



Dongguan Boze LeatherCo., LTD

All kinds of PU, PVC and microfiber and other artificial leather materials professional production supplier! 15 years of production and marketing experience, the factory covers an area of 29,000 square meters, 5 production lines, more than 450 employees, the monthly output of 2,900,000 meters; With rich OEM/ODM production experience, DIOR, CK and other well-known brand suppliers



Bio-based (vegan leather) PU material

It is one of our main products!

01

Biological based materials are raw materials derived wholly or partly from biomass

Products produced from bio-based materials are bio-based products!

03

Our bio-based (vegan bark) PU material comes from bamboo, wood, corn, cactus, apple, grape, seaweed, pineapple

Etc. All kinds of plants and fruits.

02

We have the biological base USDA certificate and the material's biological base carbon content test report.

04

The carbon content of bio-based materials, we can do 10-80%. BETA laboratory uses C-14 to measure the % content of bio-based carbon.



The magical journey from Bamboo to Bamboo Fiber Bioleather.....

Biobased (vegan) PU leather

1. Plants and fruits from nature
2. Reduce carbon dioxide emissions 9
(* Produces an average of 1 ton of diols and emits 2.55 tons of carbon dioxide by biological method, a reduction of 62.3 percent.)
3. There will be no secondary damage to the environment due to waste incineration
4. Product waste can be converted into organic fertilizer, which helps plants grow
5. It is fully biodegradable
 - * Self-degradable in the natural environment
 - * In soil environment, it can be completely decomposed in about 300 days
 - * In Marine environments, complete decomposition occurs in about 900 days

VS

Ordinary PU leather

1. It is a by-product of petroleum
2. High carbon dioxide emission
(Average production of 1 ton of diol, according to the petroleum method of carbon dioxide emissions 5.28 tons)
3. Secondary damage to the environment due to waste incineration
Product waste can not be converted into organic fertilizer, damage the soil environment, harm the growth of plants
5. Can not be biodegradable, degradation time is long





The Magical Journey from Bamboo to Bamboo Fiber Bio-leather.....

Bamboo pulp fiber

Bamboo pulp fiber is then obtained by wet spinning

Bamboo Pulp

Make bamboo pulp suitable for spinning first

Bamboo fiber cloth

Bamboo pulp fibers can be made into non-woven fabrics and machine-woven fabrics



○ From Apple to Apple Plain PU Leather, an interesting story.....



Apple Biobase (vegan) PU leather

The raw material for apple leather, which is mainly processed from apple waste produced during food processing.

First of all, apple residue is collected by flour bags after people juice, and then a material processing plant, adding dyes and adhesives into the apple residue to develop a kind of apple leather that can replace the use of animal leather.

PU leather has been widely used in clothing, handbags, shoes and furniture decoration.





Bromelain PU leather



Pineapple (vegan) PU leather

Pineapple leaves discarded after harvest are collected and processed to produce pineapple leather that can be used as an alternative to animal leather.

The leaves left over after the pineapple is harvested are collected and the long fibers extracted from the leaves are washed, dried and purified to produce fuzzy-like fibers.

The pineapple leaf fiber is mixed with corn-based polylactic acid and processed into non-woven fabric by machinery to obtain the basic material of pineapple leather, and then shipped to leather factories to manufacture different series of leather raw materials according to different uses.



Certification

USDA Certified Certificate



Notice of Certification / Application ID: 11284

July 01, 2022

Lue Fang
Dongguan Boze Leather Co., Ltd
ShuerShang building 13 floor. Cuiyuan North Road Houjie Town
Dongguan City, 523955

Dear Lue Fang,

On behalf of the United States Department of Agriculture's (USDA's) BioPreferred® program, I am pleased to inform you that your application for use of the USDA Certified Biobased Product Label for Veganpine Bio Leather has been approved as of June 29, 2022. The test result for Veganpine Bio Leather indicates that its biobased content is 72%. According to your application, you may now use the Label on the product Veganpine Bio Leather.

The Label remains in effect as long as the product or package is manufactured and marketed in accordance with the approved application and requirements in the US Code of Federal Regulations Title 7§3202 Voluntary Labeling Program for Biobased Products unless one of the following conditions occurs:

1. Product or package reformulation: The product or package formulation of the certified product is changed such that the biobased content is reduced to a level below that reported in the approved application. When products have been reformulated, a new application for certification must be submitted in order to resume using the USDA Certified Biobased Product Label, and/or,
2. New minimum biobased content: USDA revises the minimum biobased content required for a product or package to be eligible to display the certification mark and the product or package does not meet the revised minimum. USDA will inform you that your certification is no longer valid. In this case, you must increase the biobased content of your product to be at or above the revised minimum and re-apply for certification within 60 days in order to continue to use the certification mark.

Please note that all certifications are subject to USDA's periodic auditing activities. You must read the BioPreferred Brand Guidelines and Graphic Standards document prior to [downloading label artwork](#) (eAuthentication login is required).

This email is your official notice of biobased product certification. Please print and save this email should you need to provide certification documentation to any entity.

The BioPreferred program looks forward to a long and successful partnership with you in the promotion of biobased products. If you have additional questions or would like further information, you may call the BioPreferred Program Information Line at (202) 643-3287 or email us at help@usdabiopreferred.net.

Sincerely,
USDA BioPreferred Program Staff

Report of Bio-based carbon content test for PU leather with bromelain content of 72%



Beta Analytic, Inc.
4985 SW 74th Court
Miami, FL 33155 USA
Tel: 305-667-5167
Fax: 305-663-0964
info@betalabservices.com

ISO/IEC 17025:2017-Accredited Testing Laboratory

June 25, 2022

Lue Fang
Dongguan Boze Leather Co., Ltd
ShuerShang building 13 floor
Cuiyuan North Road Houjie Town
Dongguan
Guangdong, 523000
China
Dear Miss Fang

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

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

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

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

Sincerely,

Ronald E. Hatfield President



Beta Analytic, Inc.
4985 SW 74th Court
Miami, FL 33155 USA
Tel: 305-667-5167
Fax: 305-663-0964
info@betalabservices.com

ISO/IEC 17025:2017-Accredited Testing Laboratory

Summary of Results - % Biobased Carbon Content
ASTM D6866-22 Method B (AMS) TOC

Certificate Number: 519721630750130093
Validation:

Submitter	Lue Fang
Company	Dongguan Boze Leather Co., Ltd
Date Received	June 17, 2022
Date Reported	June 25, 2022
Submitter Label	Veganpine bio leather / (USDA Application# 11284)

RESULT: 72 % Biobased Carbon Content (as a fraction of total organic carbon)

Laboratory Number	Beta-630750
Percent modern carbon (pMC)	72.14 +/- 0.22 pMC
Atmospheric adjustment factor (REF)	100.0; = pMC/1.000



Package received - labeling COC



View of content




13.0mg analyzed (1mm x 1mm scale)

Disclosures: All work was done at Beta Analytic in its own chemistry lab and AMSs. No subcontractors were used. Beta's chemistry laboratory and AMS do not react or measure artificial C 14 used in biomedical and environmental AMS studies. Beta is a C14 tracer-free facility. Validating quality assurance is verified with a Quality Assurance report posted separately to the web library containing the PDF downloadable copy of this report.


Precision on the RESULT is cited as +/- 3% (absolute). The cited precision on the analytical measure (pMC) is 1 sigma (1 relative standard deviation). The reported result only applies to the analyzed material. The accuracy of the RESULT relies on the measured carbon in the analyzed material having been in recent equilibrium with CO2 in the air and/or from fossil carbon (more than 40,000 years old) such as petroleum or coal. The RESULT only applies to relative carbon content, not to relative mass content. The RESULT is calculated by adjusting pMC by the applicable "Atmospheric adjustment factor (REF)" cited in this report.



Hydrolysis Resistance Test Report



Query URLs:
<http://www.sst-test.com>
 Security Code:3568641747



TEST REPORT

No.:SST23002162 Date: 2023-05-31 Page 1of3

Applicant: BOZE LEATHER CO.,LTD
Address: FLOOR 13,SHUER BUSINESS BUILDING,NO.9,QINGCAIYUAN,CUIYUAN NORTH ROAD,HETIAN,DONGGUAN CITY
Report on the submitted sample said to be:
Material description: BIO PU

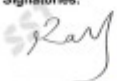
Style/ Model No.:	N/A	P/O No./ Lot No.:	N/A
Order No.:	N/A	Material:	N/A
Color:	N/A	Test Request Age:	N/A
Manufactory:	N/A	Buyer:	N/A
Country of Origin:	N/A	Country of Export:	N/A


Sample received date: May 30,2023
Sample test period: From May 30,2023 to May 31,2023

SUMMARY OF TEST RESULT(S)

Test Item(s)	Conclusion	Remark
Alkaline hydrolysis resistance test	--	See Next Page


*****FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S)*****

Signatories:

 Ray
 Lab Manager




Hotline: 0769-85584050
 Sharp Standard Testing Technology Co., Ltd

No.96 Houjie Road East, HoujieTown, DongGuan, Guangdong,China
 Mail:sst@sst-test.com Tel: 86-769-85584050 Fax: 86-769-89226586



Query URLs:
<http://www.sst-test.com>
 Security Code:3568641747



TEST REPORT

No.:SST23002162 Date: 2023-05-31 Page 2of3

Test Item (Unit)	Test Method (parameter)	Requirement (Remark)	Test Result	Conclusion
Alkaline hydrolysis resistance test	IN HOUSE METHOD (NaOH concentration:10%, Time: 24h)	--	No change on color andsize; No crack and loss.	--
Remark		(This Blank)		

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 Sharp Standard Testing Technology Co., Ltd

No.96 Houjie Road East, HoujieTown, DongGuan, Guangdong,China
 Mail:sst@sst-test.com Tel: 86-769-85584050 Fax: 86-769-89226586



Query URLs:
<http://www.sst-test.com>
 Security Code:3568641747



TEST REPORT

No.:SST23002162 Date: 2023-05-31 Page 3of3

Photograph of Sample



002162

*** End of Report ***

The test report is considered invalidated without both signature and specialized stamp. The result(s) shown in this test report refer only to the sample(s) tested. Without written approval of SST, this test report shall not be copied except in full. Detailed description are available at the website <http://www.sst-test.com>.

Hotline: 0769-85584050
 Sharp Standard Testing Technology Co., Ltd

No.96 Houjie Road East, HoujieTown, DongGuan, Guangdong,China
 Mail:sst@sst-test.com Tel: 86-769-85584050 Fax: 86-769-89226586

Product description of our Bio-based (vegan) PU material

 产品说明 (Description Of Material)				
中文	English			
产品编号	BZ-NH0522-01 黑色	Item No.	BZ-NH0522-01 Black	
产品名称	生物基PU材料	Name	Bio-Based Vegan PU Leather	
产品幅宽*厚度	52" 1.2mm+/-0.05mm	Width*Thickness	52" 1.2mm+/-0.05mm	
主要成分	生物基碳成分66%+34%PU	Main Ingredient	Bio-Based Carbon 66% + 34% PU Resin	
适用范围	鞋子, 手袋及其它产品	Main Application	Shoes, Bags and other products	
环保标准	环保项目	数值	Testing Items	Results
	含铅量	<90PPM	Lead	<90PPM
	含镉量	≤75PPM	Cadmium	≤75PPM
	甲醛	≤75PPM	Formaldehyde	≤75PPM
	偶氮染料	≤30PPM	AZO Dyes	≤30PPM
	有机锡化合物	≤1PPM	Organotin compound	≤1PPM
	苯酚	<5PPM	Phenol	<5PPM
	六价铬	<3PPM	Hexavalent Chromium	<3PPM
	分散染料	不被检测到	Disperse Dyes	ND
	富马酸二甲酯	<0.1PPM	DMFU	<0.1PPM
	短链氯化石蜡	<1000PPM	Short chain chlorinated paraffins	<1000PPM
	邻苯二甲酸盐	16P总和<1000PPM	Phthalates	Total 16P<1000PPM
	多环芳香烃	符合国际标准	PAH	Comply with International standards
	八大重金属检测	符合国际标准	Heavy Metals:EN71-3	Comply with International standards
物性标准	美国加州65项	符合国际标准	CA Prop 65	Comply with International standards
	剥离强度(纬向&经向)	2.5-3.0 KG ± 0.3KG /3CM	Peeling Strength (Zonal & Meridional)	2.5-3.0 KG ± 0.3KG /3CM
	撕裂强度(纬向&经向)	1.0-1.8 kgf	Tearing Strength (Zonal & Meridional)	1.0-1.8 kgf
	耐磨强度	CS-10#砂轮750g砝码, 1200转	Abrasion Resistance	CS-10#, 750, 1200R
	湿擦	4-5级	Wet Wipe Strength	4-5 grade
	干擦	4-5级	Dry Wipe Strength	4-5 grade



○ About our bio-based (vegan) PU leather material

1. Specifications

0.6mm, 0.8mm, 1.0mm, 1.2mm, 1.5mm and other thickness required by guests; 52 "or 27" widths.

2. Biobasesources

Bamboo, wood, corn, apples, pineapples, grapes, seaweed and other plants and fruits required by guests.

3. Biological based carbon content

10% to 80% There is no 100% biobased (vegan) P leather. For quality and durability of the material, a biobased carbon content of around 60% is optimal. No one wants to substitute durability for sustainability in pursuit of a high biobased percentage.

4. Low PU cloth

Non-woven cloth bottoms and woven cloth bottoms

5. Deliverydate

There are spot materials 2-3 days new development materials 7-10 days bulk materials 15-20 days

6. MOQ

a) The materials on our color cards are mostly in stock cloth, which requires a minimum order of 300 yards per color/grain. If the quantity is less than this, we can inform you of the specific order quantity. We can solve the problem of MOQ by increasing the code fee or changing the width of the material.
b) If it is brand new bio-based (plain leather) PU material (including thickness, bio-based source and carbon content), it needs to order bass, which requires an order quantity of 2000 meters.

7. Wayofpackaging

Roll packing, plastic bag packing. 40-50 yards per roll, depending on thickness

Color card



Number: BZ-NH0502
Product Name: Fine line Bio-based (plain) PU leather
Specification: 0.6mm X 52 "(non-woven cloth base)
Ingredients: 51%Bio+49% PU
Features: Soft feel, wear resistance and tear resistance
Applications: Shoes, handbags, notebook covers, mobile phone cases and other products



No. : BZ-NH0503
Product Name: Fine line Bio-based (plain) PU leather
Specification: 0.6mm X 52 "(non-woven cloth base)
Ingredients: 51%Bio+49% PU
Features: Soft feel, wear resistance and tear resistance
Applications: Shoes, handbags, notebook covers, mobile phone cases and other products

Color card



Number: BZ-NH0535
Product Name: Little lychee pattern Bio-based (plain skin) PU leather
Specification: 0.6mm X 52 "(machine-woven base)
Ingredients: 45-65%Bio+34% PU
Features: Soft to the touch, wear and tear resistant
Uses: Shoes, handbags, clothing, leather pants and other products



No.: BZ-NH0540
Product Name: Small lychee pattern bio-based (plain skin) leather
Specification: 1.0mm X 52 "(machine-woven base)
Ingredients: 45-65%Bio+34% PU
Features: Soft to the touch, wear and tear resistant
Uses: Shoes, handbags, clothing and other products

Color card



Number: BZ-NH0542

Product name: braided bio-based (plain) PU leather

Specification: 1.0mm X 52 "(non-woven fabric base)

Ingredients: 55-65%Bio+34% PU

Features: Imitation braid embossed, three-dimensional clear grain, feel soft, wear-resistant, tear resistant

There are multiple three-dimensional embossed version to choose from

Uses: Shoes, handbags and other products



No. : BZ-NH0543

Product name: Water Ripple Bio-based (plain) PU leather

Specification: 1.0mm X 52 "(non-woven cloth base)

Ingredients: 55-65%Bio+34% PU

Features: Imitation water ripple embossing, clear three-dimensional pattern, soft feel, wear resistance, tear resistance

There are multi - dimensional embossed grain version to choose from

Uses: Shoes, handbags and other products

Color cards



Number: BZ-NH0522
Product Name: Fine stripe Bio-based (plain) PU leather
Specification: 1.2mm X 52 "(non-woven fabric base)
Ingredients: 55-65%Bio+34% PU
Features: Wear resistance, tear resistance
Uses: Shoes, handbags and other products



No. : BZ-NH0532
Product name: Classic cross stripe Bio-based (plain) PU leather
Specification: 1.2mm X 52 "(non-woven fabric base)
Ingredients: 55-65%Bio+34% PU
Features: Wear resistance, tear resistance
Uses: Shoes, handbags, belts and other products



BOZE LEATHER

Dongguan Boze Leather Co. LTD

For a deeper understanding of our bio-based (vegan) PU materials, please feel free to contact us!

**ADD: 11th Floor, Shurshang Business Building, Hetian Cuiyuan North Road,
Houjie Town, Dongguan City, Guangdong Province, 523945**

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Contact: lisa (+86 13925513979)

Email: lisa@cignoleather.com

Website: <http://www.bozeleather.com>