Ronghao Co., Ltd.

BIO-BASED • BAMBOO REPLACES PLASTIC

BAMBOO FIBER MASTER-BATCH

Bamboo Fiber Biodegradable Masterbatch

Blown film • Injection • Thermoforming — for all three processes
Machine parameters provided to lower the barrier to entry

DIN CERTCO Certified | EN 13432 | Bio-based Carbon 97%

In Stock **Stable Supply**

+886 983-685-452 christopher.louw@ronghao.co www.ronghao.co





RONGHAO

COMPANY PROFILE

One material, three production lines

Made from natural bamboo, our in-house-developed bio-based, fully biodegradable masterbatch is suited to **blown film, injection molding and thermoforming**, and we provide machine parameter settings to lower the barrier to adoption.

Certified by DIN CERTCO and tested by Beta Analytic and other international labs. Meets the EN 13432 industrial composting requirements.

Blown film: shopping bags, trash bags, agricultural mulch film, mailer bags…
Injection molding: disposable cutlery, cup lids, toothbrushes, combs, part enclosures…
Thermoforming: food containers, food trays, electronics liners, cosmetic packaging…

- **2016** The team enters the polymer materials industry, starting from abrasion-resistant compounds for shoe outsoles
- **2023** Fully biodegradable material goes into mass production
- **2024** RONGHAO Co., Ltd. is founded in Taiwan, focusing on supplying bamboo fiber biodegradable masterbatch and technical support

0.98 g/cc
MASTERBATCH DENSITY
Low-density forming, good flow
27–38% more output than starch at the same weight

97 %
BIO-BASED CARBON CONTENT
Beta Analytic
Specialist carbon-14 testing lab

35 % ↑
ESG REPORTING
Bio-based carbon from bamboo
Useful data for ESG reports

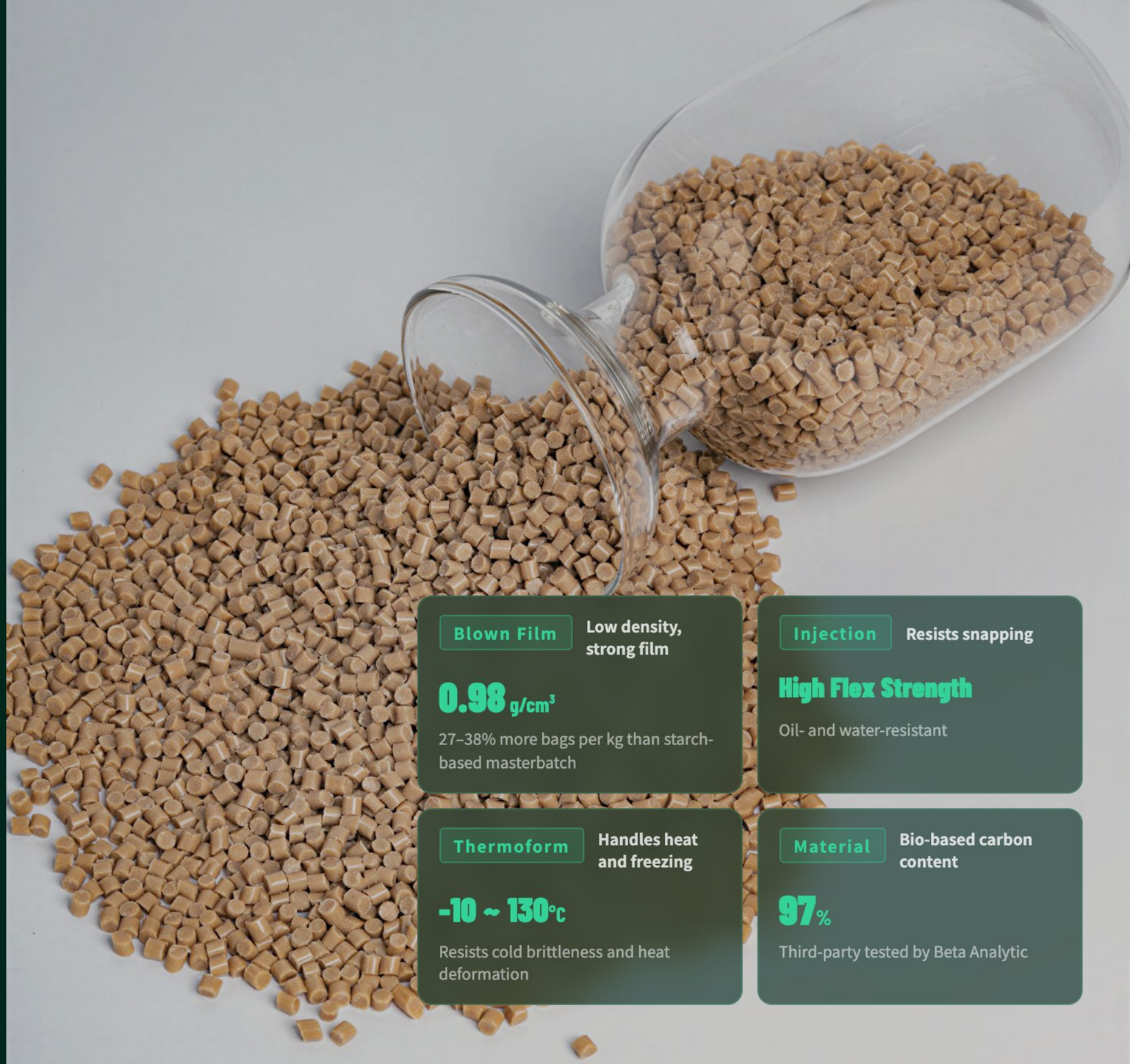
BAMBOO FIBER MASTERBATCH

Bamboo Fiber Biodegradable Masterbatch

A **pelletized raw material** blended from bamboo fiber, PBAT, and a trace amount of PLA for **blown film, injection molding, and thermoforming**, with no drying needed. We provide machine parameters to lower the barrier to entry.

It has a **natural matte look and fine hand-feel** while raising the bio-based content. It is biodegradable and certified by DIN CERTCO for industrial composting.

▸ We provide machine parameters and **support every stage, from samples and trial runs to mass production**.



Blown Film — Low density, strong film

0.98 g/cm³

27–38% more bags per kg than starch-based masterbatch

Injection — Resists snapping

High Flex Strength

Oil- and water-resistant

Thermoform — Handles heat and freezing

-10 ~ 130°C

Resists cold brittleness and heat deformation

Material — Bio-based carbon content

97%

Third-party tested by Beta Analytic

One Material, Three Processes

Specs matched to each process, with machine parameters provided



Blown Film

Film & Bags of All Kinds

- Shopping bags
- T-shirt bags
- Flat bags
- Mailer bags
- Zip bags
- Dog waste bags
- Bubble wrap
- Mulch film



Injection

Rigid Molded Products

- Disposable cutlery
- Cups
- Cup lids
- Toothbrushes
- Combs
- Enclosures
- Other injection parts



Thermoform

Sheet & Container Products

- Food containers
- Cups
- Cup lids
- Food trays
- Electronics inserts
- Cosmetic packaging
- Other thermoformed items

Bamboo Fiber vs Starch-based vs PLA

		Bamboo Fiber Masterbatch	Starch-based	PLA
	Pre-processing	✓ No drying needed	Hygroscopic — must dry before feeding	Must dry below 250ppm or it hydrolyzes
Blown Film	Density / yield per kg	**0.98** g/cm³ ↑ +27–38%	**1.25–1.35** g/cm³	**1.24** g/cm³
Blown Film	Film processability	✓ Blows smoothly, no powder shedding, better moisture resistance	Sheds powder if incompatible, less moisture-resistant	Unstable bubble, prone to blowouts, needs modification
Injection	Flexural strength	✓ Resists snapping when cut	Starch is inherently brittle, snaps easily	Brittle, barely bends before breaking
Injection	Oil resistance	✓ Oil-resistant, non-stick, easy to clean	Acceptable oil resistance, softens in water	Smooth surface, resists sticking
Thermoform	Heat resistance	✓ -10 to 130°C, freezer-ready	Softens with heat, brittle when cold	Softens above 60°C, not hot-food safe
Thermoform	Compression resistance	✓ Stable structure, stacks well	Insufficient strength, warps with moisture	Hard but brittle, cracks at stress points

Film Density Drives Cost per Bag

Resin is sold by weight, but bags are made by volume: 1 kg ÷ density = usable volume. The lower the density, the more bags you get

BAMBOO FIBER MASTERBATCH

Bamboo Fiber Masterbatch

0.98 g/cm³

1,000 g ÷ 0.98 = **1,020 cm³**

STARCH MASTERBATCH

Starch-based Masterbatch

1.30 g/cm³

1,000 g ÷ 1.30 = **769 cm³**

Starch density typically 1.25–1.35; midpoint used here

Volume comparison → bag-count gap

1,020 ÷ 769 = 1.33x

Extra yield per kg, bamboo fiber

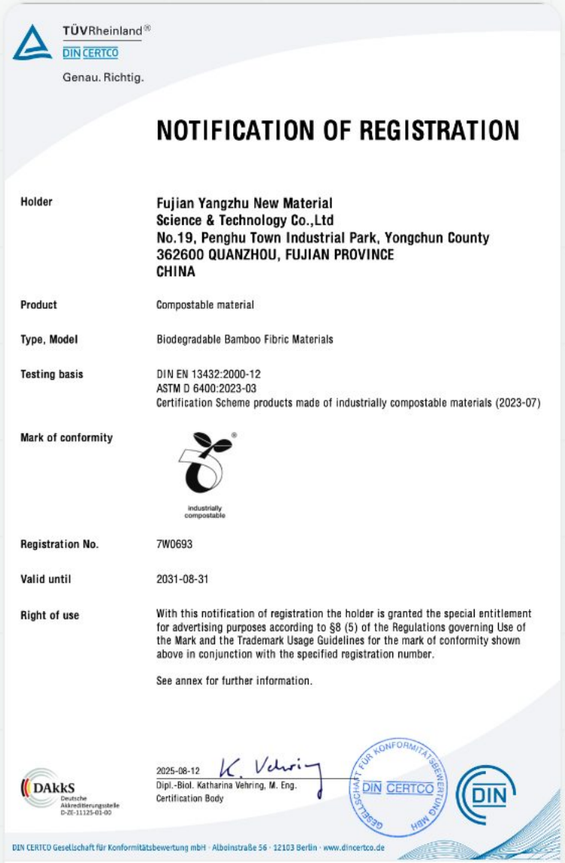
+33%

In other words: if starch-based resin makes **100 bags**, the same weight of bamboo fiber makes **133 bags**.

Lower density doesn't mean a weaker bag — our bags passed third-party load testing, so the cost per bag drops without giving up strength.

Backed by third-party certification and testing

A selection of our certificates and test reports — more documents available on request



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Genau. Richtig.

NOTIFICATION OF REGISTRATION

Holder	Fujian Yangzhu New Material Science & Technology Co.,Ltd No.19, Penghu Town Industrial Park, Yongchun County 362600 QUANZHOU, FUJIAN PROVINCE CHINA
Product	Compostable material
Type, Model	Biodegradable Bamboo Fibric Materials
Testing basis	DIN EN 13432:2000-12 ASTM D 6400:2023-03 Certification Scheme products made of industrially compostable materials (2023-07)
Mark of conformity	industrially compostable
Registration No.	7W0693
Valid until	2031-08-31
Right of use	With this notification of registration the holder is granted the special entitlement for advertising purposes according to §8 (5) of the Regulations governing Use of the Mark and the Trademark Usage Guidelines for the mark of conformity shown above in conjunction with the specified registration number. See annex for further information.

2025-08-12
Dipl.-Biol. Katharina Vehring, M. Eng.
Certification Body

DAkkS Deutsche Akkreditierungsstelle D-ZE-11125-01-00

DIN CERTCO Gesellschaft für Konformitätsbewertung mbH · Alboinstraße 56 · 12103 Berlin · www.dincertco.de

DIN CERTCO

Industrial composting certification

EN 13432 • Industrial Composting



SGS BETA

ISO/IEC 17025:2017-Accredited Testing Laboratory

Beta Analytic, LLC
4985 SW 74th Court
Miami, FL 33155 USA
Tel: (305) 667-5167
info@betalabservices.com

une 5, 2025

ai XiaoRong
ujian Yangzhu New Material Science & Technology Co., Ltd
o.19, Penghu Industrial Park,Yongchun County
uanzhou, Fujian 362000
hina

ear Lai XiaoRong,

lease find enclosed your radiocarbon (C14) report for the material recently submitted. The result is reported as "% iobased Carbon". This indicates the percentage carbon from "natural" (plant or animal by-product) sources versus ynthetic" (petrochemical) sources . For reference, 100 % Biobased Carbon indicates that a material is entirely ourced from plants or animal by-products and 0 % Biobased Carbon indicates that a material did not contain any arbon from plants or animal by-products. A value in between represents a mixture of natural and fossil sources.

he analytical measurement is cited as "percent modern carbon (pMC)". This is the percentage of C14 measured in e sample relative to a modern reference standard (NIST 4990C). The % Biobased Carbon content is calculated fror MC by applying a small adjustment factor for C14 in carbon dioxide in air today. It is important to note is that all ternationally recognized standards using C14 assume that the plant or biomass feedstocks were obtained from atural environments.

eported results are accredited to ISO/IEC 17025:2017 PJLA #59423 standards and all chemistry was performed ere in our laboratory and counted in our own accelerators in Miami, Florida.

he international standard method utilized for this analysis is cited under Summary of Results. The standard version sed is the latest available as of the date reported (unless otherwise noted). The report also indicates if the result is lative to total carbon (TC) or only total organic carbon (TOC). When interpreting the results, please consider any ommunications you may have had with us regarding the analysis. If you have any questions, please contact us. We elcome your inquiries.

incerely,

eneida Cernada
aboratory Management Group / IRMS / CRDS Instrument Manager

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Beta Analytic

Bio-based carbon content testing

Bio-based Carbon 97%



CTI 华测检测

MA 240020349784

ilac-MRA CNAS 中国认可 国际互认 检测 TESTING CNAS L1910

检测报告

报告编号 A2250098460101C 第 1 页 共 5 页

报告抬头公司名称 福建阳竹新材料科技有限公司
地 址 福建省永春县蓬壶镇工业园 19 号

以下测试之样品及样品信息由申请者提供并确认

样品名称	竹纤维全生物降解制品袋
样品接收日期	2025.02.24
样品检测日期	2025.02.24-2025.02.27

测试内容：
根据客户的申请要求，具体要求详见下一页。

朱丹丹
授权签字人
日 期 2025.02.27

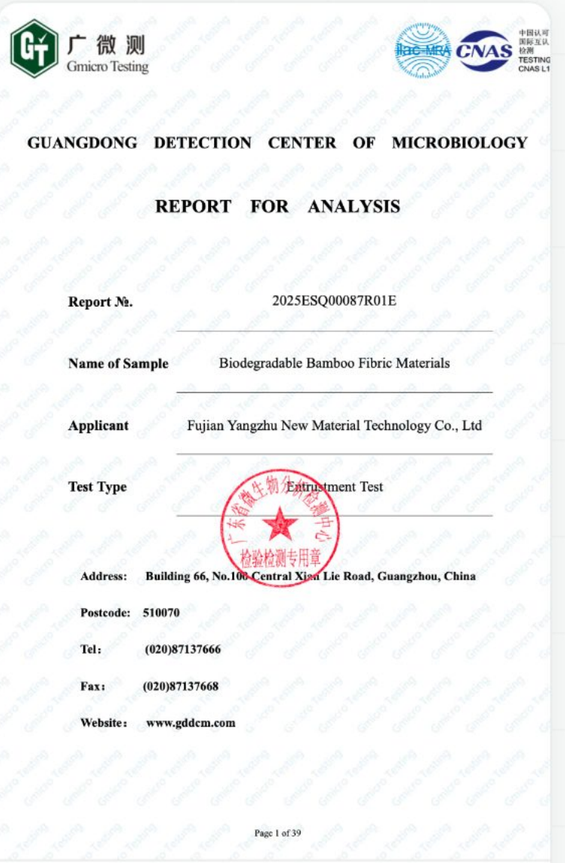
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GUANGDONG DETECTION CENTER OF MICROBIOLOGY

REPORT FOR ANALYSIS

Report №.	2025ESQ00087R01E
Name of Sample	Biodegradable Bamboo Fibric Materials
Applicant	Fujian Yangzhu New Material Technology Co., Ltd
Test Type	Entrustment Test

Address: Building 66, No.100 Central Xiao Lie Road, Guangzhou, China
Postcode: 510070
Tel: (020)87137666
Fax: (020)87137668
Website: www.gddcm.com

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