

# HyphaLite™ TC



Source responsibly.




ISA INDUSTRIAL LTD.

MACAU (CHINA) | USA | VIETNAM | CHINA | HONG KONG (CHINA)

[www.liteleather.com](http://www.liteleather.com)

# Our Divisions



The Brand  Behind The Brand



## Shoe Leather

Our vast catalog of footwear leathers promotes the natural beauty of a sustainable byproduct.

## Auburn Lace

A leading leather lace manufacturer with a history of five generations of leather craftsmanship.

## CutTec

Making use of an automated cutting system to offer standardized solutions for shoe cut parts.

## Luxury Leather

A collection of leathers targeting the affordable luxury and travel bag market.

## COSM™

Specializing in the development and production of additional sustainable products alongside our leathers.

## TrimTec

A division specializing in customized trims for apparel, bag and shoes. Options include debossing, embossing, foiling and printing.







# COSM™

## Creation Of Sustainable Materials

Ahead Of The Curve.

### 1. 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 newly created division, COSM™, to further explore non-petro based synthetics.

The COSM™ division will solely focus on the development and production of new sustainable materials.

### 2. COSM™ Philosophy

All materials developed under the COSM™ umbrella will follow the below principles:

- Utilize plant based materials which are biodegradable.
- Production of products that have circularity.
- Ability to replace petrochemical based synthetics.

### 3. Why use COSM™ ?

COSM™ materials will provide brands with the same level of:

- Quality
- Reliability
- Compliance
- Service

Brands have come to expect this from ISA TanTec as an established supplier in the footwear industry. COSM™ answers the call for biobased footwear materials.

# HyphaLite™ TC



*All shoes shown have had a finish plan applied. We recommend Kenda Farben's vegan and water based products. Ask your account manager for further information.*



# HyphaLite™ TC





# HyphaLite™ TC Features

## Regenerative

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

## VFSC Certified

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

## Biobased

The plant based materials that HyphaLite™ TC is made from are completely natural and allow the product to be classified 100% biobased.

## Biodegradable

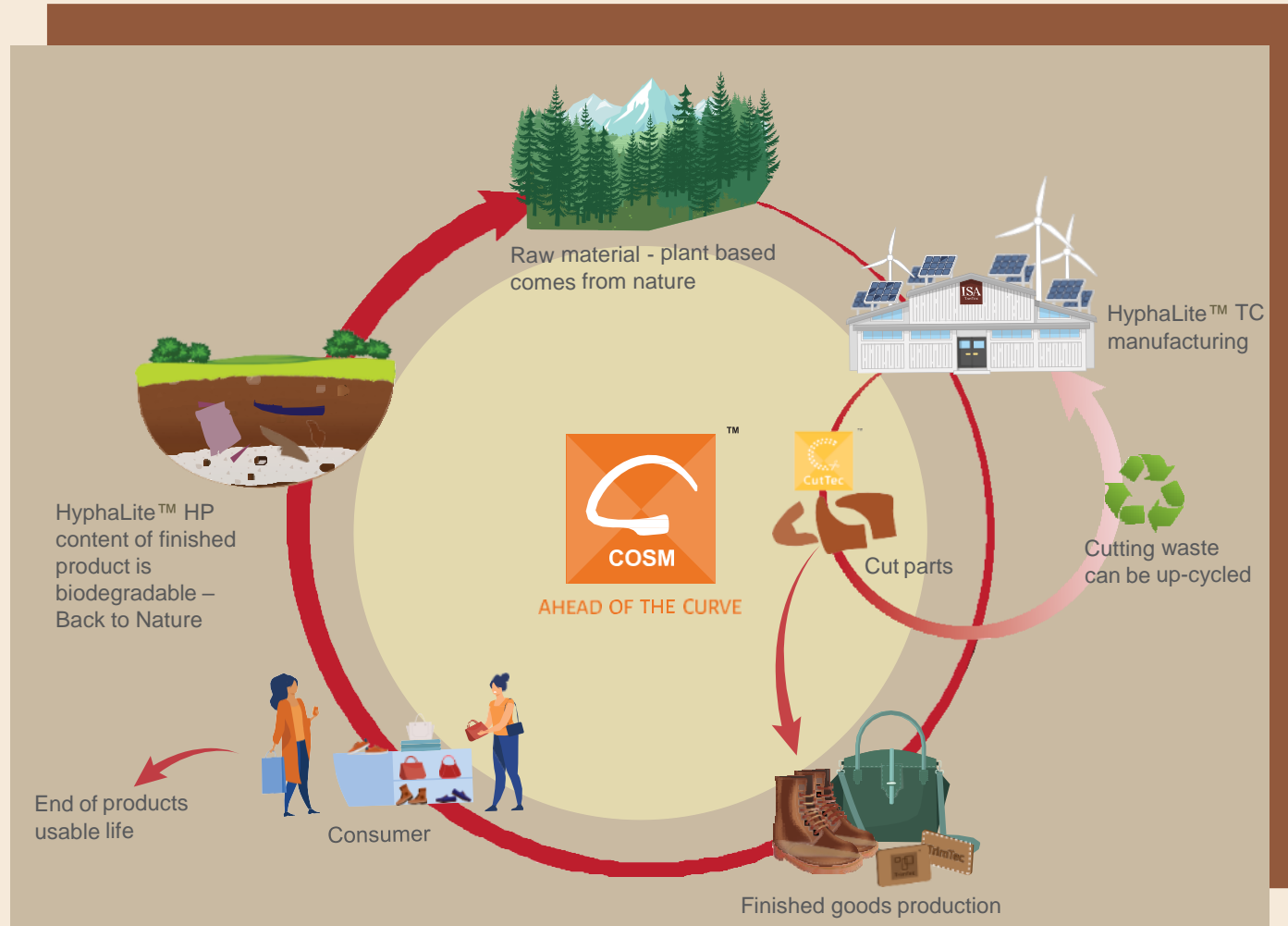
All natural components of HyphaLite™ TC have been carefully selected in order to achieve biodegradability. ASTM D 5511 18 testing underway and results are expected end of 2021.

## Circular

HyphaLite™ TC scrap generated by ISA CutTec can be ground and reused into new HyphaLite™ TC product.

# Circularity

Our approach to developing materials for COSM™ is simple; make materials that benefit the footwear and handbag industries and the environment. We have designed HyphaLite™ TC specifically to be a circular product that is regenerative and reusable by design as opposed to the “take-make-waste” linear model of manufacturing and consumption.





# WHAT IS HyphaLite™ TC MADE OF?

## Mushroom

HyphaLite™ TC is plant based and also includes mushrooms. The mushrooms are locally sourced in Vietnam. We use only the rejected fruiting body of the mushroom, which is not suitable for the food supply chain. We repurpose into dried mushroom powder and include in our formulation for a non-petrol based material.

## Non-Woven Reinforcement

HyphaLite™ TC's reinforcement is comprised of man-made cellulosic fibers that are produced from regenerative, renewable and sustainably managed forests in a closed loop production process. The material is 100% nature based made from renewable raw material wood sourced from sustainable plantations and processes to ensure minimal environmental impact.

## Natural Polymers

Natural polymers occur in nature and can be responsibly extracted. These polymers are used to make HyphaLite™ TC functional allowing it to meet required shoe making specifications.

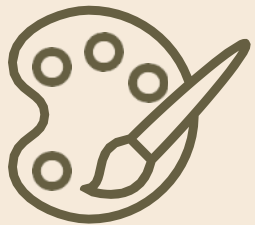
## Without Non Biobased Materials

Physical performance supporting chemicals such as: dyes, mold inhibitors and PU are included.



# Ordering Info

Ordering HyphaLite™ TC is very easy and the process is similar to ordering your footwear leather. All of our HyphaLite™ TC material is manufactured in our brand new, state of the art TransAsia TanTec tannery in Vietnam. HyphaLite™ TC is not completely dyed through. We have found using a shoe finishing plan gives finished footwear a cleaner and more consistent look.

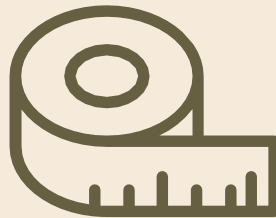


## 1. Color

Choose from our 18 core colors available.

Recommended shoe finishing product:  
Kenda Farben Grasso  
Vegetale #35681 V Oil\*

*\*Kenda Farben's cream + wax products are vegan and water based.*



## 2. Thickness

Three thickness ranges are available:

0.9-1.3mm  
1.4-1.8mm  
1.8-2.2mm

*\*please note 0.4mm range*



## 3. MOQ

Sample: none  
Production: 1,500 sqf.



## 4. Lead Time

Sample: 2 weeks  
Production: 4 weeks

HyphaLite™ TC Price: \$2.95 per sqf  
100% cuttable area

# HyphaLite™ TC Color Palette



Black	Silent Storm	Steel Grey	Limestone	Off White	Irish Cream
Demitasse	Clove	Ubrique	Brown Sugar	Oatmeal	Starfish
Red Brown	Leather Brown	Rhubarb	Luscious Red	Sunset	Pink Coral
Pink	Digital Lavendar	Nugget	Vivre	Golden Yellow	Light Yellow
Dark Green	Palm Leaf	Light Green	Blue Depths	Dark Blue	Tranquil Blue





# Specs

## Additional Material Lab Test Spec

Test Code	002	A0	Date	05/8/21	End User	ISA TanTec
Product Name	HyphaLite™ TC				Color	All
ID	Property / Description		Test Method		Units	Requirement
12	Thickness of Leather + 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	[1.1mm=min. 1.8] / [1.6mm=min. 2.1] [2.0mm=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. 15.0
15	Lastometer Ball Burst Test - Grain Crack Point - Distension		SATRA TM24		mm	min. 8.0
274	Vamp Flex - Dry		SATRA TM25		cycles	500,000 - not worse than slight crack
273	Vamp Flex - Wet		SATRA TM25		cycles	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
5	Crockmeter Test - Wet		SATRA TM167		gss rating	min. 2
104	Light Fastness		ASTM D1148		gsc rating	300 W - 48 hours - 50 C min. 2.5
62	Water Vapour Permeability		ISO 14268 (5.2 -Option C)		mg/(cm2.h)	4.0 – 6.0 (reference value)
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
75	Softness		IUP36		mm	2.8 (+/- 0.5) @35mm aperture
672	Abrasion Resistance - Taber Method		SATRA TM163		% mass loss	CS-17 wheels, 500 g/arm, 200 cycles 0.3% (reference value)

- Passes 3rd Party Restricted Substance (RSL) Testing. Test reports available upon request.

- Harmonized tariff code 4008.11.1000 which provides for plates, sheets, strip, rods and profile shapes, of vulcanized rubber other than hard rubber: of cellular rubber: plates, sheets and strip: of natural rubber. The general rate of duty will be free.

- Washability: HyphaLite™ TC is washable based upon ISO 105-C06:2010 test method for color fastness to domestic and commercial laundering.

# 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.



Front



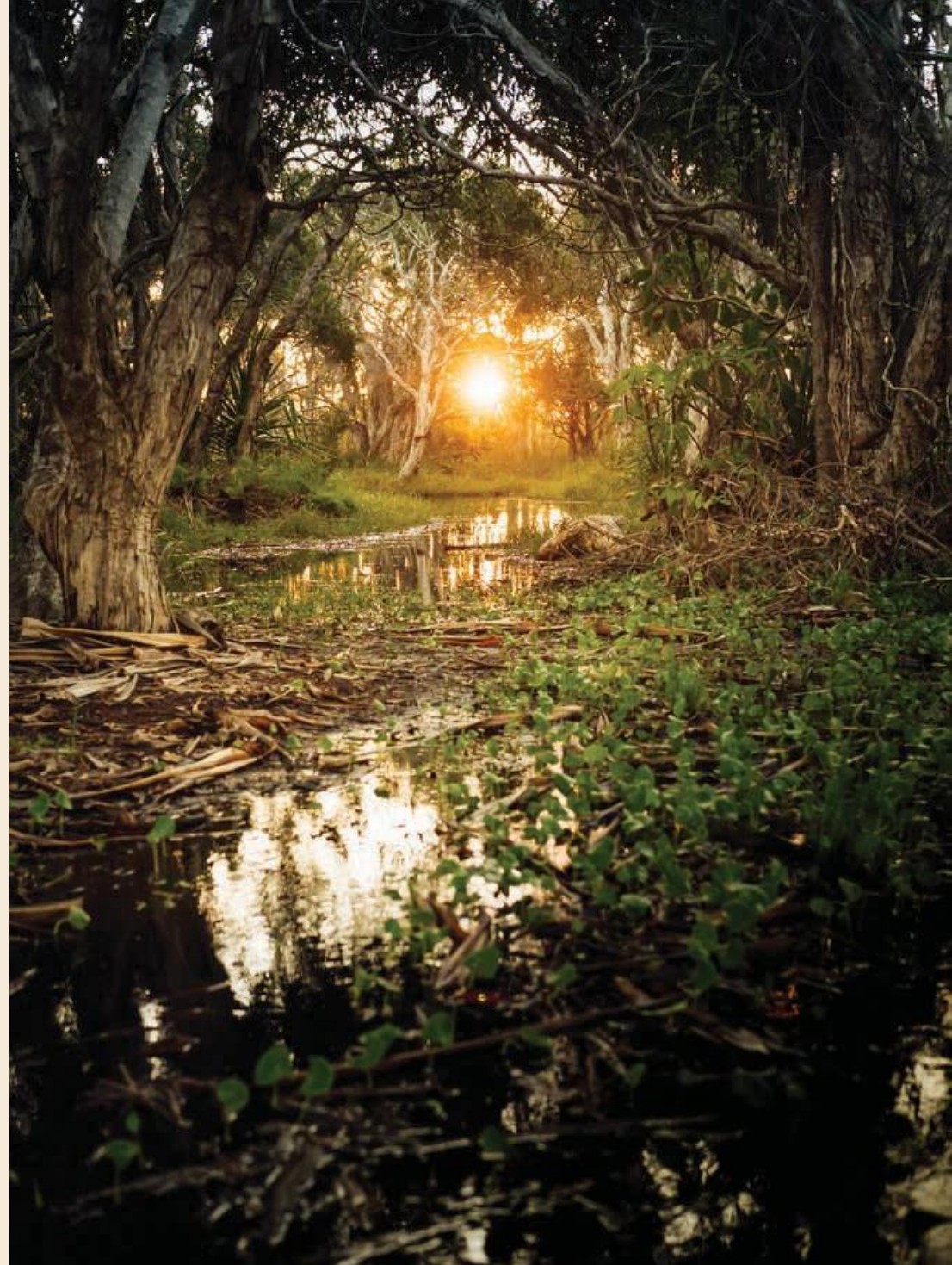
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Ask your Account Manager for more information.



# Looking Ahead

We are not stopping with HyphaLite™ TC. Our COSM™ division will continue to develop innovative, natural materials with a focus on sustainability and reducing the reliance of petrol-chemical based synthetics. As we look ahead we plan to expand the HyphaLite™ TC collection to include a variety of looks, as well as introducing new materials.



# Sustainability Terms. WHAT DO THEY ALL MEAN?

**BIOBASED:** Biobased materials are composed in whole, or in significant part, of biological products (biomass).

**BIODEGRADABLE:** Refers to a product breaking down into natural elements, carbon dioxide and water vapor by organisms like bacteria and fungi.

**BY-PRODUCT:** A secondary or incidental product of a manufacturing process (e.g., scrap or emissions).

**CELLULOSIC FIBERS:** Fibers structured from cellulose, which is a starch-like carbohydrate. Cellulosic fibers are created in a man-made process by dissolving natural materials such as cellulose or wood pulp, which are then regenerated by extrusion and precipitation.

**CERTIFICATION:** Third-party confirmation (or, the process leading to confirmation) that products, processes or persons have demonstrated specific requirements.

**CHAIN OF CUSTODY:** The chain of custody, CoC, is an unbroken and documented chain of ownership of materials and products all the way from the supplier to the end user.

**CLOSED-LOOP PRODUCTION:** Production processes that reuse material waste created during the production process for additional products as well as using the recycled ingredients for re-use in the production process and/or to create new items.

**LIFE CYCLE ASSESSMENT:** Compilation and evaluation of the inputs, outputs, and the potential environmental impacts of a product system throughout its life cycle. The comprehensive examination of a product or service's environmental aspects and potential impacts throughout its lifetime, including raw material extraction, transportation, manufacturing, use, and disposal.

**NATURAL POLYMERS:** Natural polymers are defined as materials that widely occur in nature and/or which can be extracted from plants and animals. Some examples of natural polymers are cellulose, silk, natural rubber as well as other materials.

**PETROCHEMICAL:** A set of chemicals, hydrocarbons, that are separated and extracted from petroleum (crude oil) and natural gas and are the building blocks for multiple industries.

**REGENERATIVE:** A set of processes that restores, renews or revitalizes their own systems. Cellulosic fibers are regenerated fibers as they are created by dissolving the cellulose out of a plant fiber and making it into a new cellulosic fiber.

**RENEWABLE:** Materials whose substances are derived from trees, plants, animals or ecosystems that can regenerate. A renewable material may be produced repeatedly.

**SUSTAINABLE:** Sustainability or acting sustainable focuses on meeting the needs of the present without compromising the ability for future generations to meet their needs (Brundtland Commission). The concept of sustainability is composed of three essential pillars: Economic, Environmental and Social. Also known as Profit, Plant and People.

**SYNTHETIC:** The term synthetic describes a substance and/or material which is made by a chemical synthesis/process.



# Certifications

The importance of 3rd party auditing and certifications is paramount for all materials developed for the COSM™ division. The following certifications have been verified for each HyphaLite™ TC component.

## Mushroom

The food grade mushrooms used for HyphaLite™ TC do not comply with the growers set of standards. If these mushrooms were not re-purposed into HyphaLite™ TC they would otherwise be discarded therefore wasting precious resources to grow them.

## Natural Polymers

The natural polymer binders are Vietnam Forest Stewardship Council certified for sustainable forest management.

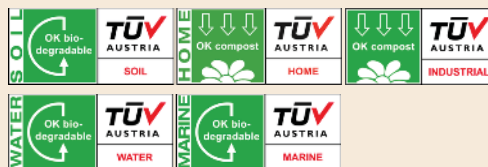


## Non-Woven Reinforcement

The production of the regenerative fibers meets responsible manufacturing requirements.

- EU BREF, Best Available Technology
- EU ECO label
- ZDHC MMCF Standard 2020
- HIGG 3.0, FEM, 3rd party verified
- From Q2 2021 forward, ZLD technology is used for wastewater treatment

The regenerated cellulosic fibers are certified according to TÜV Austria OK scheme for biodegradability in soil, water and marine environment as well as compostability in various environments.



All pulp and fiber associated with our reinforcement material is sourced with sustainable forestry practices. The Chain of Custody is certified according to Forest Stewardship Council (FSC), Sustainable Forestry Initiative (SFI) and Programme for the Endorsement of Forest Certification (PEFC) standards.



All pulp and fiber units have an Environmental Management System in place and are certified according to ISO 14001:25



The regenerated cellulosic fibers are USDA certified as a 100% biobased product.



The regenerated cellulosic fibers received the Cradle to Cradle Gold Level Material Health Certification.



The regenerated cellulosic fibers are certified to OEKO-Tex Standard 100.



# Contact Us

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The Brand  Behind The Brand

