbai & Kharach, India

The research teams at ABSTC and ABCFC continuously work on the development and validation of newer nonwoven products and applications to help the nonwoven value chain bring faster and sustainable innovations.

APPLICATIONS



- Feminine Care
- Diapers



- Medical Disposables
- Surgicals



- Personal Care
- Baby
- Surface Cleaning
- Flushable
- Face Mask



- Mattresses
- Shoes
- Interlining
- Specialty Papers



- Battery Separators
- Automotives
- Filters
- Precursors

VISCOSE

**Pure &
Hygienic**

Birla
pur^ocel[™] | **Viscose**
because we care

Purest viscose fibres for all hygienic nonwoven applications

These fibres have been manufactured under strict hygiene conditions complying with global hygiene standards making them suitable for all kinds of hygienic nonwoven applications. What's more, the finish given to these fibres is FDA compliant making their use extra safe for everyone. Applications made out of our Purocel viscose fibres are not just good for you but for mother nature as well, as these fibres are fully bio-degradable & compostable.

Distinct Advantages

- Global hygiene standard compliant
- FDA compliant finish
- Suitable for high speed processing with latest spunlacing technologies
- Denier – 1.5 D
- Cut Length Range – 25 to 60 mm
- Fully biodegradable & compostable

Applications

- Personal hygiene products
- Medical disposables
- Wet / Dry Wipes
- Industrial products like filters, substrates, etc.



SHORT-CUT

**Bio-safe &
Flushable**

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purocel[™]
because we care

Short-cut

Short length fibres for biofriendly flushable nonwovens and other applications

Short-cut fibres can be used to produce the nonwoven wipes that provides the fine balance between strength and dispersion. The fibres enable to make nonwoven wipes strong enough for product performance during use and at the same time be flushed down the toilet without the danger of clogging the sewer system and that are completely biodegradable.

Special application nonwovens or papers can also be made from these fibres, as the fibres help to balance the tear strength, porosity and other characteristics of the product.

Distinct Advantages

- Good and uniform dispersion in the slurry for wet laying
- Individual fibre strength to hold the short pulp fibres together in nonwovens
- Ability to lose short fibres when flushed, to fulfill flushability norms
- Biodegradable & compostable
- Fibres are available in cut length 8-12mm

Applications

- Moist toilet wipes
- Wet wipes
- Specialty papers
- Battery Separators
- Tea Bags



HYDROPHOBIC

Keeping
it dry,
Naturally



Hydrophobic

Biodegradable & compostable fibres for sustainable and environment friendly hygiene disposable products

Birla Purocel Hydrophobic is a viscose fibre with incorporated durable hydrophobicity based on covalently bound water repellent hydrocarbon chains to the fibres. It helps in creating nonwovens that keeps the user skin dry at the same time allowing fluids to get transferred to the absorbent core. Fibre remains biodegradable and compostable like regular viscose. The hydrophobic fibre is made by use of non-fluorinated and non silicon based chemicals which gives the contact angle with water of approximately 100°. This allows to make safer and environment friendly hygiene products with the requisite performance characteristics.

Distinct Advantages

- Hydrophobicity is retained in the product even after spunlacing
- Fibre feel is soft and similar to regular viscose
- This fibre can be used in 100% or in blends with other fibres
- Can be processed using spunlace and wetlaid technologies
- Biodegradable and compostable

Applications

- Hygiene products such as diapers
- Feminine hygiene
- Absorbent pads



FLAME RETARDANT

Keeping
the heat
Away

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purcel[™]
because we care

Flame Retardant

Inherent flame retardant fibres for mattress and upholstery products

Flame retardant property in nonwovens help in making the mattresses and upholstered furniture more safe for consumers at home and public places. However, topically treated nonwovens have chemicals which create challenges like toxic hazard. Inherent flame retardant fibres offer a complete solution for flame retardancy in mattresses to fulfill the specific requirements of CPSC 16CFR part : 1633 : US federal mattress flammability standard, in the form of nonwoven matt.

Distinct Advantages

- Inherent flame retardant property
- Builds-up a char layer avoiding oxygen flow, providing barrier against the heat source
- Biodegradable cellulosic fibres that do not melt or drip when burnt
- Denier Range - 3 Den to 4.6 Den/Cut Length - 51 or 60mm

Applications

- Mattress ticking
- Mattress backing
- Upholstered furniture



UNSHADES SPUNSHADES SPUNSHADES
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Spunshades

Inherently colored Cellulosic fibres for brilliant colored nonwoven wipes

Colored wipes can be produced by using color pigments on the surface of nonwovens. However, the surface pigments tend to leach more when used in wiping application. This challenge is overcome by using Spunshades- fibres that are dyed inherently during spinning stage itself called spundyed process. The dye pigments are deep embedded in fibres giving brilliant colors which is impossible to achieve otherwise. The color is not faded while in use, maintaining aesthetics of the wipe product.

Distinct Advantages

- Brilliant colors
- Widest range of shades
- Unmatched color depth
- Suitable for hygiene applications

Applications

- Surface cleaning wipes
- Mops
- Wet wipes

**Hygiene
begins
At home**



QUAT RELEASE

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Quat Release

Fibres created for effective cleaning and disinfecting in household and industrial environment

These speciality fibres have been infused with a quat release technology which enables easy & quick release of quats – quaternary ammonium compounds usually found in quat based deep cleaning disinfectants. The technology helps in higher amount of disinfectant (>85%) getting transferred to the target surface thus effectively cleaning hard surfaces of your household and industrial areas. Along with the deep cleaning, wipes made from Purocel fibres are bio-degradable compared to existing deep cleaning wipes made out of synthetic fibres. Due to its ability to hold more water, it offers better fluid management while offering soft feel inherent to viscose fibre.

Purocel QR can be used in blends with other fibres like polyester, polypropylene or standard viscose in disinfecting and surface cleaning wet wipes.

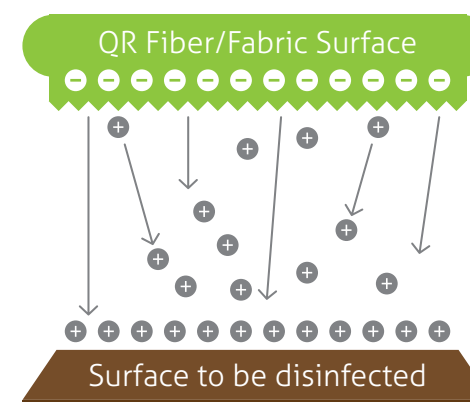
Distinct Advantages

- High percentage of free quat in disinfecting wipes
- Made of 95%+ renewable raw materials
- Soft hand-feel
- Homogenous distribution of lotion
- Compatible with spunlace and needle punch process

Applications

- Surface cleaning wipes

Efficient
cleaning,
Environment
Friendly.



PARTNERSHIPS

Long-term relationship-based approach with business partners

Dedicated team to execute special joint development programs with value chain partners

Partnerships for product testing and process perfection at the value chain / Partnerships for business development & marketing through Global Sales & Marketing Teams

**We work as
hard as our
partners
Because
we care**

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