



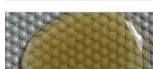
Applications 2022






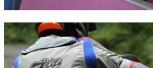




UNRIVALED PERFORMANCE. UNMATCHED DURABILITY. UNLIMITED POSSIBILITIES.

TABLE OF CONTENTS

Introduction

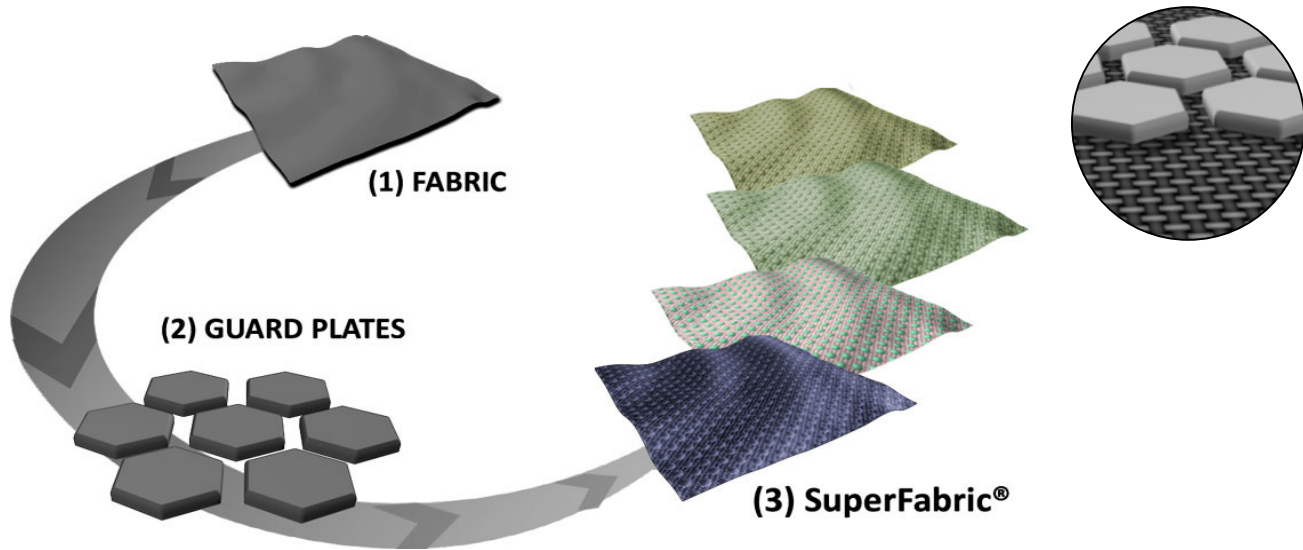
Technology	pg 3	
Types of SuperFabric® materials	pg 4	
Performance: Abrasion Resistant	pg 5	
Performance: Breathable	pg 5	
Performance: Stain Resistant	pg 6	
Performance: Slash Resistant	pg 7	
Performance: Quick Drying	pg 7	

Applications

Footwear	pg 8	
Outerwear	pg 14	
Seating	pg 18	
Motorcycle	pg 22	
Bags and Packs	pg 26	
Military	pg 28	
Industrial	pg 31	
Specialized	pg 34	

Introduction to SuperFabric® materials

SuperFabric® technology takes a fabric and overlays it with tiny plates (“guard plates”) in a specific arrangement. The gaps between guard plates allow complete flexibility. The geometry, thickness, and size of the guard plates, as well as the fabric, can be varied depending on the desired attributes. SuperFabric® materials are designed to deliver a range of performance features such as abrasion resistance, stain resistance, quick drying, weight reduction and more.



Technology

The key to this remarkable material is the fact that locally, the plates are hard. Globally, the plates allow full motion which gives SuperFabric® a feel similar to traditional fabrics.



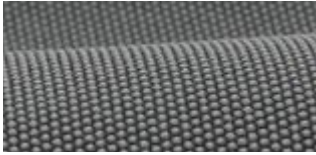
Side View: Small guard plates allow for a high degree of flexibility while providing tough protection



Side View: Showing integration of guard plates, spacing, and fabric

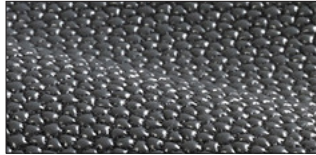
Types of SuperFabric® materials

The many varieties of SuperFabric® materials are all built around the same core technology. Our materials address a range of performance and attribute needs that help showcase the versatility for which SuperFabric® is known.



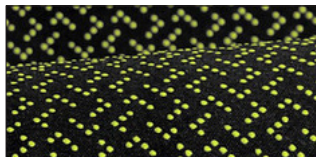
SUPERFABRIC®-Am99™

The newest addition to the SuperFabric® family of products. SuperFabric®-Am99™ incorporates antimicrobial functionality...read more on Pg. 35.



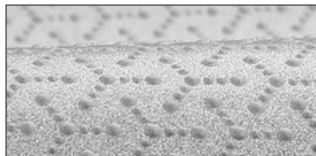
PERFORMANCE SUPERFABRIC®

These SuperFabric® materials have a close array of plating integrated into strong fabric to provide the most performance such as abrasion resistance, slash resistance and more.



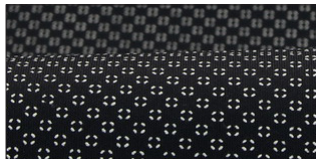
LIGHTWEIGHT SUPERFABRIC®

These SuperFabric® materials are very lightweight while still bringing a level of performance that often surpasses other performance fabrics. These SuperFabric® materials offer soft hand feel and high levels of flexibility in addition to their lightweight properties.



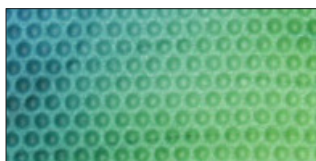
REFLECTIVE SUPERFABRIC®

Reflective SuperFabric® materials not only look good, but they are well suited for safety applications such as apparel, jackets, and shoes.



STRETCH SUPERFABRIC®

Many applications require fabric that has a bit of stretch, whether it be for apparel, bags, seating, or forming over hard objects such as cases. This new offering still provides nice performance in a highly flexible fabric.



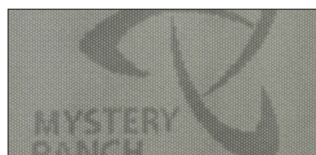
MULTI-COLORED SUPERFABRIC®

Multi-colored SuperFabric® ushers in a new area of continuous color. The coloring is a result of a deep infusion (sublimation) of color to the plates which results in strong, lasting color suited for many applications.



EMBOSSED SUPERFABRIC®

A new line of SuperFabric® brand materials with amazing design and performance. Can be used for many applications including seating, bags and apparel.

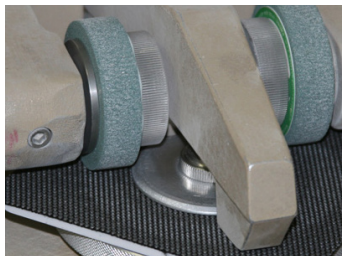
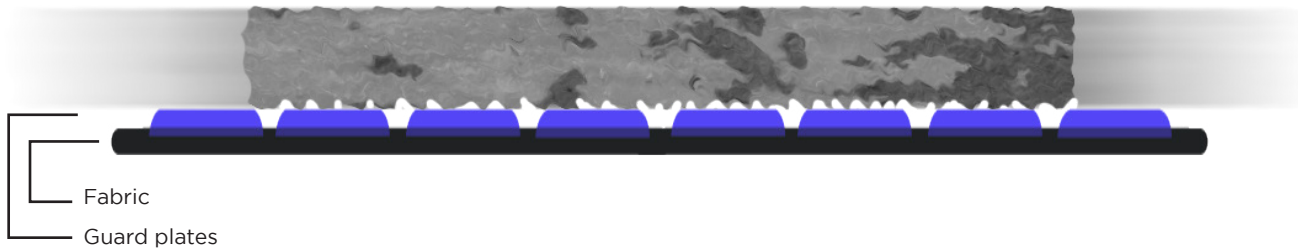


CUSTOM SUPERFABRIC®

Applications often require unique color, patterns, or branding to be most effective. SuperFabric® can provide all that and more. Customers love the flexibility and creativity of SuperFabric® material.

Performance: Abrasion Resistance

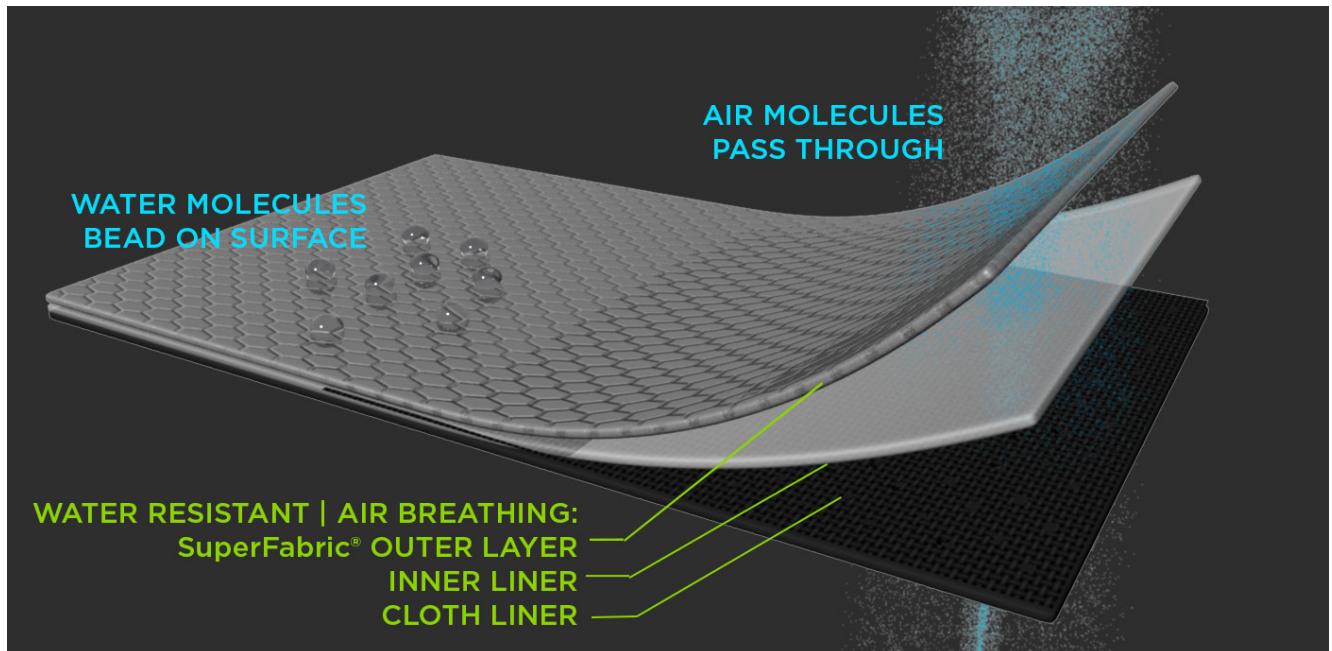
The guard plates are ready to fend off rock, ice, brush, debris, scuffs, and scrapes. SuperFabric® doesn't just look pretty, it performs day in and day out. SuperFabric® materials won't snag like knit fabrics. SuperFabric® is used in demanding abrasion resistant application such as motorcycle apparel, ski and snowboarding apparel, footwear and more.



SuperFabric® material is undergoing a Taber abrasion test using 1000g load and an H18 wheel. This is an aggressive test that demonstrates the ability of the guard plates to perform in abrasion applications.

Performance: Breathability

It is the ability of a fabric or material to transmit air and moisture. Lots of materials are, of course, breathable. However, being breathable while still being water resistant is a much taller order. By their inherent construction, SuperFabric® materials are both air breathing and water repellent.



Performance: Stain Resistance

SuperFabric® is highly resistant to stains from mud, dirt, grease, and liquids such as oil, sauces, and more. In the photos, you can see all of the mud washes right off of SuperFabric®. Nylon and conventional materials quickly pick up stains which can deteriorate the performance of the fabric as well as compromise the look of the material.



In photo on left, a combat boot gets ‘in the mud’. After, it is rinsed off...not scrubbed...not pressure washed...just rinsed with water. The photo on the right shows that the mud is gone from the SuperFabric® area of the boot (toe area). The leather and nylon areas don’t clean easily and they also don’t dry as quickly.



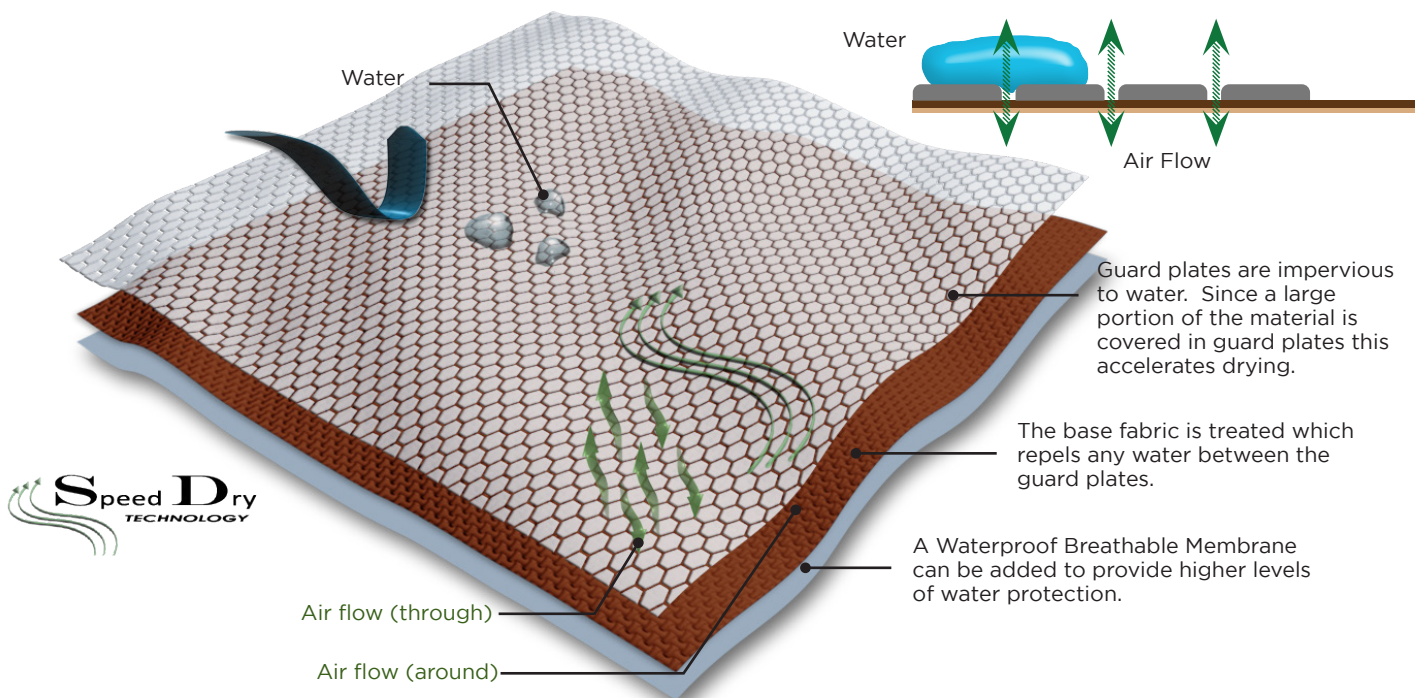
Performance: Slash Resistance

The performance SuperFabric® materials offer the most slash protection with heavier coverage of guard plating. Many applications, such as motorcycle apparel, scuba apparel, ski and outdoor jackets and pants, all benefit from the slash resistance SuperFabric materials offer.



Performance: Quick Drying

SuperFabric® drying is the result of a 3-pronged system that quickly dries, while keeping the elements on the outside and contents dry on the inside. Impervious guard plates, repellent fabric, and optional waterproof breathable membranes are part of the Speed Dry advantage.



Select SuperFabric® materials have other intrinsic properties such as rodent resistance (important for covers and other protective applications), flame resistance, and high UV resistance.

FOOTWEAR



SuperFabric® ADVANTAGES

- + Durable: Provides long life even in extreme conditions such as mountaineering
- + Unique: Like no other material in the world
- + Versatile: Can be used in the upper, toe, tongue, and heel
- + Performance: Breathable, water resistant, rot resistant, abrasion resistant, etc.
- + Design: Unlimited possibilities of colors and patterns

EXAMPLE



DC SHOES
Snowboarding Boots

WHERE: SuperFabric®
over toe and side

WHY: SuperFabric®
provides high levels
of abrasion resistance
against ice, compacted
snow, and bindings. This
boot is part of the Travis
Rice Signature series.



■ SuperFabric®

EXAMPLE



BLACK YAK®

BLACK YAK
Hiking Shoes

WHERE: SuperFabric®
used on upper

WHY: SuperFabric®
provides abrasion
resistance and weather
resistance in critical area
of shoe subjected to rocks,
brush, water, and mud.



■ SuperFabric®



FOOTWEAR

EXAMPLE



ALTAI™ Boots
Footwear | Tactical

WHERE: SuperFabric® on
uppers and toe

WHY: extreme abrasion
protection in addition to
breathability, comfort,
and design.



SuperFabric®



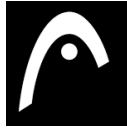
■ SuperFabric®

ALTAI™ Footwear is used in law enforcement and SWAT, and has extended out to hiking and other areas. ALTAI™ Boots use SuperFabric® materials extensively throughout the upper and toe (on most models) for superior performance.



FOOTWEAR

EXAMPLE



HEAD
Tennis Shoe

WHERE: SuperFabric®
across toe area

WHY: Provides extreme
abrasion resistance against
asphalt, clay, and concrete
surfaces.

■ SuperFabric®



■ SuperFabric®

EXAMPLE

VANS®

VANS
Skateboarding Shoes

WHERE: SuperFabric®
used across entire shoe

WHY: Skateboarding is
an extreme sport that
works shoes hard on
concrete and asphalt.
SuperFabric® protects
against scuffs, scraps,
and abrasions. Who can
argue that these shoes
don't look awesome?

Comments about boots made with SuperFabric® materials.

“I have been wearing these boots for two months on patrol. I have been in buildings, on the street, and in the woods, and these boots are working great.”

Brady F.
(Canine officer)

“I love the SuperFabric® upper. It is very durable and water resistant.”

Eric J.
(Wildlife officer)

“Water resistant, my feet never got wet.”

Joseph C.
(Correctional officer)

EXAMPLE

NOBULL NOBULL Cross Trainers



■ SuperFabric®

WHERE: SuperFabric® used on entire outer surface

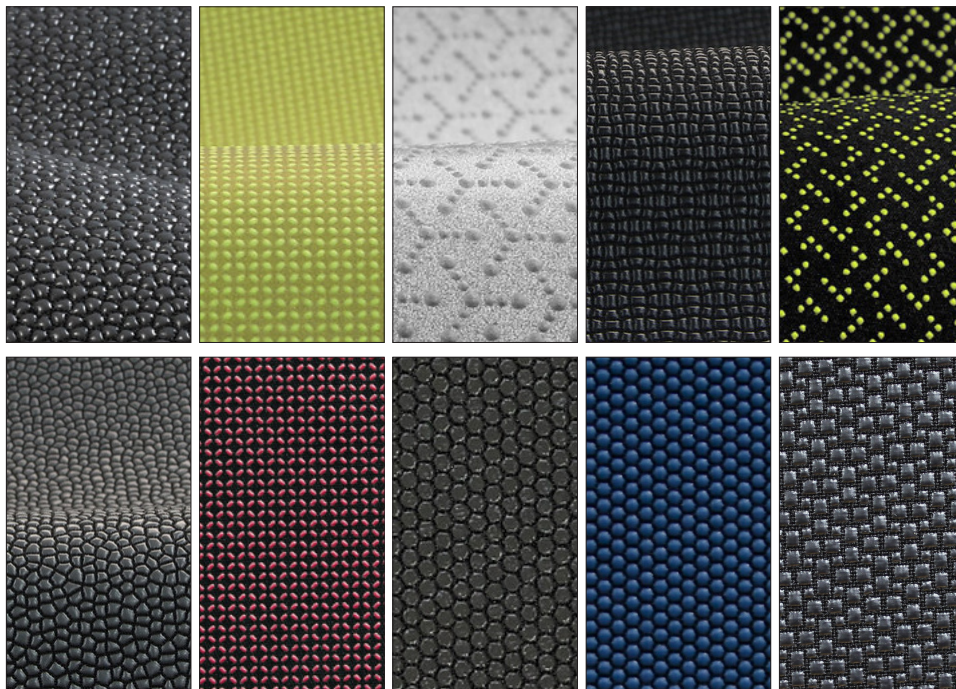
WHY: SuperFabric® provides abrasion resistance and durability, along with an amazing look and style, in this rugged cross-training shoe.



SuperFabric® materials for FOOTWEAR

Footwear covers a wide range of needs, from lightweight running shoes, to industrial work boots, to hiking shoes. SuperFabric® provides materials perfectly tailored for the diversity and performance needed. SuperFabric® is available in *more than 50 varieties*, not to mention customization that is nearly limitless.

A few examples of SuperFabric® materials



DURABLE
STAIN RESISTANT
ABRASION RESISTANT
BREATHABLE

OUTERWEAR



SuperFabric® ADVANTAGES

- + Durable: Provides long life even in extreme conditions such as mountaineering
- + Unique: Like no other material in the world
- + Versatile: Can be used in the upper, toe, tongue, and heel
- + Performance: Breathable, water resistant, rot resistant, abrasion resistant, etc.
- + Design: Unlimited possibilities of colors and patterns

EXAMPLE

K2

K2
Ski/Snowboard jacket

WHERE: SuperFabric® used on shoulders and elbows

WHY: High performance materials are the necessity when it comes to technical jackets such as this K2. SuperFabric® provides abrasion resistance, and scuff protection against the elements and gear.



■ SuperFabric®

EXAMPLE

SLYTECH

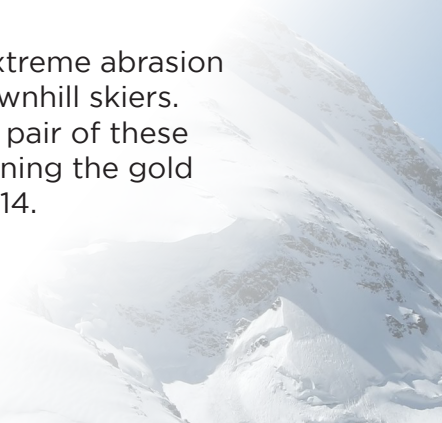
Slytech
Ski Gloves

WHERE: SuperFabric® used across entire back

WHY: Provides extreme abrasion protection for downhill skiers. Ted Licity wore a pair of these on his way to winning the gold medal in Sochi 2014.



■ SuperFabric®



OUTERWEAR

EXAMPLE



Nepa
Ski/Snowboard jacket

WHERE: SuperFabric® used
in key abrasion areas

WHY: This is a high
performance jacket
designed for cold and windy
environments. SuperFabric® is
used in key abrasion and slash
areas.



■ SuperFabric®

EXAMPLE



Lindy Little Joe
Fishing Gloves

WHERE: SuperFabric®
across entire palm and
back thumb

WHY: Regarded as the
best fish handling glove
on the market, this Lindy
glove uses multiple layers
of SuperFabric material
to protect against razor
sharp teeth, gill plates,
hooks, and fillet knives.





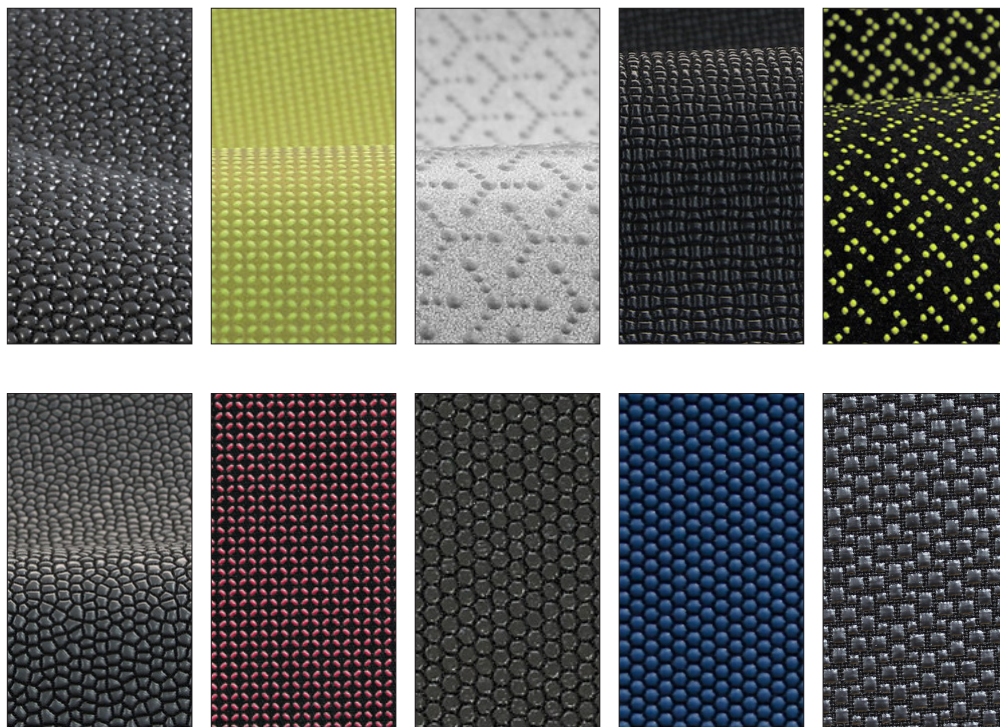
SuperFabric® is used in all kinds of harsh weather and environmental conditions. In the cold and ice of snowboarding, alpine mountaineering, and winter trekking, SuperFabric® has proven not to freeze like other materials. This is largely due to SuperFabric® not holding or trapping water like leather, nylons, etc.

On the other end of the spectrum, SuperFabric® can handle a scorching hot summer day, in running or hiking shoes or in gloves used for fishing.

Whether it's mud, dirt, ice, snow, gravel, rock, or rain, SuperFabric® materials are ready for what comes their way.

SuperFabric® materials for OUTERWEAR

Apparel and gear continue to push the envelope of both performance and design. Lighter, stronger, and more technical fabrics combine with innovative patterns, colors, and style. SuperFabric® provides the ultimate balance that merges high-end performance with unmatched style. SuperFabric® is available in *more than 50 varieties*, not to mention customization that is nearly limitless.



SEATING



SuperFabric® ADVANTAGES

- + Durable: Provides long life even under continuous use such as in public transit
- + Unique: Like no other material in the world
- + Versatile: Can be used in seats, backs, headliner, cargo area, floor mats
- + Performance: Breathable, water resistant, abrasion resistant, stain resistant
- + Design: Unlimited possibilities of colors and patterns

EXAMPLE

bimos

Bimos
Industrial chair

WHERE: SuperFabric®
over entire seat and back

WHY: SuperFabric® provides
abrasion, slash, and stain resistance
from heavy use in an industrial
environment.



■ SuperFabric®

■ SuperFabric®



EXAMPLE



Zero1
Office Chair

WHERE: SuperFabric®
over entire seat and back

WHY: SuperFabric® provides
abrasion, slash, and stain resistance
from heavy use in an industrial
environment.

SEATING



Photo Credit: Ferrari

Ferrari Belinetta using SuperFabric® in the floor mats.



EXAMPLE

Hospital seating

WHERE: SuperFabric® over entire seat and backrest

WHY: SuperFabric® provides abrasion, cut, and stain resistance in seating applications.

Which chair would you rather sit in? The choice is obvious with SuperFabric®. Vinyl fades, hardens and cracks. Whether it's an office chair, bus seat, or seating at an airport, hospital or other public place, SuperFabric® material offers a durable and long-lasting solution for your upholstery applications.

VINYL



SuperFabric®



SuperFabric® materials for SEATING

Seating materials take a lot of daily wear in addition to stains from spills. SuperFabric® has an array of options that are a great fit for seating needs for automotive, public transportation, chairs, and more. SuperFabric® is available in *more than 50 varieties*, not to mention customization that is nearly limitless.



MOTORCYCLE



teiz motorsports

Teiz Motorsports makes a variety of motorcycle apparel with SuperFabric® materials.

SuperFabric® ADVANTAGES

- + Durable: Provides long life even in extreme conditions
- + Unique: Like no other material in the world
- + Versatile: Can be used in the elbows, knees, and shoulders
- + Performance: Breathable, water resistant, rot resistant, abrasion resistant, etc.
- + Design: Unlimited possibilities of colors and patterns

PROTECTION



- Zone 1: Highest risk
- Zone 2: High risk
- Zone 3: Moderate risk
- Zone 4: Lower risk

Motorcyclists are 28 times more likely than passenger car occupants to die in a crash per vehicle mile traveled and eight times more likely to be injured, according to NHTSA*.

SuperFabric® provides some of the highest levels of abrasion resistance in the industry, which is why you will often see it used in the high risk zones (Zone 1).

EXAMPLE



Klim USA
Motorcycle Jacket
and Pants

WHERE: SuperFabric® is used on elbows, shoulders, and knees

WHY: SuperFabric® used on key areas of abrasion helps protect riders from severe injury.



MOTORCYCLE

EXAMPLE



Held
Motorcycle Gloves

WHERE: SuperFabric®
fingers, palm, and other
high wear areas

WHY: SuperFabric® is
used on areas of high
abrasion, helping to
protect riders from
severe injury.



■ SuperFabric®

EXAMPLE



REV'IT!
Motorcycle Jackets and Gloves

WHERE: SuperFabric® on elbows,
shoulders, and palms

WHY: SuperFabric® is used for
high levels of abrasion
resistance.

EXAMPLE



FEEL THE RIDE

Hein Gericke
Motorcycle Jacket and Gloves

WHERE: SuperFabric® on
elbows and shoulder

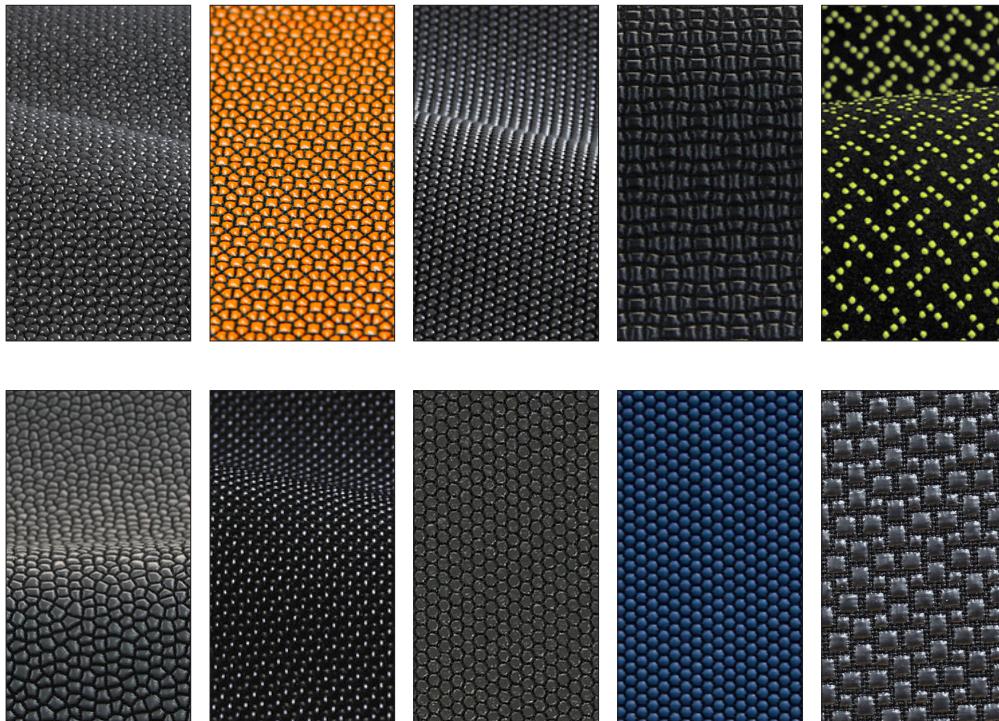
WHY: SuperFabric® is used
for high levels of abrasion
resistance.



SuperFabric®

SuperFabric® materials for MOTORCYCLE

Motorcycle riding is a dangerous activity that can put protective equipment and materials to the test. SuperFabric® provides a number of materials that are performance driven. SuperFabric® can be further customized without compromising high levels of abrasion resistance, slash resistance, or other performance features.



BAGS AND PACKS

EXAMPLE



MYSTERY RANCH

Mystery Ranch Backpacks

WHERE: SuperFabric® on the front panel

WHY: A custom SuperFabric® was developed which incorporates the company's logo and provides abrasion resistance.



EXAMPLE



Amabilis Stash capsule

WHERE: SuperFabric® on the entire bottom half

WHY: Used as a carrying pouch.



■ SuperFabric®

EXAMPLE



The North Face
Backpacks

WHERE: SuperFabric® in
high wear area (tool)

WHY: SuperFabric® provides
abrasion resistance from tools
such as picks and axes.

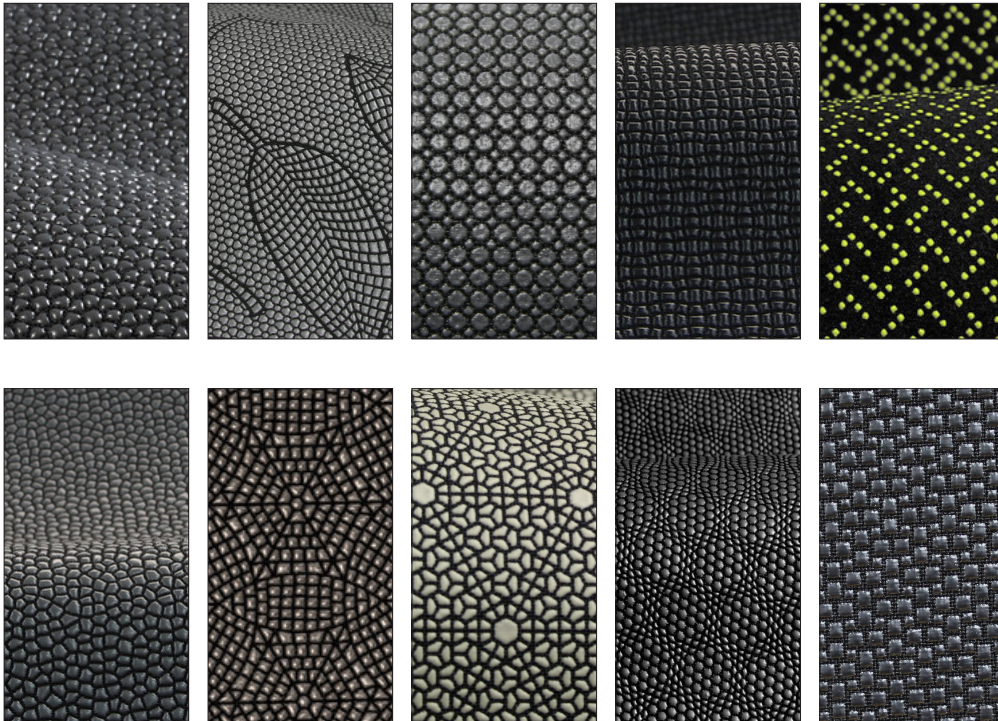


■ SuperFabric®

Photo credit: climbinggearreviews.com

SuperFabric® materials for Bags and Packs

Let's face it, bags get tossed around, knocked over, scrunched, and in general...abused. SuperFabric® is a great material to keep bags and packs functional.



MILITARY

SuperFabric® ADVANTAGES

- + Durable: Provides long life even in extreme conditions such as fast rope rappelling
- + Unique: Like no other material in the world
- + Versatile: Can be used in footwear, jackets, pants, and vehicles.
- + Performance: Breathable, water resistant rot resistant, abrasion resistant, etc.
- + Easy to clean, highly breathable

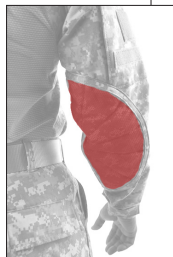
EXAMPLE



Massif
Army Combat Shirt

WHERE: SuperFabric® on
the elbows

WHY: A flame retardant
SuperFabric® is used on
the elbows to provide
abrasion and flame
retardance.



■ SuperFabric®



■ SuperFabric®



EXAMPLE



DriFire
Combat shirt and pants

WHERE: used on the
elbows and knees

WHY: A flame retardant
SuperFabric® is used
on elbows and knees
to provide abrasion
resistance and flame
retardance.

MILITARY

EXAMPLE



Military Uniforms

WHERE: SuperFabric® on knees and elbows

WHY: SuperFabric® provides abrasion resistance against rough terrain, sand, dirt, and rock.



SuperFabric® materials for Military

SuperFabric® provides superior protection in key wear areas. In addition to apparel, SuperFabric® can be used in seats, covers, razor wire gloves, and more.



INDUSTRIAL



SuperFabric® ADVANTAGES

- + High levels of cut resistance
- + High levels of abrasion resistance
- + Use in gloves, aprons, arm guards, and covers
- + Often exceeds the highest levels of safety standards
- + Washable, breathable, stain resistant

INDUSTRIAL

EXAMPLE

HexArmor®

HexArmor
Gloves, Aprons and Arm Guards

WHERE: SuperFabric® in
high safety risk areas

WHY: SuperFabric® provides cut,
abrasion, and puncture resistance
in a variety of safety products such
as gloves, arm guards, and aprons.

A few examples of the many industrial
safety products made by HexArmor



EXAMPLE

HexArmor®

HexArmor®
Mechanics Gloves

WHERE: SuperFabric® in high safety risk areas in palm and back of hand

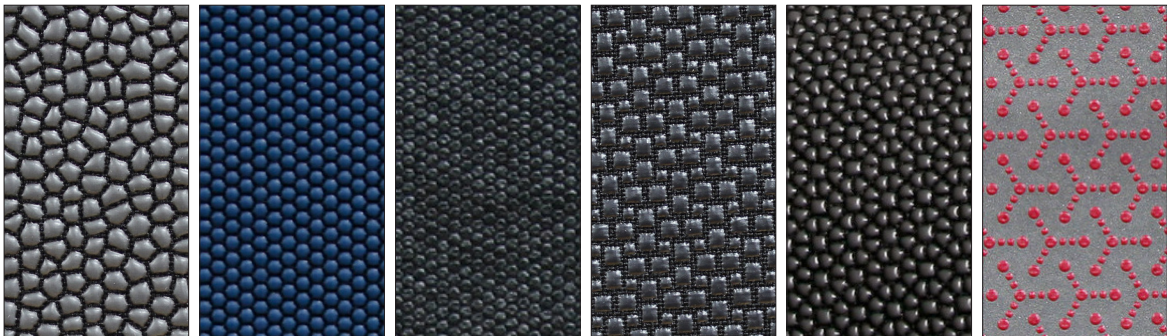
WHY: SuperFabric® provides cut and abrasion resistance.



■ SuperFabric®

SuperFabric® materials for Industrial

SuperFabric® brings superior protection in the industrial safety market. From materials with high abrasion resistance, to multiple layers that provide puncture resistance, to reflective materials designed to provide high visibility, SuperFabric® offers performance solutions for industrial safety products.



SPECIALIZED

EXAMPLE



DIVE RITE®

Dive Rite
Scuba/Diving equipment

WHERE: SuperFabric® on
outer jacket of buoyancy
compensator.

WHY: SuperFabric provides
critical protection from life-
threatening slashes caused by
sharp rock and coral.

Photo credit: Jon-Layslider



SuperFabric®

SuperFabric® materials for specialty applications

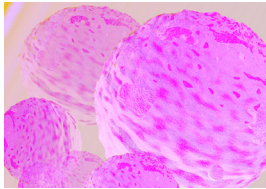


SuperFabric® Am99™

SuperFabric® adds a **NEW** member to its portfolio of product offerings with the addition of its SuperFabric® Am99™ (**Am99™**).

SuperFabric® materials are already known world-wide for their performance properties such as durability, stain resistance, breathability, quick drying, and more. SuperFabric® attains this remarkable combination of properties by having an array of closely spaced, engineered guard plates that creates a **LOCALLY HARD, GLOBALLY FLEXIBLE** fabric.

NOW, ***Am99™**, pushes the boundaries by adding antimicrobial functionality while still maintaining the other inherent features.



Microbe Resistant
Odor-Resistant
Mold & Mildew Resistant



Durable
Stain Resistant
Quick Drying

AND more!!!

The antimicrobial agent used in **Am99™** kills and retards the growth of these types of microbes on SuperFabric®



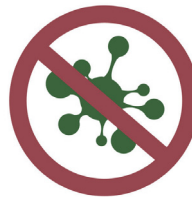
bacteria



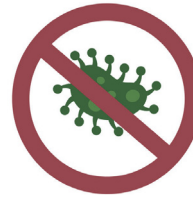
fungi



mold



mildew



algae

Am99™ is formulated with antimicrobial properties to protect the SuperFabric® itself from stains, odors, and damage caused by bacteria and other microbes. Antimicrobial protection is limited to the SuperFabric® material. Higher Dimension Materials makes no direct or implied claims to protecting users or providing other health benefits.

This revolutionary textile uses IONPURE antimicrobial agent (EPA Registration Numbers 73148-1 through 73148-3 and 73148-5 through 73148-8) embedded into its guard plates, resulting in a durable treatment that does not wash off under normal laundering conditions, does not leach and is highly resistant to being abraded off.

SuperFabric is a registered trademark of HDM, Inc.
Am99 is a trademark of HDM, Inc.
IONPURE is a registered trademark of ISHIZUKA GLASS CO., LTD.



Facebook.com/SuperFabric



Twitter.com/SuperFabric



Linkedin.com/company/SuperFabric



Instagram.com/superfabric_official



YouTube.com/SuperFabricNews



SuperFabric.com

SuperFabric® materials are not puncture, abrasion, or cut proof, etc. SuperFabric® materials are available in a variety of configurations and intended to be matched with suitable applications. Branding agreement is needed for the use of SuperFabric® materials.

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SuperFabric® is a registered trademark of Higher Dimension Materials, Inc. in the United States.

Pat. 5906873, other patents pending.

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