

COSM

AHEAD OF THE CURVE



COSMTM

Creation of Sustainable Materials

The Future is Now

January 2023



litecosm.com

Why COSM™ ?

Our DNA

Sustainability and responsible manufacturing processes have been at the core of our business model since LITE's inception in 2003. We built on this foundation with a separate division, COSM™, to further explore biobased materials. COSM™ focuses on the development and production of new sustainable materials.

Our Commitment

1. Utilize **plant based** materials which are **biodegradable**
2. Ability to **replace petrochemical** based synthetics
3. Production of COSM™ materials with **circularity** in mind

Your Benefits

Reducing your brand's use of petro-based chemicals is not the only reason to choose one of our biobased COSM™ materials. We offer the same infrastructure for our biobased materials as our full grain leather division. Our COSM™ materials are fully scalable for production in a wide range of color and weight options. We always offer **Quality, Reliability, Compliance, Service.**



Havea tree used to make natural rubber.

Why Choose COSM™ ?

- High biobased content which can meet the necessary specs for footwear
- Currently in production and at retail for major global footwear brands
- Existing service infrastructure set up to aid both brands and factories
- Established, long-term factory relationships
- Pricing structure that is achievable and attractive for large scale projects

FSC tree plantation tapped for natural rubber.

The **Elephant** in the Room



The term “Vegan Leather” which is an oxymoron itself has increased in popularity. Many of those materials are advertised as environmentally friendly. However, these contain plastics. In contrast to genuine leather, vegan leather is one of the biggest threats to our planet. As an alternative to petro-based vegan leathers, our COSM™ materials offer another option to materials that can cause harm to our ecosystem.

Features

COSM™ Features

- **USDA Certified Biobased**

The plant based components in our COSM™ materials are completely natural and allow the product to be classified as bio-based. The biobased content has been 3rd party certified by the USDA. Documentation in progress.

**biobased content varies by article*

- **Regenerative**

The regenerated cellulosic fibers are certified according to Oeko-Tex and TUV Austria OK scheme for biodegradability in soil, water and marine environments.

- **Biodegradable**

All natural components of our COSM™ Materials have been carefully selected in order to achieve biodegradability.

- **FSC Certified**

All natural rubber, pulp & fiber units are Forest Stewardship Council certified with leading sustainable forestry practices stressing responsible sourcing of raw material from forests.



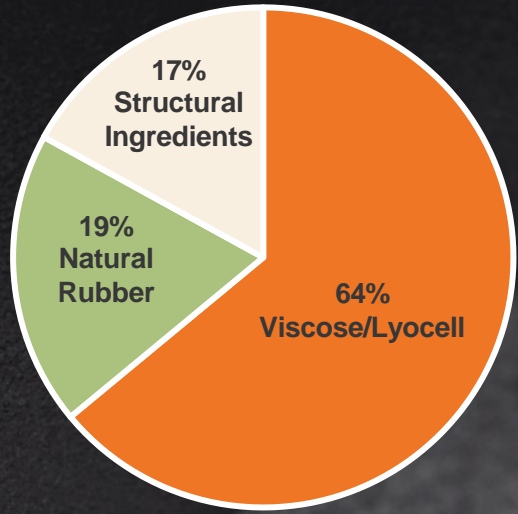
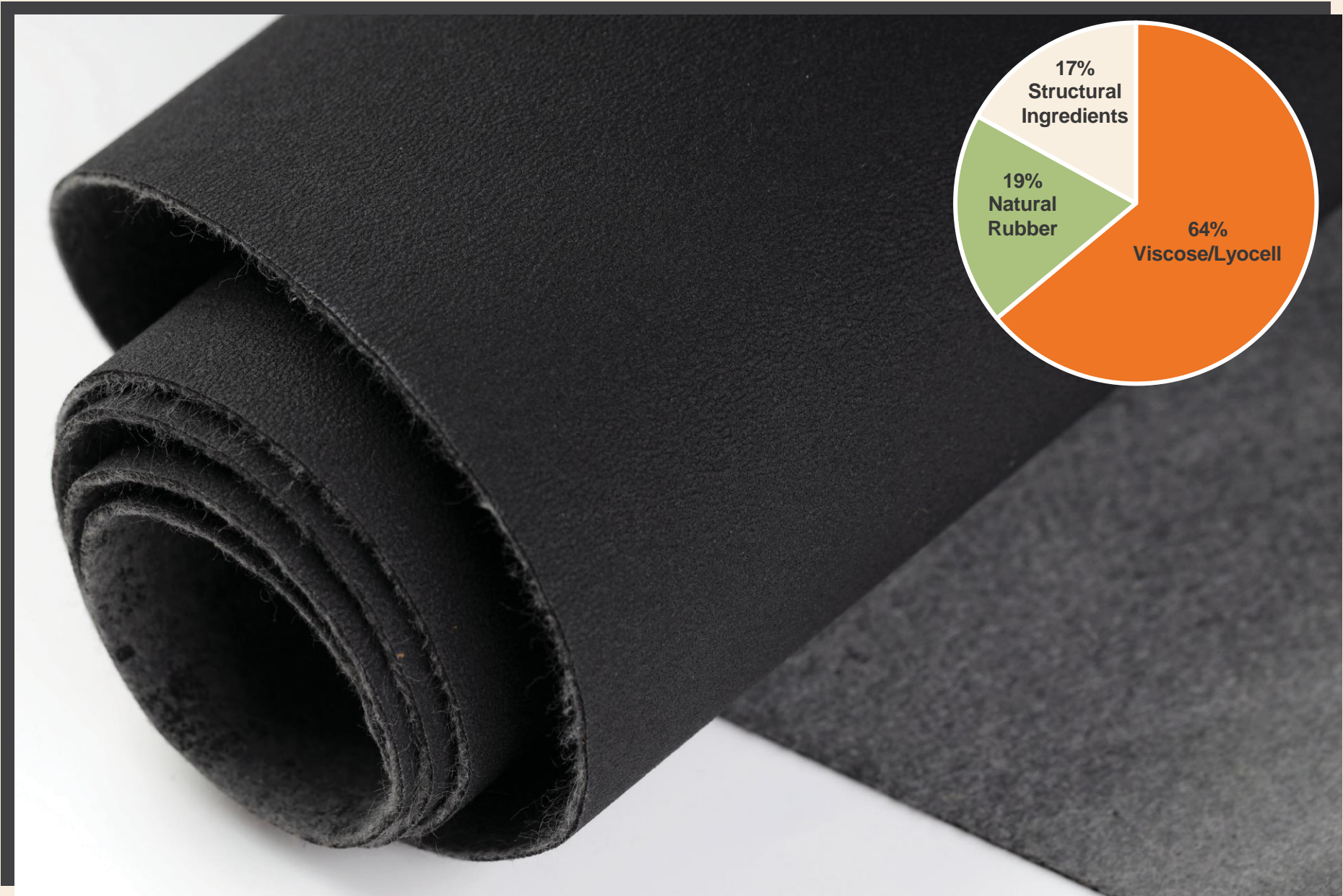
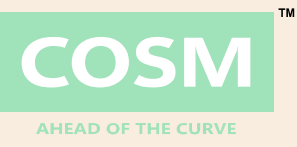
The Products

HyphaLite™ TC

NatraLite

TerraLite

HyphaLite™ TC



HyphaLite™ TC



Bio Content: **100%**

Mushroom Content: **250g/sqm**

Weight: **0.9-2.2mm***

Top Coat: **Mushroom & Latex**

Colors: **See Palette**

Textures: **Smooth, Milled or Embossed**

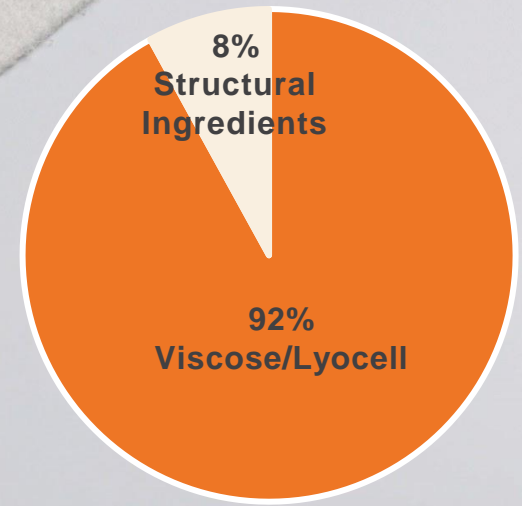
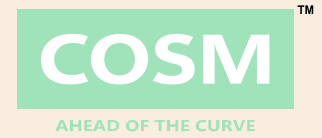
**embossed version available in 0.9-1.8mm only*

HyphaLite™ TC

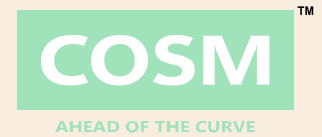


- Washable
- Uncoated Back Side
- Our Premium Biobased Material

NatraLite



NatraLite



Bio Content: **87%**

Mushroom Content: **None**

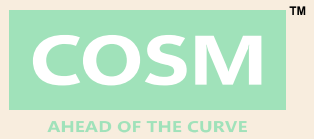
Weight: **0.9-1.3mm**

Top Coat: **Structural Polymers/Pigments**

Colors: **Black, White, Brown Sugar**

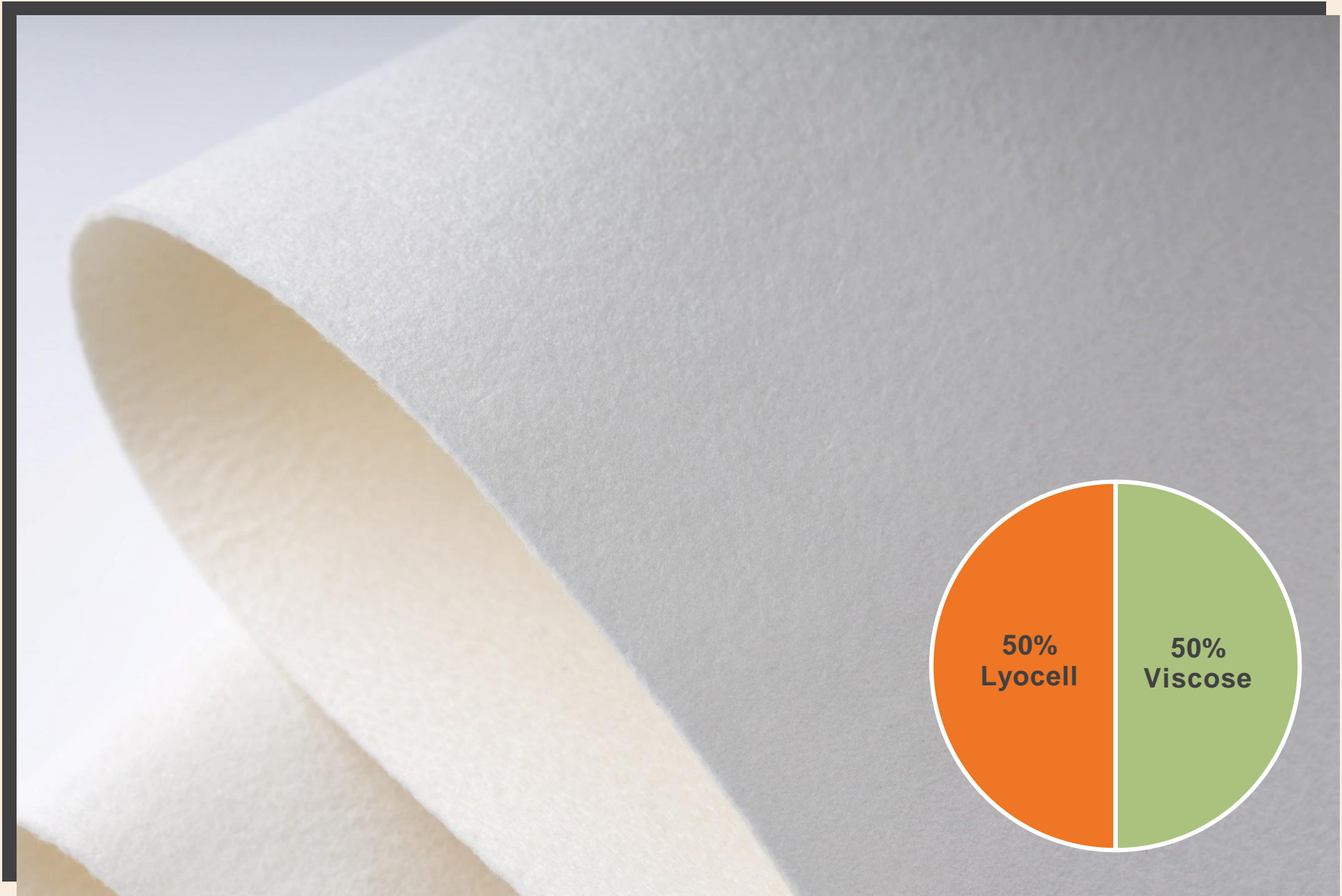
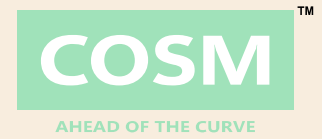
Textures: **Embossed**

NatraLite



- Great for Athletic Product
- Available in ISA White

TerraLite



TerraLite



Bio Content: **100%**
Mushroom Content: **None**
Weight: **0.9-1.8mm**
Top Coat: **None**
Colors: **See Palette**
Textures: **Smooth, Antiqued**

TerraLite



- Similar in look to a Felted Wool
- Light Weight + Breathable

Ordering & Colors

Ordering Info



1. Material

HyphaLite™ TC
NatraLite
TerraLite
TerraLite Antiqued



2. Texture

Smooth
Embossed
Milled



3. Color

See Color Palette



4. Thickness

0.9-2.2mm
* 0.4mm thickness range
* varies based on material



5. MOQ

Sample: none
Production: 1,500 sqf.



6. Lead Time

Sample: 2 weeks
Production: 4 weeks



Color Palette

HyphaLite™ TC



Black



Steel Gray



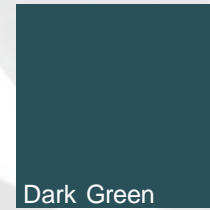
Limestone



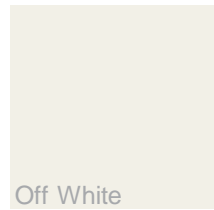
Tranquil Blue



Blue Depths



Dark Green



Off White



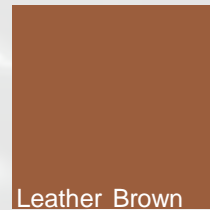
Light Green



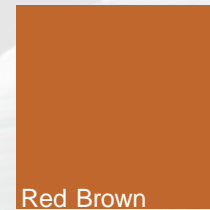
Irish Cream



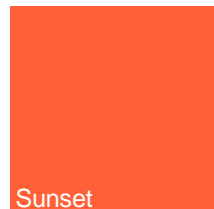
Starfish



Leather Brown



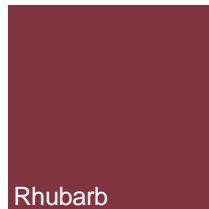
Red Brown



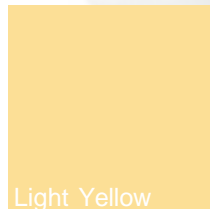
Sunset



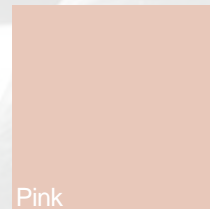
Luscious Red



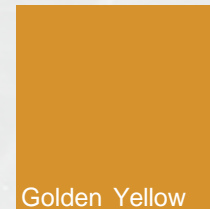
Rhubarb



Light Yellow



Pink



Golden Yellow

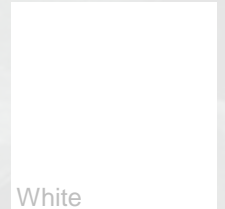
NatraLite



Black



Brown Sugar



White

TerraLite



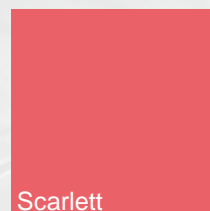
Blue



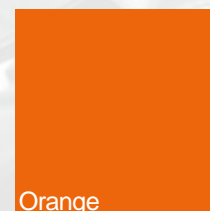
Grey



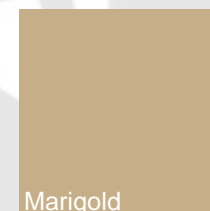
White



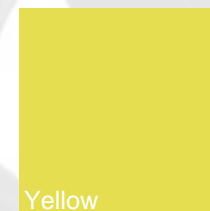
Scarlett



Orange



Marigold



Yellow

Partner with Us

ISA TanTec is proud to offer specialized, creative marketing and co-branding services. Our in-house marketing team can work with you to create visually striking and informative digital and on-product sales tools. These complimentary services will ensure the best possible message resonates with your consumer.

Social Media



Box Inserts



Web Banners

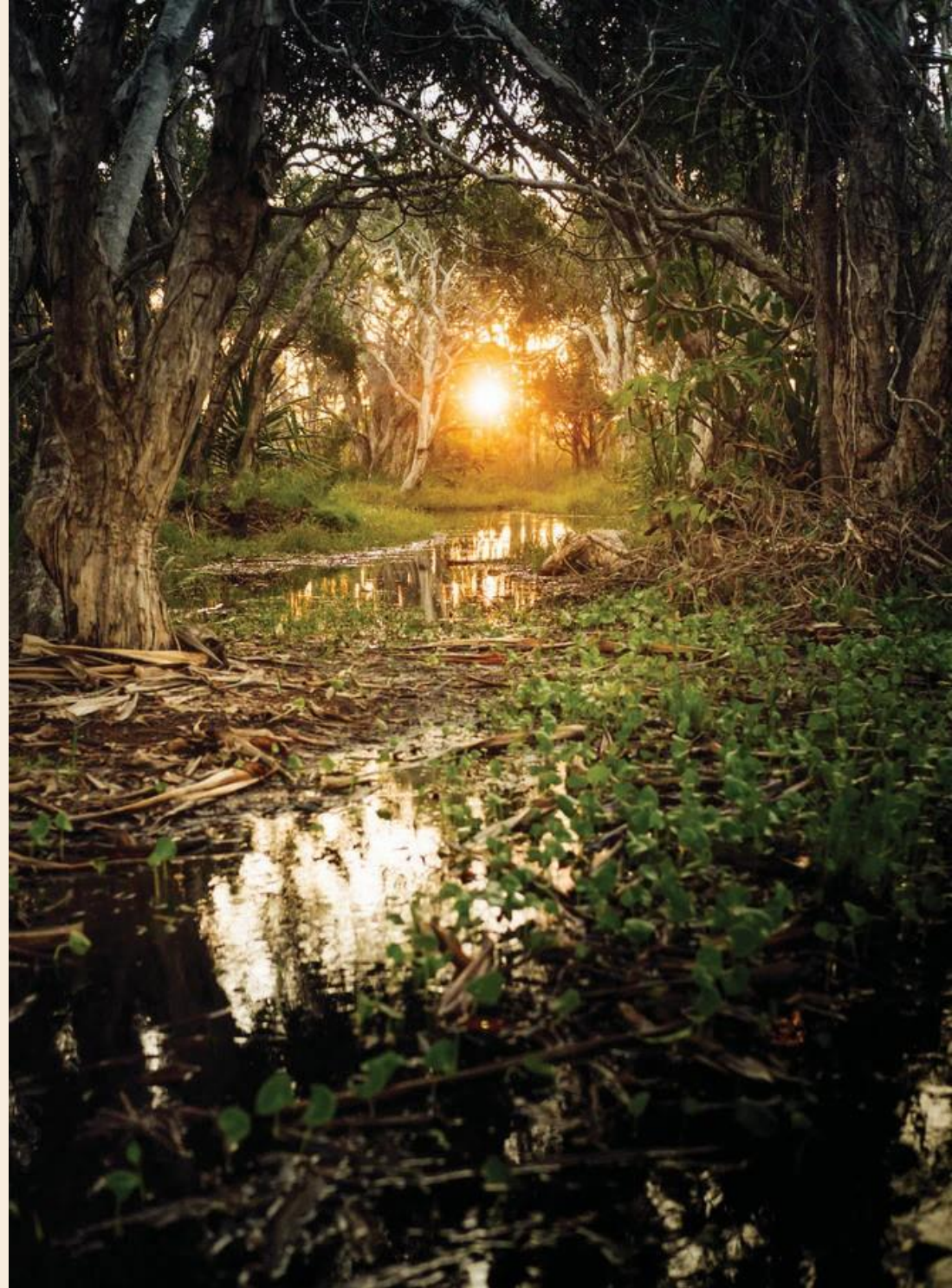


Hang Tags



Looking Ahead

As we look to the future, our COSM™ division will continue to develop innovative, natural materials with a focus on sustainability and reducing the reliance of petrol-chemical based synthetics. Stayed tuned for future developments in this exciting area.



Specifications

HyphaLite™ TC Spec

Additional Material Lab Test Specification

Test Code	007	A0	Date	08/24/22	End User	ISA TanTec
Product Name	HyphaLite™ TC			Color	All	
ID	Property / Description	Test Method	Units	Requirement		
12	Thickness of Leather and Insole Materials	SATRA TM1	mm	As specified 1.1 (+/- 0.2) or 1.6 (+/- 0.2) or 2.0 (+/- 0.2)		
612	Tear Strength-Trouser Leg Method	SATRA TM30	KG	[1.1 mm = min. 1.8] / [1.6 mm = min. 2.1] [2.0 mm = min. 2.5]		
609	Breaking Strength	SATRA TM29	KG/CM	[1.1mm=min. 5.0] / [1.6mm=min. 7.5] [2.0mm=min. 10.0]		
611	Extension at Break	SATRA TM29	%	min. 30 / max. 80		
15	Lastometer Ball Burst Test - Grain Crack Point – Distension	SATRA TM24	mm	min. 8.0		
274	Vamp Flex – Dry	SATRA TM25	CYCLE	500,000 - not worse than slight crack		
273	Vamp Flex – Wet	SATRA TM25	CYCLE	100,000 - not worse than slight crack		
4	Crockmeter Test – Dry	SATRA TM167	GSS RATING	min. 3		
5	Crockmeter Test – Wet	SATRA TM167	GSS RATING	min. 2		
104	Light Fastness	ASTM D1148	GSC RATING	Sunlamp 300 W - 48 hours - 50 C min. 3.5		
62	Water Vapor Permeability	ISO 14268 (5.2 -Option C)	mg/ (cm ² .h)	min. 2.0		
35	Color Fastness to Water – Grain	SATRA TM335	GSS RATING	min. 2.5		
36	Color Fastness to Perspiration – Flesh	SATRA TM335	GSS RATING	min. 2.5		
672	Abrasion Resistance - Taber Method	SATRA TM163	% mass Loss	CS-17 wheel, 500 g/arm, 200 cycles max. 0.3		
637	Vamp Flex after Hydrolysis	SATRA TM344/25	CYCLES	7 days, 70 C, > 95% R.H. 100,000 Dry - not worse than slight crack		

NatraLite Spec

Additional Material Lab Test Specification

Test Code	009	A0	Date	09/26/22	End User	ISA TanTec
Product Name	NatraLite			Color	All	
ID	Property / Description	Test Method	Units	Requirement		
12	Thickness of Leather and Insole Materials	SATRA TM1	mm	As specified 1.1 (+/- 0.2) or 1.6 (+/- 0.2)		
612	Tear Strength-Trouser Leg Method	SATRA TM30	KG	[1.1 mm = min. 1.8] / [1.6 mm = min. 2.1]		
609	Breaking Strength	SATRA TM29	KG/CM	[1.1mm=min. 5.0] / [1.6mm=min. 7.5]		
611	Extension at Break	SATRA TM29	%	min. 30 / max. 80		
15	Lastometer Ball Burst Test - Grain Crack Point – Distension	SATRA TM24	mm	min. 7.0		
274	Vamp Flex – Dry	SATRA TM25	CYCLE	500,000 - not worse than slight crack		
273	Vamp Flex – Wet	SATRA TM25	CYCLE	100,000 - not worse than slight crack		
637	Vamp Flex after Hydrolysis	SATRA TM344/25	CYCLES	7 days, 70 C, > 95% R.H. 100,000 Dry - not worse than slight crack		
4	Crockmeter Test – Dry	SATRA TM167	GSS RATING	min. 3.0		
5	Crockmeter Test – Wet	SATRA TM167	GSS RATING	min. 2.0		
62	Water Vapor Permeability	ISO 14268 (5.2 -Option C)	mg/ (cm ² .h)	min. 5.0		
35	Color Fastness to Water – Grain	SATRA TM335	GSS RATING	min. 3.0		
36	Color Fastness to Perspiration – Flesh	SATRA TM335	GSS RATING	min. 3.0		
672	Abrasion Resistance - Taber Method	SATRA TM163	% mass Loss	CS-17 wheel, 500 g/arm, 200 cycles max. 0.3		
603	Leather – Test for Adhesion of Finish – Dry	ISO 11644(IUF 470)	N/CM	min. 10		
604	Leather – Test for Adhesion of Finish – Wet	ISO 11644(IUF 470)	N/CM	min. 4		

TerraLite Spec

Additional Material Lab Test Specification

Test Code	006	A0	Date	07/21/22	End User	ISA TanTec
Product Name	TerraLite			Color	All	
ID	Property / Description	Test Method	Units	Requirement		
12	Thickness of Leather and Insole Materials	SATRA TM1	mm	As specified 1.1 (+/- 0.2) or 1.6 (+/- 0.2) or 2.0 (+/- 0.2)		
612	Tear Strength-Trouser Leg Method	SATRA TM30	KG	Thickness 1.1 mm = min. 1.8 1.6 mm = min. 2.1 2.0 mm = min. 2.5		
609	Breaking Strength	SATRA TM29	KG/CM	Thickness 1.1 mm = min. 5.0 1.6 mm = min. 7.5 2.0 mm = min. 10.0		
611	Extension at Break	SATRA TM29	%	min. 30 / max. 80		
274	Vamp Flex – Dry	SATRA TM25	CYCLE	500,000 - No crack		
273	Vamp Flex – Wet	SATRA TM25	CYCLE	100,000 - No crack		
4	Crockmeter Test – Dry	SATRA TM167	GSS RATING	min. 3.5		
5	Crockmeter Test – Wet	SATRA TM167	GSS RATING	min. 3		
104	Light Fastness	ASTM D1148	GSC RATING	Sunlamp 300 W - 48 hours - 50 C min. 3.5		
35	Color Fastness to Water – Grain	SATRA TM335	GSS RATING	min. 3		
62	Water Vapor Permeability	ISO 14268 (5.2 -Option C)	mg/(cm ² .h)	min. 10.0		
75	Softness	IUP36	mm	Thickness 1.1 mm = 6.0 (+ / - 0.5) @ 35 mm aperture 2.0 mm = 3.5 (+ / - 0.5) @ 35 mm aperture		

Certifications

Certifications

The importance of 3rd party auditing and certifications is paramount for all materials developed for the COSM™ division. Below are the highlights for our 3rd party certifications. **All 3rd party certifications can be forwarded upon request.**

Raw Material Certifications

Viscose/Lyocell and Natural Rubber (HyphaLite™ TC)



Life Cycle Analysis

An LCA will be conducted on our COSM™ materials and the initial groundwork has been done.

Facility Rating

Our COSM™ materials are manufactured in our TransAsia TanTec facility which is Higg FEM and ISO 14001 certified.

USDA Biobased Ratings

HyphaLite™ TC and TerraLite are USDA rated 100% biobased. NatraLite is rated 87% biobased.

Documentation in progress.

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