
TECHNICAL DATA SHEET (TDS)

Product Name: Celligo Bio-Inserts

Product Type: Pre-assembled Core/Cloth with Multifunctional Biocomponents

Date of Issue: March, 2026

1. PRODUCT DESCRIPTION

Celligo Bio-inserts is a sustainable, "one-pack" raw material solution designed for high-efficiency absorption. It integrates antimicrobial protection and rapid fluid distribution using bio-based components.

2. MATERIAL COMPOSITION & FUNCTIONS

Functionality	Material
Gelation	Tapioca Starch Bio-SAP
Antimicrobial	Curcumin
Absorption Layer	Airlaid Paper
Constructive Adhesive	Starch-based
Distribution Layer	Cotton Gauze

3. TECHNICAL SPECIFICATIONS

- **GSM:** 300-350
- **Width:** 70 to 75 MM
- **Unwinding Length:** 420 - 450 Meters
- **Overall Diameter:** 700 to 750 MM
- **Net Roll Weight:** 12-13 Kg

4. KEY FEATURES

- **Sustainable Sourcing:** Entirely build from bio-based raw materials.
 - **Ready-to-Use:** Pre-assembled format for seamless integration into production.
 - **Natural Safety:** Utilizes Curcumin for its inherent antimicrobial properties.
-

CELLIGO NATURAL FIBRES PVT LTD,

Maraimalainagar, Chennai, Tamil Nadu,

Email: celligonaturalfibres@gmail.com



5. Absorption Performance

The Celligo Bio-insert is engineered for high fluid retention under pressure, ensuring the core remains effective during physical movement and use.

Centrifuge Retention Capacity (CRC) Centrifuge Method **11.99 g/g**

- **Performance:** The material successfully retains approximately **12 times** its own dry weight in fluid even after centrifugal force is applied.
- **Testing Authority:** The South India Textile Research Association (SITRA).

6. Antimicrobial Efficacy

Demonstrates superior protection against bacterial growth and associated odors, providing active hygiene throughout the product lifecycle.

Antibacterial Activity	<i>Staphylococcus aureus</i> (ATCC 6538)	6.41	Strong/Significant
Antibacterial Activity	<i>Klebsiella pneumoniae</i> (ATCC 4352)	6.40	Strong/Significant

- **Bacterial Growth Suppression:** Recorded negative growth values of **-5.41** and **-5.39** indicate an active reduction in the bacterial population over a 24-hour incubation period.
- **Standard Compliance:** Tested under **ISO 20743:2021** (Quantitative Absorption Method).

7. Chemical Safety & Toxicology

Certified as "toxic-free," the Bioinsert is free from restricted plasticizers, making it safe for prolonged contact with sensitive skin.

DBP, BBP, DEHP, DNOP, DINP, DIDP, DIBP	Not Detected (ND)	0.005%
Sum of Phthalates	Not Detected (ND)	0.005%

- **Safety Profile:** The material meets the safety requirements of **IS 9873 Part 6: 2021**, confirming it is free from detectable endocrine-disrupting phthalates.

Dr. Sabapathy S

CEO, Celligo Natural Fibres Pvt. Ltd.