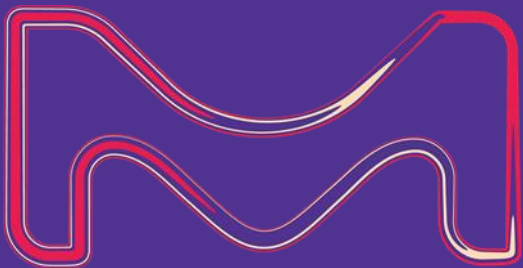


The NW Material Show 2022 **trends report**

August 10th-11th 2022, Portland OR

Fabien DARCHE, Strategic Marketing Americas COA
September 2022



**EMD
Electronics**



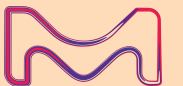
Hi, welcome to EMD Surface Solutions!

Since more than 360 years, as part of our Journey as a vibrant company of Science and Technology, we developed curiosity about our world and what surrounds us.

This is why part of our mission is to bring to our partners and customers, insights and trends visions from different perspectives.

This information is not necessarily directly related to our activities; however, it could contain relevant trend markets insights that could be adapted or transferred in short or mid-terms to cosmetics, coatings or industrial applications.

Enjoy the Journey with us!



THE MATERIALS SHOW

The NW Material Show 2022

The Materials Show is an initiative of AmericanEvents. Specialized in advanced and innovative materials, this fair happens in Oregon, Northwest, to feed principally Nike headquarters and then transfers to Boston, Northeast to attend Reebok and New Balance.

For two days, the event brings together professionals from sportswear and sneakers industry, designers and worldwide material suppliers.

The NW 2022 edition happened on August 10th and 11th 2022 at the Oregon Convention Center, in Portland.

THE NW MATERIALS SHOW

August 10 & 11, 2022

Portland, OR

Hall D

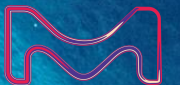


Table of content

01

The show

02

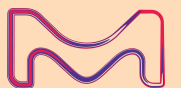
Main trends

03

Highlights

04

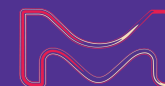
Contacts & references





01

the show

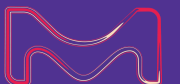


overview of the show

+200 exhibitors

Complete list here :

<https://americanevents.com/nw-exhibitor-list/>





NW show

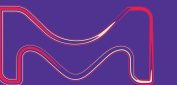
overview



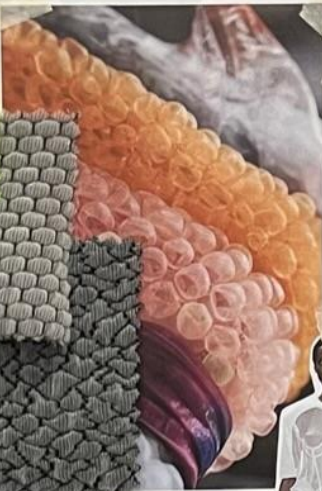
The background features a blue gradient with numerous red spheres of varying sizes. Some spheres are large and in the foreground, while others are smaller and further back, creating a sense of depth. The text is positioned on the right side of the image.

02

Main trends



24SS' CONCEPT BOARD



PANTONE®
15-3820 TPK



STRETCH
TRANSLUCENT
ADHESIVE
DURABLE
SOFT



PANTONE®
17-1755 TPK



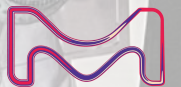
STADS

all
the
feels

Spring Motif



DONGJIN TEXTILE



Conceptual
moodboards for
Spring/Summer 2024

WOW!

24 SS' CONCEPT BOARD

WOW!

EMBROIDERY



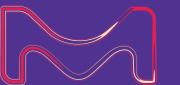
sustainability

Probably the main theme dealt during the fair, sustainability has definitely become a reality in the sector.

Fabrics have to come from recycled or natural sources.

Masterbatches have to claim at low carbon footprint.

Story-telling from suppliers are very importante, even more if they can be transmitted to the final consumer. A few examples will be detailed in the next section.

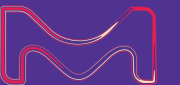


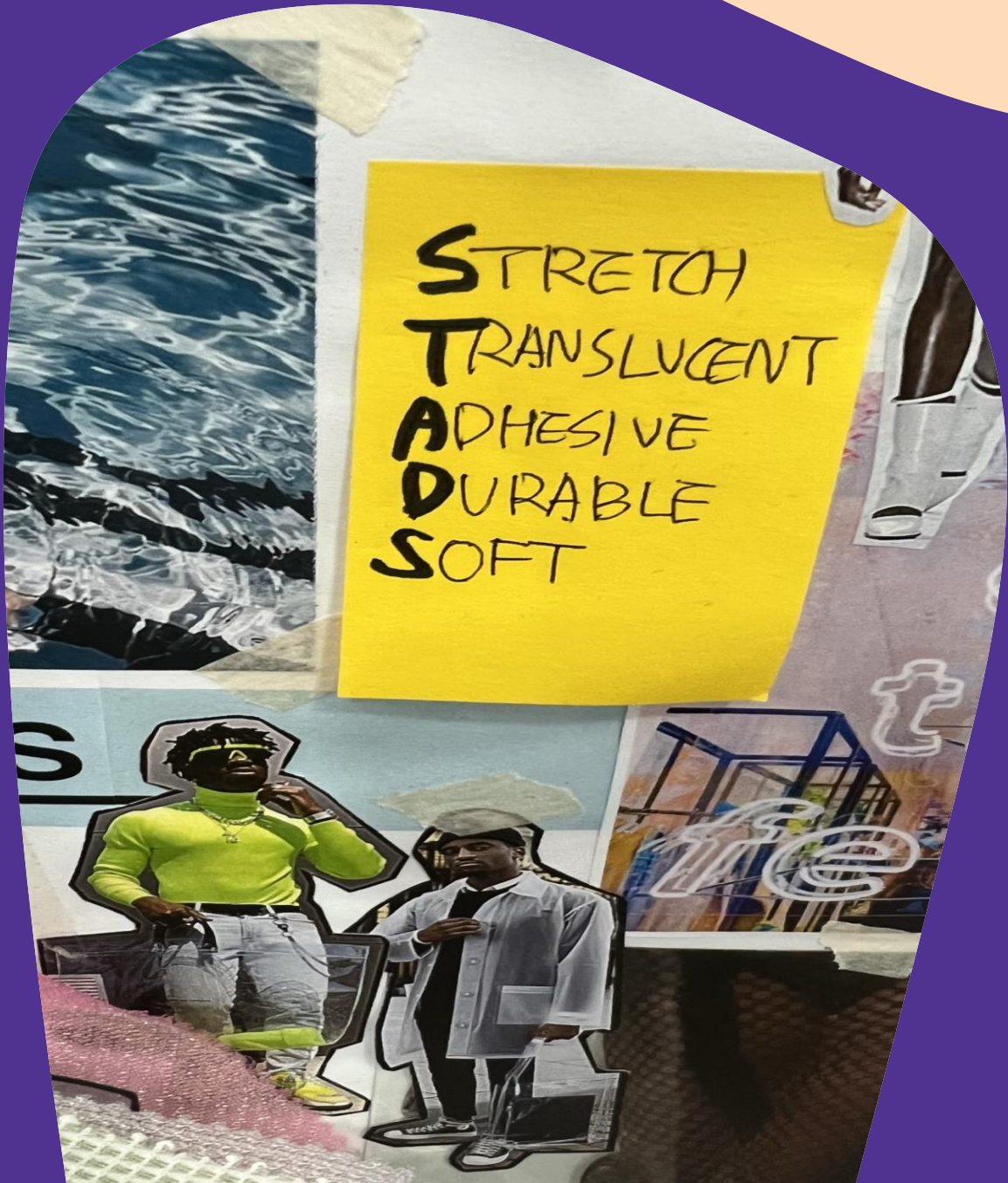


transparency

Transparency for footwear and active wear is synonymous of lightweight, performance and breathability.

Ripstop fabrics and technical ketten were strongly showcased with these qualities and attributes.



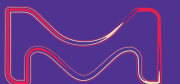


STADS

As Illustrated at the beginning of this section, Spring/Summer 2024 materials will respond to **STADS** acronym. That is to say, **Stretch** will be expected though more elastic materials.

Translucent effects will contribute to modernity, as well as **Adhesive** features (ideally with sustainable solutions). This will result into **Durable** design.

Of course, comfort will remain priority with application of **Soft** materials and solutions



The background features a blue-to-purple gradient. On the left side, there is a cluster of red, glossy spheres of various sizes, some of which are blurred to create a sense of depth. Scattered across the blue area are several smaller, semi-transparent red circles.

03

Highlights

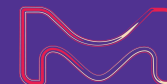




coffee yarn

As part of new ways to produce more sustainable materials, with reduced carbon footprint, ground coffee beans have been implemented.

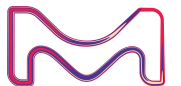
www.jia-zhantextile.com





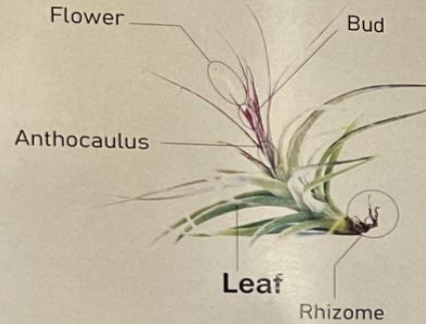
Coffee yarn

- Coffee beans are firstly grounded and added to a compound of recycled PET materials.
- The obtained masterbatch is then extruded to produce a yarn which will be used to produce fabrics materials
- Coffee yarns demonstrated advantages compared to cotton yarn in relations to the following features :
 - _ UV protection
 - _ Odour control
 - _ Fast drying
 - _ Cool touch.



Since Taiwan is a half tropical and half subtropical country, there are four seasons in a year. Like grapes, lychees, bananas, watermelons, papayas, pineapples, oranges, etc, these were well-suited to the abundant rainfall, fertile soil and warm climate of Taiwan so Taiwan is called the "fruit kingdom".

Especially Pineapple, there are more than 4000 ha planted areas in Taiwan. There will produce 40000 heads of pineapple for each planted area, and every planted area will cause 72 tons of pineapple leaves. Each planted area cost NTD 40 thousands for the farmer to deal with the Agricultural waste. Because of the plenty agricultural waste, we start to think out of box to find the value of waste. Using the pineapple leaves' feature create whole new life for the agricultural waste. Not only reduce the waste but also greener the environmental.



During the first step,

mature pineapple leaves are harvested and stripped of their outer coating by scraping them with a blunt instrument (for example a coconut shell). Two grades of fibre are extracted from the leaves: the first, called bastos, is strong and course and usually reserved for making string or twine. Liniwan, or washout, only lifts away from the leaf after vigorous scraping. It is much finer and used for weaving fabric. The green epidermal layer is washed away from the fibres, leaving behind white, opaque threads.

17-W22355 / 44"
 Yarn + 30% Organic Cotton + 60% BCI Cotton



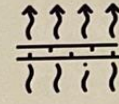
Eco-friendly



Save water



Reduce carbon footprint



Breathable



Reduce agricultural waste

Production CO2

Per 1000 KG	Cultivation+Fiber Production	
	min CO2-eq	max CO2-eq
POLYESTER	7.2	10.0
COTTON FIBER	2.4	5.9
HEMP FIBER	3.8	5.2
PINEAPPLE LEAF FIBER	0.0	0.0

Energy Requirement

Per KG	min MJ	Cultivation+Fiber Production	
		min Kg / CO2-eq	max Kg / CO2-eq
POLYESTER	104	16.0	19.4
COTTON FIBER	25	1.7	3.8
HEMP FIBER	32	2.3	4.9
PINEAPPLE LEAF FIBER	25.2	2.2	3.9

Cultivation+Fiber Production

Water Consumption(m3)

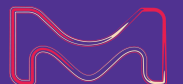
0.0

2.7

pineapple yarn

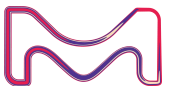
Benefiting from the abundance of pineapple in Taiwan, this supplier had the idea to use this fruit's leaves as a natural compound for masterbatch, to produce yarn.

www.jia-zhantextile.com



Pineapple yarn

- Mature pineapple leaves are harvested and stripped to extract fibers.
- Two types of fibers are generated though the process. The finer ones are used to produce organic yarn which could be mixed to organic cotton.
- Tha main advantages of using this material are the following :
 - _Eco friendly
 - _Save water and energy
 - _Breathable material
 - _Reduce agricultural waste



Shellfish Recycling

ECO

There is a large volume of oyster yielded in Taiwan and carry out 160 thousand tons of "Oyster Shell-Waste" every year. We use shell-waste to produce bio-calcium oxide powder, so that it can reduce the shell-waste and prevent the environment pollution.

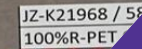
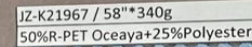
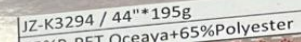
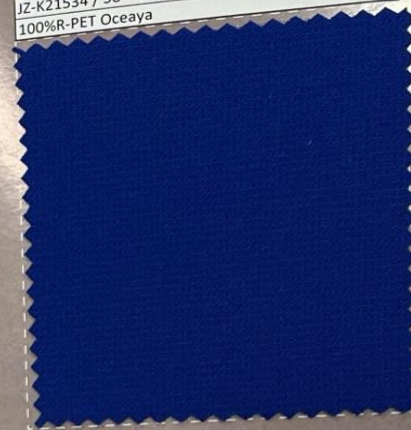
Grinding

Antistatic

Oyster-shell contains 80% of calcium carbonate and 20% light metal elements. The raw-material has a lot of micro-pore on high surface area. Therefore bio-calcium oxide can absorb moisture easily in order to have free ions to increase conductivity.

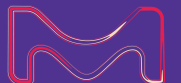
Antibacterial/deodorant

This bio-calcium oxide powder was made from oyster-shell under high temperature treatment, and it can bring out anti-bacterial and



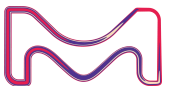
oyster-shells recycling

To reduce the oyster shell waste and prevent environment pollution, shells are transformed into bio-calcium oxide powder which could be added to masterbatch to produce yarn with special properties.



Oyster-shells recycling

- After harvest, oyster-shells are grinded and processed with high temperature to extract bio-calcium oxide powder.
- Through this process, the material gains antibacterial and deodorant properties that could be brought into the fabric fiber.
- As a final step, the powder is added to a PET recycled compound to form a masterbatch which will be extruded to produce yarn.



Nylon from recycled nets

With the intent of reducing marine waste, used fish nets are collected and processed to produce nylon chips that would be integrated to a new masterbatch to create yarn.

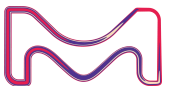
www.jia-zhantextile.com

www.wintex.co.kr



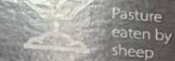
Nylon from recycled nets

- With fish industry growing up globally, over 1000 T of marine waste are rejected in the oceans worldwide. These litter pieces are mainly nylon fishermen's nets.
- By collecting these items, it's possible to sort them by type, then to cut them.
- The cut parts are then heated and polymerized to create new nylon chips.
- The chips can then be extruded to create new yarns to produce fabrics mixed with Nylon or recycled PET.



WHY WOOL IS 100% biodegradable?

Wool, especially Australian wool, is produced in extensive pasture systems, where the diet is dominated by grasses and other pasture plants. These plants capture carbon from the atmosphere and convert it into organic compounds through photosynthesis (which supports much of the life on earth).



Pasture
eaten by
sheep



Wool
converted to
clothing



Garments can
be reused
or recycled

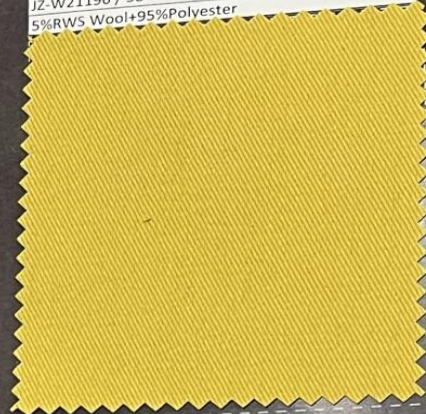


Recycled products
can be composted
and returned to the soil

HOW DOES WOOL BIODEGRADE?

Wool is composed of the natural protein keratin, which is similar to human hair. It is biodegradable and can be composted.

JZ-W21196 / 58"
5%RWS Wool+95%Polyester



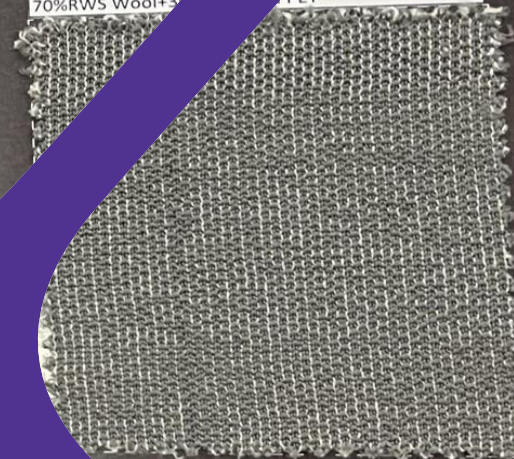
JZ-W21198 / 58"
5%RWS Wool+95%Polyester



JZ-K3446 / Sample
25%RWS Wool+75%Recycled PET



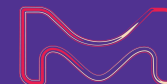
JZ-FN22167 / 44"*44"
70%RWS Wool+30%Recycled PET



wool textiles

Wool is returning to the market with a strong asset of recyclability. As a sustainable solution it offers unique biodegradable properties.

www.jia-zhantextile.com





Wool textiles

- Wool has an animal origin, and through sheep's pasture it's gaining exclusive properties.
- By containing keratin protein, which can be broken down by microorganisms it has an easy biodegradability process.
- The material could be combined to PS or recycled PET.
- The main advantage of using this product are the following:
 - _ Quick biodegradability
 - _ Through degradability process, returns essential nutrients to the soil
 - _ No microfiber pollution.

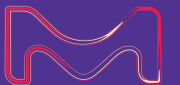




Algae foam

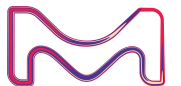
Green algae has turned itself an environmental problem, as it proliferates in clear waters. This projects aims to clear the water and use the algae as a “green” substrate to produce EVA foam.

www.bloommaterials.com



Algae foam

- Water is treated to eliminate and collect green algae.
- The material is then grinded and processed into an algae-blended resin containing a significant fraction of algae biomass and bio-based additives.
- This resin is then transformed into an EVA foam with excellent flexibility.
- This material is environmentally-conscious and offers a high-performance replacement for traditional petroleum-based EVAs.

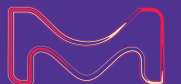


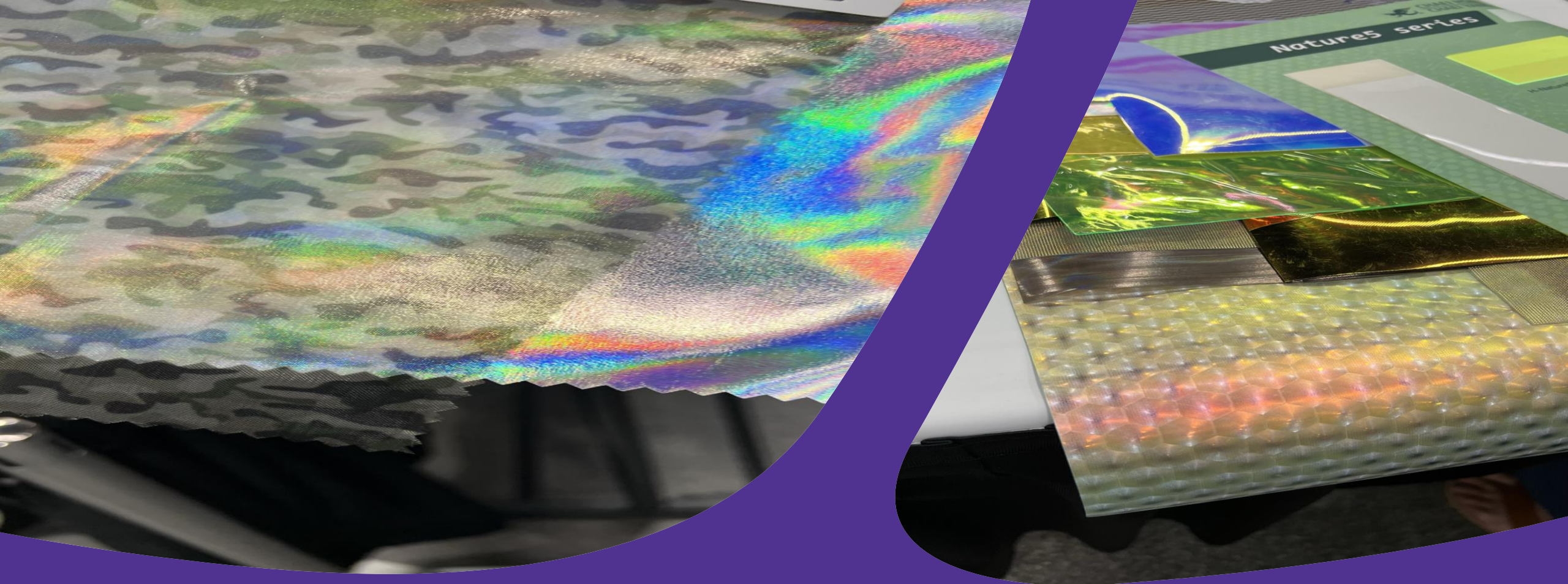


Thermal resistance

Aerogel is a NASA-developed technology used to insulate spacecraft at -450°F. By combining this thermal properties with flexible foam that warms without bulk, it generated the best solution for outerwear ever imagined.

www.orosapparel.com

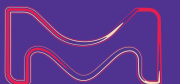




iridescent effect

Mainly offered through transfer paper solutions,
Iridescent effects were extremely present at the fair.

www.sappi.com

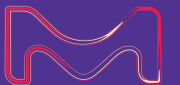




engineered soles

Footwear soles are becoming more and more engineering masterpieces with the generalization of 3D printing and application of effect coatings on hard and soft plastics.

www.framas.com



New natural sources of masterbatch have been developed, such as carbon masterbatch made from tomato plants, or silica made from rice husks, bringing new possibilities to the market.

www.neomatdistribution.com

NEW Masterbatch substrates



More info

Fabien Darche
Strategic Marketing Manager Americas - Coatings
Electronics – Surface Solutions

Merck S.A., Rio de Janeiro, Brazil, an affiliate of Merck KGaA,
Darmstadt, Germany

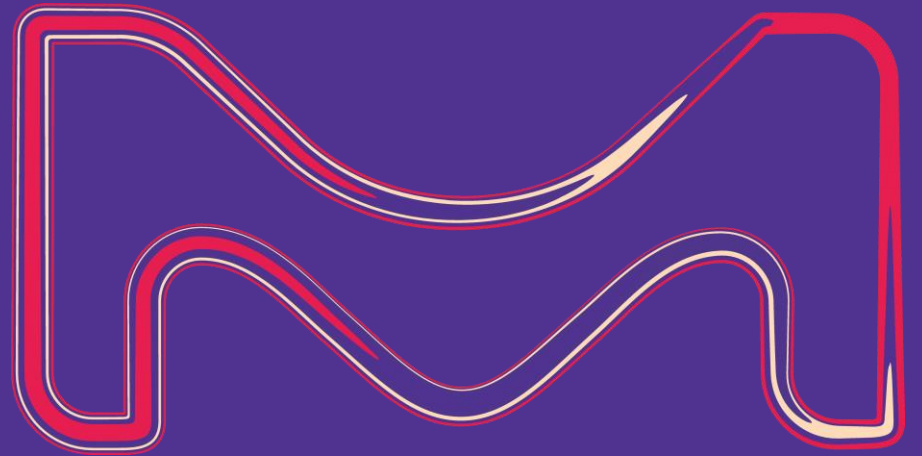
Alameda Xingu, 350 - 6th floor

Zipcode: 06455-030 | Barueri, São Paulo | Brazil

Mobile: +55 11 97891-9127

E-mail: fabien.darche@emdgroup.com

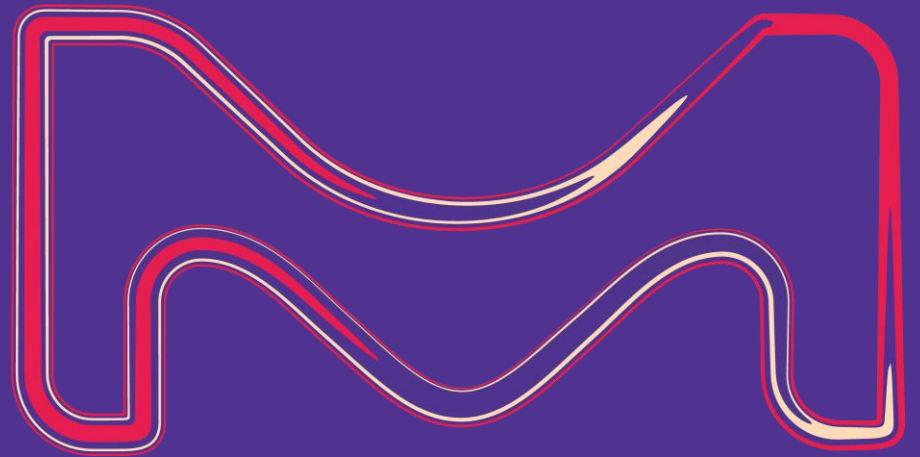
www.EMDgroup.com

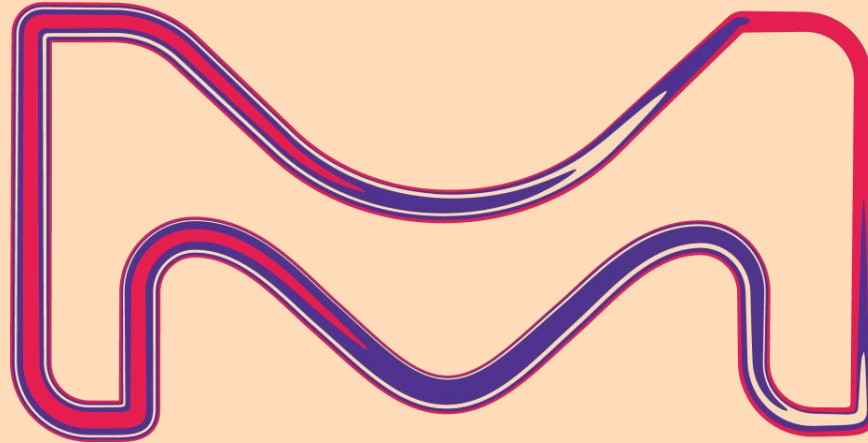


DISCLAIMER

Products are warranted to meet the specifications set forth on their label/packaging and/or certificate of analysis at the time of shipment or for the expressly stated duration. EMD Performance Material Corp. provides information and advice on application technologies and relevant regulations based upon its current knowledge and opinion. EMD PERFORMANCE MATERIALS CORP. MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE REGARDING OUR PRODUCTS, THEIR APPLICATION OR ANY INFORMATION PROVIDED IN CONNECTION THEREWITH. EMD Performance Materials Corp. shall not in any event be liable for incidental, consequential, indirect, exemplary or special damages of any kind resulting from any use or failure of the products. Customer is responsible for and must independently determine the suitability of our products for its intended use and processes. The foregoing information and suggestions are also provided without warranty of non-infringement as to intellectual property rights of third parties and shall not be construed as any inducement to infringe the rights of third parties. Customer shall be responsible for obtaining any applicable third-party intellectual property license. All sales are subject to our complete Terms and Conditions of Sale. Prices are subject to change without notice. EMD Performance Materials Corp. reserves the right to discontinue products without prior notice.

©2022 Merck KGaA, Darmstadt, Germany and/or its affiliates. EMD Electronics, the vibrant M, Xirallic, Xirallic NXT, Colorstream, Meoxal, Pyrisma and Iriodin are trademarks of Merck KGaA, Darmstadt, Germany. All other trademarks are the property of their respective owners. Detailed information on trademarks is available via publicly accessible resources.





EMD Electronics, the vibrant M are trademarks of Merck KGaA, Darmstadt, Germany or its affiliates.
All other trademarks are the property of their respective owners.

Merck KGaA, Darmstadt, Germany

Surface Solutions
Frankfurter Str. 250
64293 Darmstadt, Germany
[effects-for-coatings.com](https://www.effects-for-coatings.com)

EMD Performance Materials Corp.

Surface Solutions
1200 Intrepid Avenue
Philadelphia, PA 19112, USA
[emdpigments.com](https://www.emdpigments.com)
An affiliate of Merck KGaA,
Darmstadt, Germany

Merck Performance Materials G.K. Tokyo, Japan

Surface Solutions
ARCO Tower, 5F
1-8-1, Shimomeguro, Meguro-ku
Tokyo 153-8927, Japan
[emdpigments.com](https://www.emdpigments.com)
An affiliate of Merck KGaA,
Darmstadt, Germany

