



# Sun Meadow™

A New Material Made from Leather Waste



Sun Meadow™



ISA nextgenmaterials

ISA INDUSTRIAL LTD. MACAU (CHINA) | USA | VIETNAM | CHINA | HONG KONG (CHINA) [www.isanextgenmaterials.com](http://www.isanextgenmaterials.com)



LITE



# Transforming Waste into Opportunity

At ISA, we are pioneering a solution to one of the industry's biggest challenges. Every year millions tons of solid leather waste (wet blue shavings, offcuts & scraps) are generated by tanneries, shoe and handbag factories destined for landfills.

Our innovative process diverts this waste and transforms it into a high quality, upcycled material. This breakthrough presents a unique opportunity for brands to enhance their sustainability story and connect with eco-conscious consumers.



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# Vision for the Future

**TODAY:** ISA is currently upcycling wet blue shaving waste in our China tannery location into the innovative Sun Meadow 1100 material. Our product is perfect for use in footwear or accessories, pieced patterns and outdoor footwear mud guards.

**TOMORROW:** We will expand our development to include shoe factory offcuts and scrap in Vietnam. This expansion is more than just growth, it's about creating a sustainable, verified circular supply chain that benefits all stakeholders.

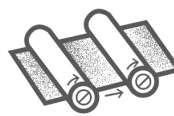
Brands utilizing leather can be part of the sustainability journey, buying repurposed waste from the shoe production supply chain.



Sun Meadow 1100

# Process Steps

- Collect wet blue shavings or leather offcuts & scrap for upcycling into Sun Meadow.
- Sun Meadow incorporates up to 30% leather waste, previously destined for landfill.
- Offers a unique circular story for leather using brands to boost sustainability approach.



## Collection and Sorting

Collect wet blue shavings or leather offcuts & scraps and sort by color/type.

## Mechanical Processing

Shred & mill the sorted material into a fine powdered form.

## Blending

Mix the powdered leather with proprietary rubber blend.

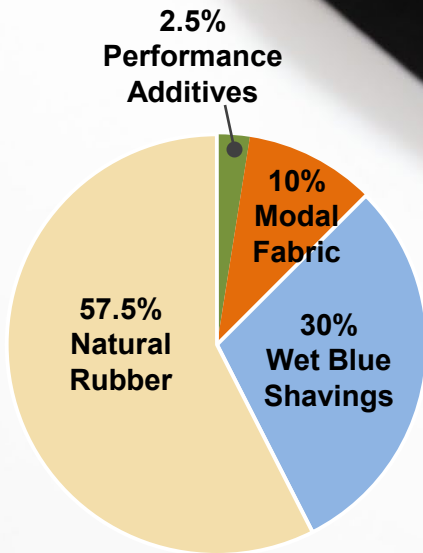
## Forming

Press the blended material into sheets.

## New Products

Finished product for use in footwear and accessories.





### Sun Meadow 1100 components

Wet Blue Shavings - diverted from landfill

Natural Rubber - from a renewable source and vulcanized

Modal - made from reconstituted beech tree cellulose

# Order Information for Sun Meadow 1100



## Content

30% Leather Waste,  
Natural Rubber & Modal  
fabric for structure



## Thickness

1.2-1.4mm or  
1.8-2.0mm



## Colors

Black only



## Price

\$1.85 per sqf



## Size

1 sqm  
100% cuttable area





# Sun Meadow 1100 Spec

Test Code	001	A0	Date	8/28/23	End User	ALL
Product Name	Sun Meadow 1100			Color	BLACK	
ID	Property / Description	Test Method	Units	Requirement		
12	THICKNESS OF LEATHER AND INSOLE MATERIALS	SATRA TM1	mm	1.6 - 2.0		
634	WEIGHT	ISA	g/m2	2,000 +/- 300		
816	TENSILE PROPERTIES OF PLASTIC AND RUBBERS - BREAKING STRENGTH	SATRA TM 137	kgf/cm2	min. 40		
817	TENSILE PROPERTIES OF PLASTIC AND RUBBERS - EXTENSION AT BREAK	SATRA TM 137	%	min. 200		
818	TEAR STRENGTH OF RUBBERS AND PLASTICS - TROUSER METHOD	SATRA TM 218	N/mm	min. 35		
274	VAMP FLEX - DRY	SATRA TM25	CYCLE	500,000 cycles - not worse than slight crack		
133	ABRASION RESISTANCE - TABER METHOD	SATRA TM163	SCALE RATING	H-18 / 500 g / 200 cycles No wear through textile to rubber		
4	CROCKMETER TEST - DRY	SATRA TM167	GSS RATING	min. 4		
5	CROCKMETER TEST - WET	SATRA TM167	GSS RATING	min. 2		

- Harmonized Tariff Code: 5906.91.2000
- Rubberized textile fabric, not adhesive tape, knitted, of man-made fibers

# Certification

## RSL Test Report

Test Report No. 64.441.23.5562.01  
 Dated: 2023-06-30



Applicant: ISA Industrial Ltd  
 Address: 22nd Floor, Tai Yau Building, 181 Johnston Road, Wanchai, Hong Kong  
 Contact Person: AJJ/Abel/Eling

Sample Description: Sunmeadow/Black/SM-ND008  
 End Use: Footwear  
 Colour: Black

Sample Receive Date: 2023-06-19  
 Test Period: From 2023-06-19 to 2023-06-29

Sample submitted: The sample(s) was (were) submitted by applicant and identified.

Test result(s): Refer to the Section 3



Note:  
 (1) The TÜV SÜD Certification and Testing (China) Co., Ltd. "General Terms & Conditions" applied.  
 Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production.  
 For further details, please see "Testing and certification regulations", chapter 4.3.4  
 For full Contents in English, please visit: [http://www.tuv.sud.com.cn/zh/eng/terms\\_and\\_conditions\\_en](http://www.tuv.sud.com.cn/zh/eng/terms_and_conditions_en)  
 (2) The results relate only to the items tested.  
 (3) The test reports shall not be reproduced except in full without the written approval of the laboratory.  
 (4) This report is for customer's internal use and reference only, such as internal scientific research, education, quality control, product improvement.  
 Laboratory: TÜV SÜD Certification and Testing (China) Co., Ltd. Phone: +86 592 7706188 Regd. Office: TÜV SÜD Certification and Testing (China) Co., Ltd., Xiamen Branch, Unit 401 No.53 Hall Industrial Park, Meizi Road, Tong'an District, Xiamen 361100 P. R. China Fax: +86 592 7706288 Email: report.softlines@tuv.sud.com www.tuv.sud.com Xiamen Branch, Unit 401 No.53 Hall Industrial Park, Meizi Road, Tong'an District, Xiamen 361100 P. R. China Fax: +86 592 7706288 Email: report.softlines@tuv.sud.com www.tuv.sud.com Form No.: TC\_XMH\_F\_34.04 E Rev. A/D Effective Date: 2015-03-23 Page 1 of 13

Test Report No. 64.441.23.5562.01  
 Dated: 2023-06-30



1. Description of the test subject:

Sample	Description	Photo
001	Black leather, rubber and synthetic fibers	



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Test Report No. 64.441.23.5562.01  
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2. Conclusion:

No.	Test Parameter(s)	Conclusion*
(1)	pH Value Test	Pass
(2)	Alkylphenols (APs) and Alkylphenol Ethoxylates (APEOs) Content Test	Pass
(3)	Azo-amines and Arylamine Salts Test	Pass
(4)	Sisphenols Content Test	Pass
(5)	Chlorinated Paraffins (SCCP & MCCP) Content Test	Pass
(6)	Formaldehyde Content Test	Pass
(7)	Chromium VI Content Test After Aging	Pass
(8)	Extractable Heavy Metals Test	Pass
(9)	Total Arsenic Content Test	Pass
(10)	Total Cadmium Content Test	Pass
(11)	Total Mercury Content Test	Pass
(12)	Total Lead Content Test	Pass
(13)	Styrene Monomer Content Test	Pass
(14)	Vinyl Chloride Monomer Content Test	Pass
(15)	N-nitrosamines Content Test	Pass
(16)	Organotin Compounds Test	Pass
(17)	Perfluorinated and Polyfluorinated Chemicals (PFCs) Content Test	Pass
(18)	Phthalates Content Test	Pass
(19)	Polycyclic Aromatic Hydrocarbons (PAHs) Content Test	Pass
(20)	UV-Stabilizer Test	Pass
(21)	Volatile Organic Compounds (VOCs) Test	Pass

Note: Pass= Meet Requirement Preliminary Fail (separate tests are recommended) Fail= Below Requirement  
 #= No Comment - = Did Not Perform  
 N/A = Not Applicable N/C = Not Conducted (due to insufficient sample)

Remark: (1) The results relate only to the items tested (2) Samples are tested as received (3) "" denotes conclusion was drawn according to the client's specification (4) Results of quantitative chemical analysis are reported with two significant figures unless otherwise stated (5) The limit is not applicable to composite sample(s) in result section

Disclaimer: Measurement Uncertainty.  
 Unless otherwise agreed upon, Pass or Fail verdicts are given based on the measured values without any considerations of measurement uncertainties. Please note, every test method has a measurement uncertainty which has been evaluated by the laboratory according to ISO/IEC 17025 requirements. By taking measurement uncertainties into account it might happen that measured values can neither be assessed as PASS nor as FAIL.

TÜV SÜD Certification and Testing (China) Co., Ltd. Xiamen Branch

Approved by:

*Nemo*

Nemo Chen  
 Softlines Department

Laboratory: TÜV SÜD Certification and Testing (China) Co., Ltd. Phone: +86 592 7706188 Regd. Office: TÜV SÜD Certification and Testing (China) Co., Ltd., Xiamen Branch, Unit 401 No.53 Hall Industrial Park, Meizi Road, Tong'an District, Xiamen 361100 P. R. China Fax: +86 592 7706288 Email: report.softlines@tuv.sud.com www.tuv.sud.com Xiamen Branch, Unit 401 No.53 Hall Industrial Park, Meizi Road, Tong'an District, Xiamen 361100 P. R. China Fax: +86 592 7706288 Email: report.softlines@tuv.sud.com www.tuv.sud.com Form No.: TC\_XMH\_F\_34.04 E Rev. A/D Effective Date: 2015-03-23 Page 3 of 13

\*Certification Deck available upon request



# Certification

## 3rd Party Biobased Certification



**Beta Analytic**  
TESTING LABORATORY

Beta Analytic, Inc.  
4985 SW 74<sup>th</sup> Court  
Miami, FL 33155 USA  
Tel: 305-667-8167  
Fax: 305-663-8966  
info@betalabservices.com

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ISO/IEC 17025:2017 Accredited Testing Laboratory

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

**Certificate Number:** 645498658087137354  
**Validation:** 

---

<b>Submitter</b>	Wenbo Liu
<b>Company</b>	Jiashen TianToc Leather Co., Ltd.
<b>Date Received</b>	February 1st, 2023
<b>Date Reported</b>	February 22, 2023
<b>Submitter Label</b>	N0006

**RESULT:** 80 % Biobased Carbon Content (as a fraction of total organic carbon)

---

<b>Laboratory Number</b>	Beta-666057
<b>Percent modern carbon (pMC)</b>	79.83 ± 0.24 pMC
<b>Atmospheric adjustment factor (REF)</b>	100.0 ± pMC(1.000)



Package received, labeling visible



View of substrate (1cm x 1cm scale)




Testing performed (1cm x 1cm scale)

Disclaimer: All work was done at Beta Analytic in its own chemistry lab and AMS. No subcontractors were used. Beta's chemistry laboratory uses AMS do not react or incorporate artificial C-14 used in biotests and conventional AMS studies. Beta is a C-14 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 ± 0.3% (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 CO<sub>2</sub> in the air (rather than 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.

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
**Beta Analytic**  
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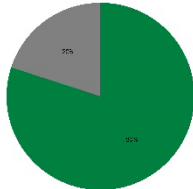
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<b>Percent modern carbon (pMC)</b>	79.83 ± 0.24 pMC
<b>Atmospheric adjustment factor (REF)</b>	100.0 ± pMC(1.000)



	Biobased Carbon
	Fossil Carbon

Precision on the RESULT is cited as ± 0.3% (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 CO<sub>2</sub> in the air (rather than 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.

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ISO/IEC 17025:2017 Accredited Testing Laboratory

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

**Explanation of Results**

This result was obtained using the radiocarbon isotopes (also known as Carbon-14, C14 or 14C), a naturally occurring isotope of carbon that is radioactive and decays in such a way that there is none left after about 45,000 years following the death of a plant or animal. Its most common use is radiocarbon dating by archaeologists. An industrial application was also developed to determine if consumer products and CO<sub>2</sub> emissions were sourced from plants/biomass or from materials such as petroleum or coal (fossil-based). By 2003 there was growing demand for a standardized methodology for applying Carbon-14 testing within the regulatory environment. The first of these standards was ASTM D6866-04, which was written with the assistance of Beta Analytic. Since ASTM was largely viewed as a US standard, European stakeholders soon began demanding an equivalent CEI standard while global stakeholders called for ISO standardization.

The analytical procedures for measuring radiocarbon content using the different standards are identical. The only difference is the reporting format. Results are usually reported using the standardized terminology "biobased carbon". Only ASTM D6866 uses the term "biogenic carbon" when the result represents all carbon present (Total Carbon) rather than just the organic carbon (Total Organic Carbon). The terms "biobased carbon" and "biogenic carbon" are now the standard units in regulatory and industrial applications, replacing absolute units of measure historically reported by radiocarbon dating laboratories (e.g. disintegrations per minute per gram (dpm/g) or radiocarbon age).

The result was obtained by measuring the ratio of radiocarbon in the material relative to a National Institute of Standards and Technology (NIST) modern reference standard (SRM 4990C). This ratio was calculated as a percentage and is reported as percent modern carbon (pMC). The value obtained relative to the NIST standard is normalized to the year 1950 AD so an adjustment was required to calculate a carbon source value relative to today. This factor is listed on the report sheet as the terminology "REF".

Interpretation and application of the results is straightforward. A value of 100% biobased or biogenic carbon would indicate that 100% of the carbon came from plants or animal by-products (biomass) living in the natural environment and a value of 0% would mean that all of the carbon was derived from petrochemical, coal and other fossil sources. A value between 0-100% would indicate a mixture. The higher the value, the greater the proportion of naturally sourced components in the material.

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\*Certification Deck available upon request

# Certification

## Rubber Certification & Modal Fabric Certification

Certificate SGSHK-COC-300178

The Organization  
**Dongguan G-LUN Rubber & Plastic Co., Ltd.**

1309 Room, 44 Building, One Mall, Central Wealth District, #220 Hong Fu Road, Nanchang, Dongguan, 523001, CHINA

has been assessed and certified as meeting the requirements of  
**FSC™ Chain-of-Custody**

The company was assessed against the following standards:  
FSC-STD-40-004 V3-1: Chain of Custody Certification  
FSC-STD-40-003 V2-1: Chain of Custody Certification of Multiple Sites – November 2014  
FSC-STD-40-001: Requirements for use of the FSC trademarks by Certificate Holders

for the products detailed in the scope below:  
Purchase FSC 100% natural rubber, production, warehousing and sales of FSC 100% natural gums, resins, oils and derivatives (Transfer System)

This certificate is valid from 13 April 2023 until 13 December 2024 and remains valid subject to satisfactory surveillance audits.  
Issue 2. Certified since 16 December 2019

This is a multi-site certification. Additional site details are listed on the subsequent page.


Authorized by  
Dai Teng  
SGS Hong Kong Limited  
Units 302 & 306, 3/F, Building 22E, Phase 2, Hong Kong Science Park, New Territories, Hong Kong  
T: +852 2353 6811 | www.sgs.com

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Innovative by nature

HESHAN BLANKE TEXTILE LTD.  
VINCENT ZHAO  
POLYESTER  
ZONGSHI, BEICHANG, HESHAN, LANGMEN, GUANGDONG PROVINCE, CHINA

Lenzing (China) Hong Kong Ltd.  
Unit 507, 5/F, 8th, West, 12th Street,  
2/Fung Wo Street, Kowloon, Kowloon, Hong  
Kong  
www.lenzing.com

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電話: +852 21 93 000  
傳真: +852 21 93 000  
E-mail: certificate\_hk@lenzing.com  
日期: 1985年9月24日

Company name and address in local language:  
公司名稱及地址(中文): 赫山布蘭克(中國)有限公司  
地址: 廣東省龍門鎮北涌村

**Certification Confirmation Letter**  
一级认证证明确认函  
In reference to application ID: APPL2320968  
申請號 APPL2320968

We hereby issue the Lenzing Certification for:  
茲將以下產品予以一级认证证明确认:

Company 公司	HESHAN BLANKE TEXTILE LTD.
---------------	----------------------------

Product Specification according to the Application:  
申請產品規格:

Article name 產品名稱	Article No.: 30059
Product name 產品名稱 (中文)	Order No.: 20233010 20232070 Article No.: 72530017
Claimed Composition / 宣称成分	LENZING® Modal 95% Liaslane / Spandex / Polyurethane 5%
Claimed Finishing State / 宣称 finishing 状态	Finished / 已完工
Claimed Product type / 宣称产品类型	Knit T-shirt
Claimed fabric construction / 宣称 fabric 构造	Single jersey / 单上T恤
Claimed Fabric weight /	135 gm²

Page 1 of 2

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# Certification

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Allergen Test

We have tested our products with Dermatest



\*Certification Deck available upon request