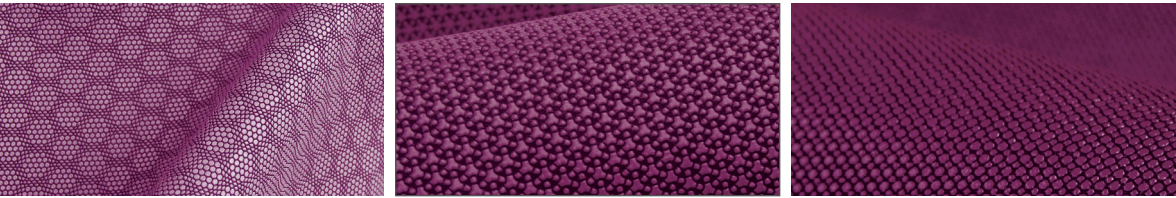




Information Guide

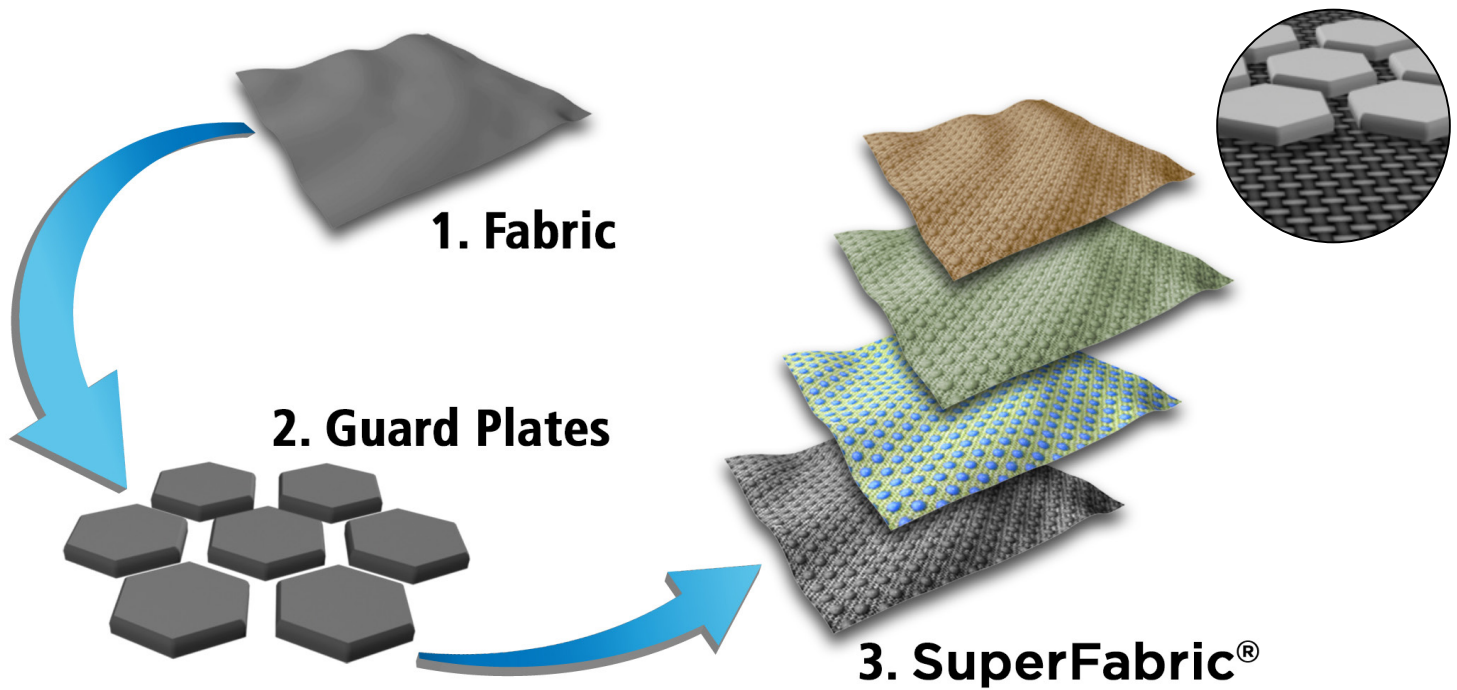
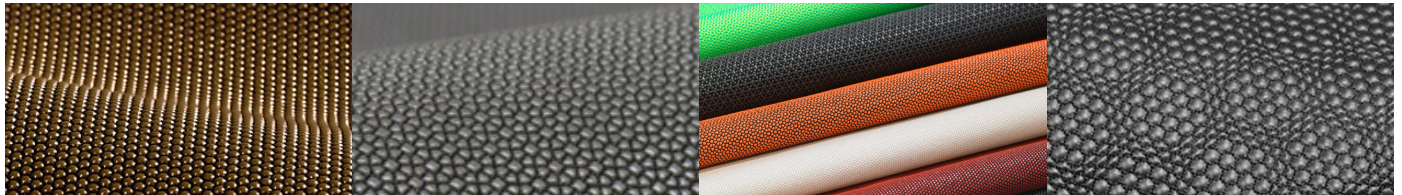
2022



UNRIVALED PERFORMANCE. UNMATCHED DURABILITY. UNLIMITED POSSIBILITIES.

Introduction to SuperFabric® Material

SuperFabric® technology starts with 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 guard plates are hard. Globally, the plates allow full motion which gives SuperFabric® a feel similar to traditional fabrics.



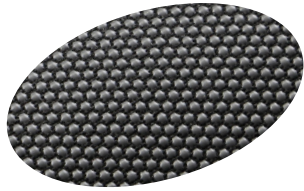
Side View: Small guard plates allow a high degree of flexibility while providing superior protection



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

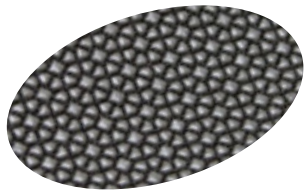
Types of SuperFabric® Material

We have created many types of SuperFabric® materials, all built around the same core technology. These materials are designed for a range of performance and attributes that helps showcase the versatility for which SuperFabric® is known.



SuperFabric® Am99™

Am99™ is our newest product line featuring antimicrobial properties while maintaining other inherent features our customers love about SuperFabric® materials. Am99™ is microbe resistant, odor resistant, and mold and mildew resistant.



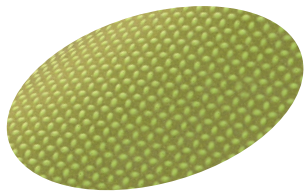
PERFORMANCE SuperFabric®

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



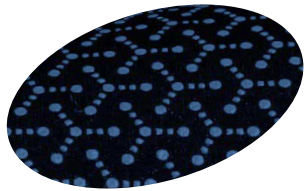
LIGHTWEIGHT SuperFabric®

These SuperFabric® materials are very lightweight, breathable, and flexible. They are ideal for apparel, footwear, gloves, and more. Another benefit of lightweight SuperFabric® is that it does not snag, unlike knit materials such as nylon.



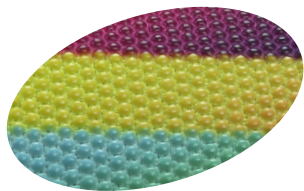
REFLECTIVE SuperFabric®

Light-reflecting SuperFabric® is highly reflective and well suited for safety applications such as work vests, jackets, shoes, and more. This SuperFabric® material provides high visibility for highway workers and others who work in hazardous situations.



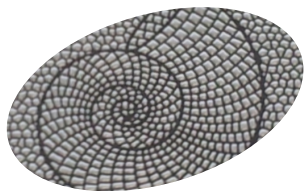
STRETCH SuperFabric®

Many applications require fabric that has a little bit of stretch. Whether it's used for apparel, bags, seating, or forming over hard objects such as cases, our stretch SuperFabric® provides reliable performance in an attractive, supple fabric.



MULTICOLOR SuperFabric®

With multicolor SuperFabric®, a stunning variety of colors and patterns is possible. Multicolor SuperFabric® provides continuous color sublimated onto the guard plates, resulting in a vibrant product your customers will appreciate.



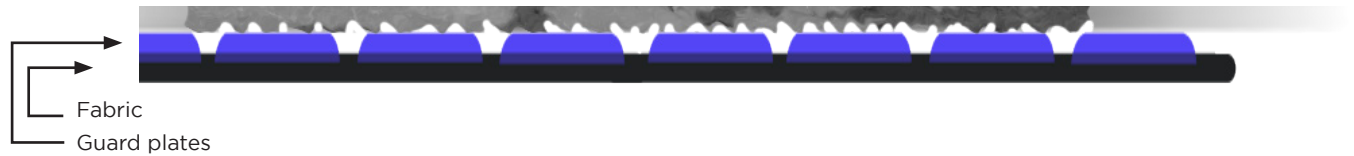
CUSTOM SuperFabric®

In many applications, branding that stands out is required for it to be the most effective. Custom SuperFabric® can be designed to incorporate company logos, distinctive patterns, unique colors and textures, and more.

Benefits of SuperFabric® Material

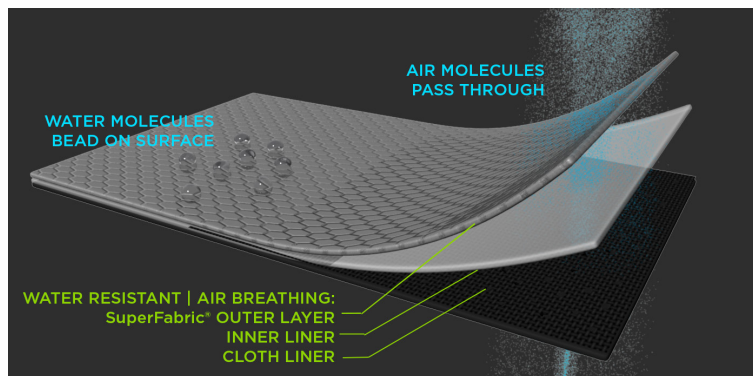
A BRASION RESISTANT

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



B REATHABLE AND WATER RESISTANT

Breathability: 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, many SuperFabric® materials are both air breathing and water repellent.



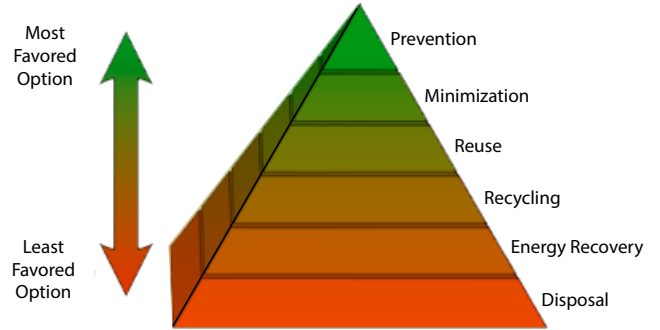
S TAIN RESISTANT

SuperFabric® is highly resistant to stains from mud, dirt, grease, and liquids such as oil, sauces, and more. This ALTAI™ boot, made with SuperFabric® material, resists mud and is easy to rinse clean with a garden hose or under a running faucet.



ENVIRONMENTALLY FRIENDLY MANUFACTURING

SuperFabric® offers a preventative solution, which represents the highest level of environmental protection. The durability of SuperFabric® extends the product life of finished goods, thereby minimizing the need to produce and dispose of replacement products.



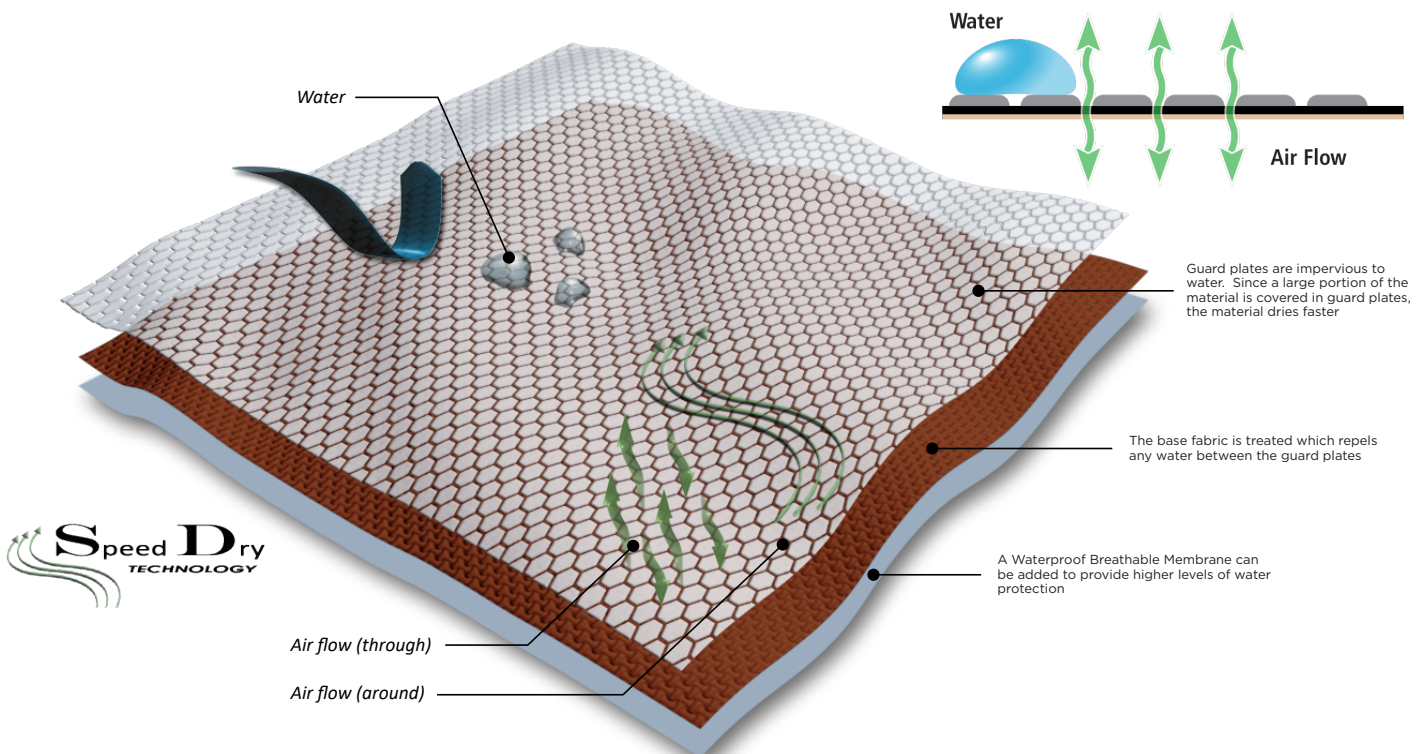
SLASH RESISTANT

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



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.



SuperFabric® Am99™

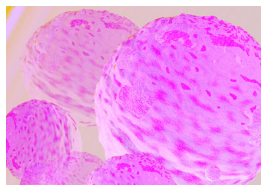


SuperFabric® Am99™

SuperFabric® adds a **NEW** member to its portfolio of product offerings with the addition of its SuperFabric® 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, *SuperFabric® Am99™, pushes the boundaries by adding antimicrobial functionality while still maintaining the other inherent features.



Microbial Resistant
Odor Resistant
Mold & Mildew Resistant



Durable
Stain Resistant
Quick Drying

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



bacteria



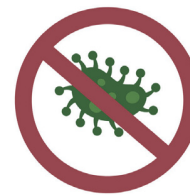
fungi



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.

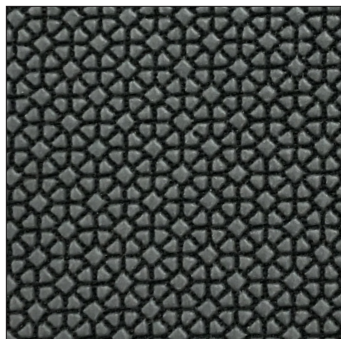
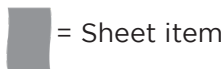
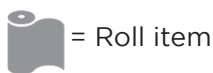
SuperFabric is a registered trademark of HDM, Inc.
Am99 is a trademark of HDM, Inc.

IONPURE is a registered trademark of ISHIZUKA GLASS CO., LTD.

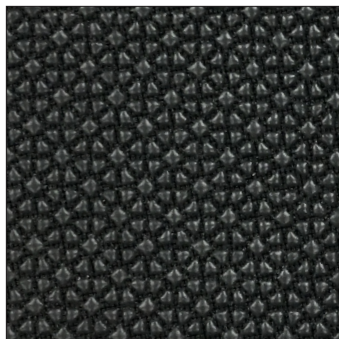
SuperFabric® Materials

In the following pages you will find a variety of SuperFabric® brand materials that address a range of performance and attribute needs. New SuperFabric® materials are constantly being developed, including ones with new patterns, colors, fabric, and more. For reference, please use the item number when requesting more information about a particular SuperFabric® brand material. Contact your SuperFabric® sales representative for information, to discuss custom options or request samples.

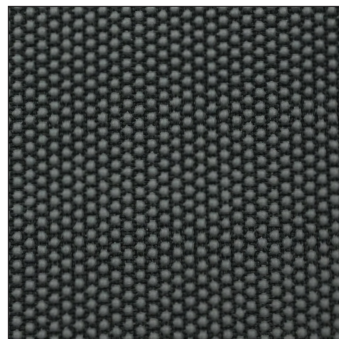
Item #, resin color, pattern, base fabric
Items are shown slightly enlarged



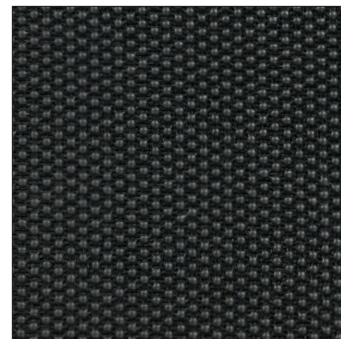
600100-960
Dolphin Gray
Penta 83/21-350
Black Poly 600D



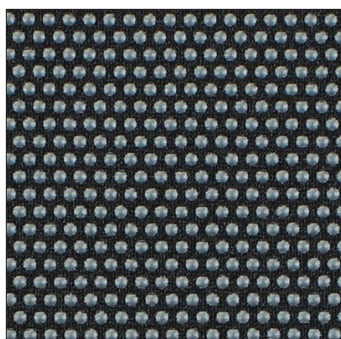
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Mystic Black
Penta 83/21-350
Black Poly 600D



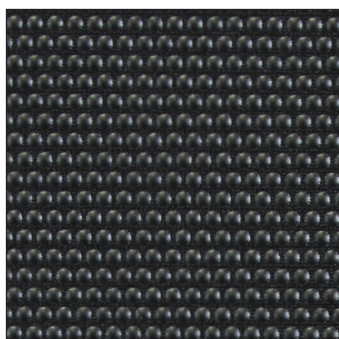
600107-900
Pewter Gray
Hex 60/18-300
Black Poly 600D



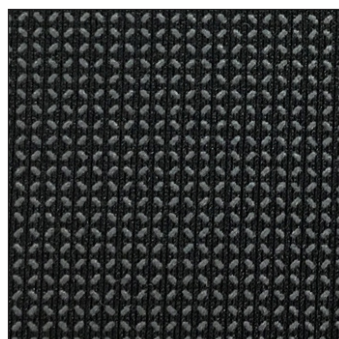
600107-905
Dusky Black
Hex 60/18-300
Black Poly 600D



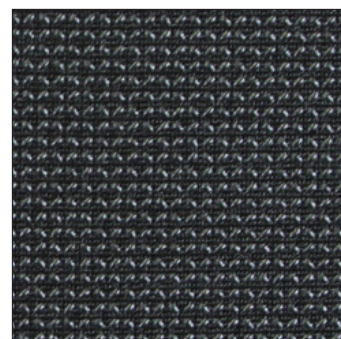
600120-900
Pewter Gray
Dot 80/40-300
Stretch Nylon/Spandex



600120-905
Dusky Black
Dot 80/40-300
Stretch Nylon/Spandex



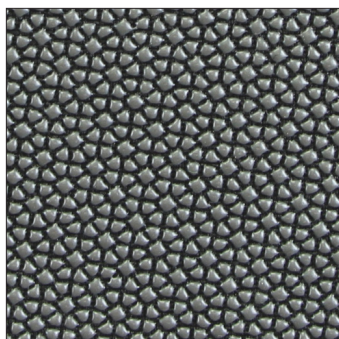
600135-900
Pewter Gray
XGP 60/30
Black Poly 100D



600135-905
Dusky Black
XGP 60/30
Black Poly 100D



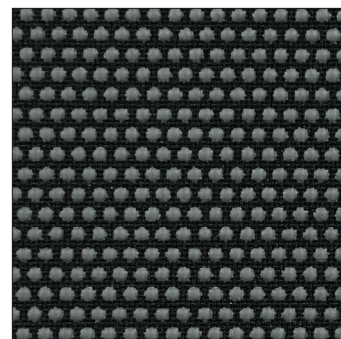
600147-780
Nutmeg
Hex 80/18
Brown Poly 600D



600195-960
Dolphin Gray
Mini Penta
Black Poly 600D



600195-962
Mystic Black
Mini Penta
Black Poly 600D

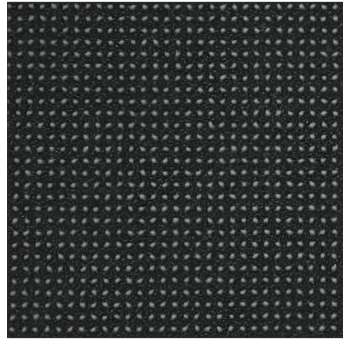


600200-900
Pewter Gray
Dot 80/40-300
Black Poly 600D

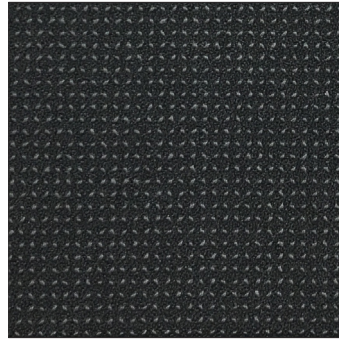




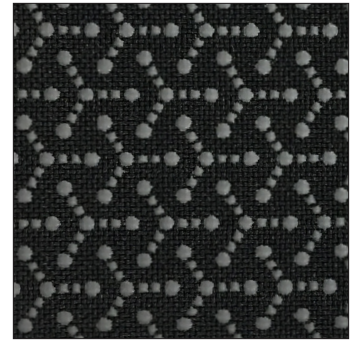
600200-905
Dusky Black
Dot 80/40-300
Black Poly 600D



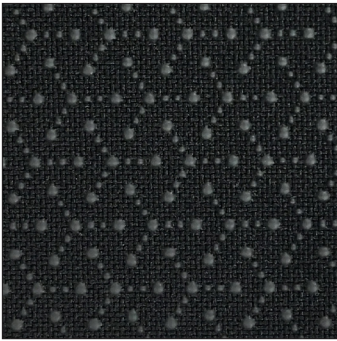
600256-900
Pewter Gray
XGP Small
Black Poly 100D



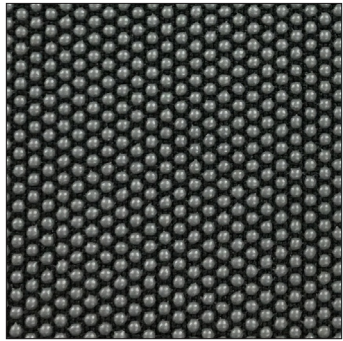
600256-905
Dusky Black
XGP Small
Black Poly 100D



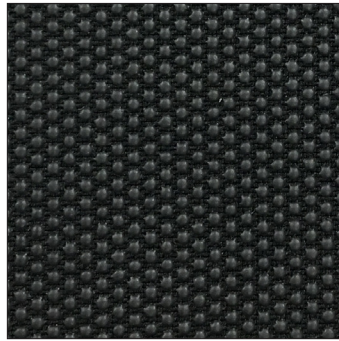
600815-900
Pewter Gray
Jax
Black Poly 600D



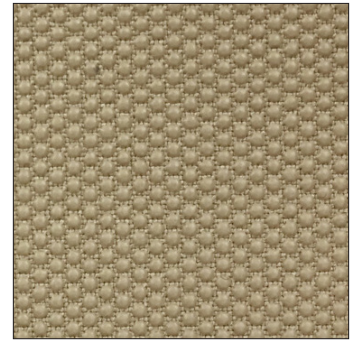
600815-905
Dusky Black
Jax
Black Poly 600D



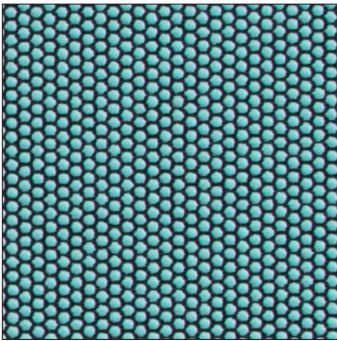
601050-620
Stormcloud Gray
Hex 80/18
Black Poly 600D



601050-905
Dusky Black
Hex 80/18
Black Poly 600D



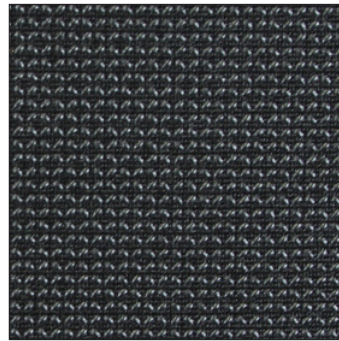
601070-925
Sandstone Tan
Hex 80/18
Tan Poly 600D



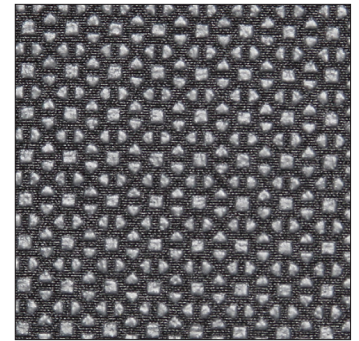
SuperFabric® Am99™
601200-096
Hex 60/18-300 Dream Blue
Black Poly 100D



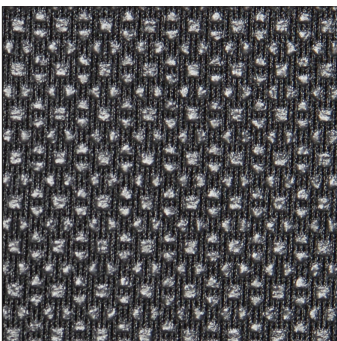
700105-900
Pewter Gray
XGP 60/30
Stretch Nylon/Spandex



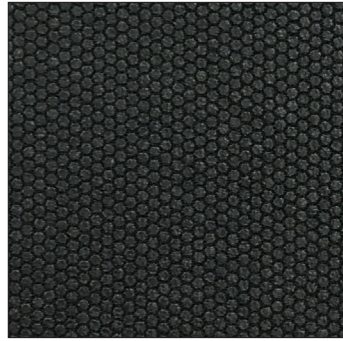
700105-905
Dusky Black
XGP 60/30
Stretch Nylon/Spandex



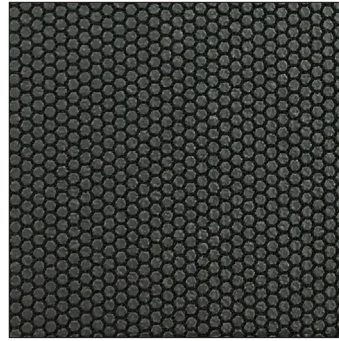
700108-960
Dolphin Gray
80/28-400 Penta
Stretch Nylon/Spandex



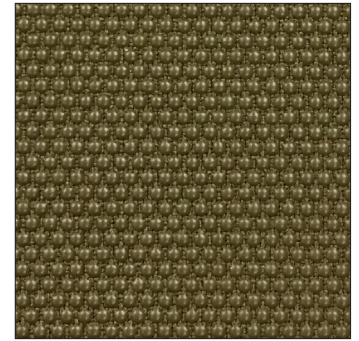
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Mystic Black
80/28-400 Penta
Stretch Nylon/Spandex



700149-700
Raven Black
Hex 60/10-200
Black Poly 100D

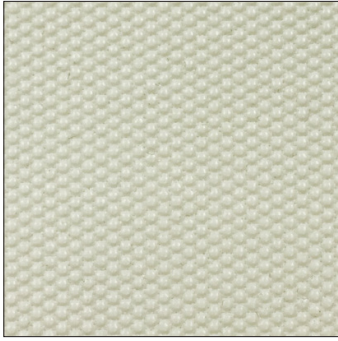


700149-800
Charcoal Gray
Hex 60/10-200
Black Poly 100D

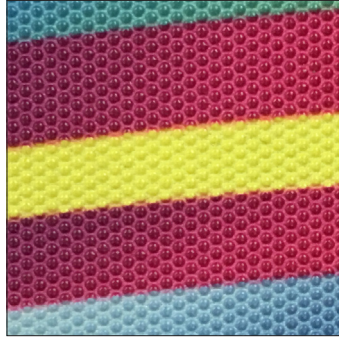


700192-638
Coyote Brown
Hex 80/14-400
Coyote Poly 600D

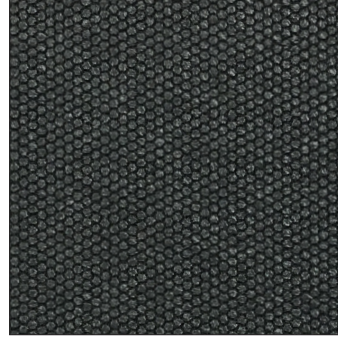




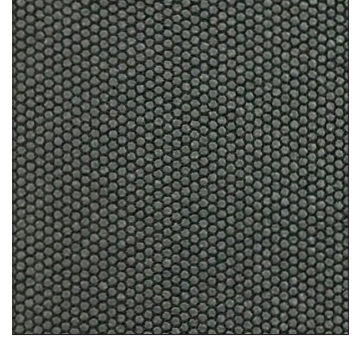
700300-722
Eggshell White
Hex 70/08-400
White Poly 600D



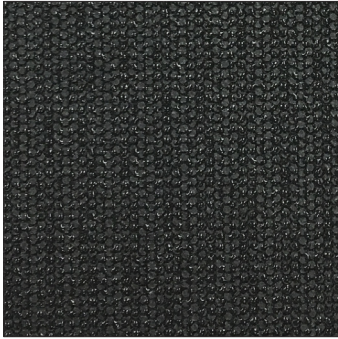
700305-722
Multi-color Example
Hex 70/08-400
White Poly 600D



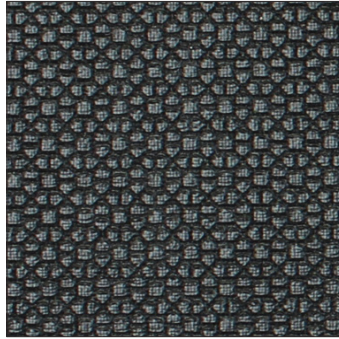
700538-700
Raven Black
Hex 50/05-200
Black Poly 100D



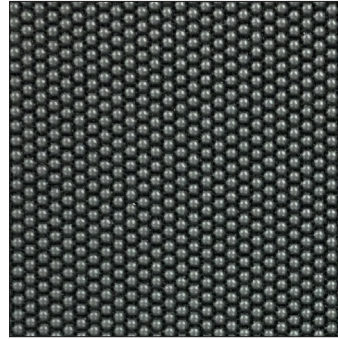
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Charcoal Gray
Hex 50/05-200
Black Poly 100D



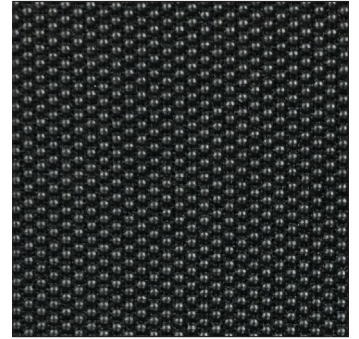
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Raven Black
Hex 50/05-200
Black Poly 100D+Silicone



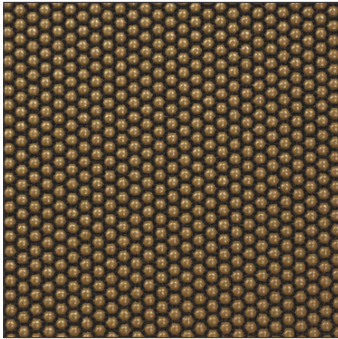
700590-701
Rough Black
Penta 83/11-400
Black Poly 600D



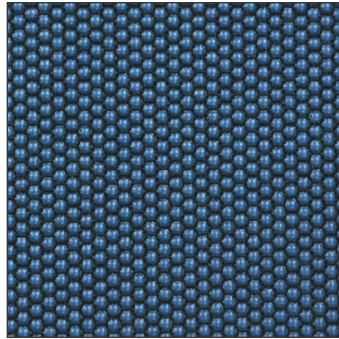
700665-620
Stormcloud Gray
Hex 70/08-400
Black Poly 600D



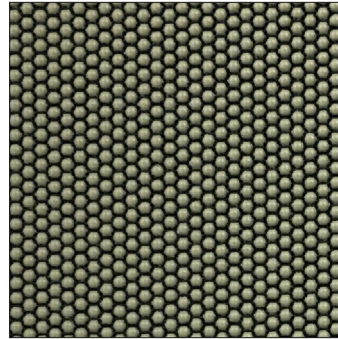
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Onyx Black
Hex 70/08-400
Black Poly 600D



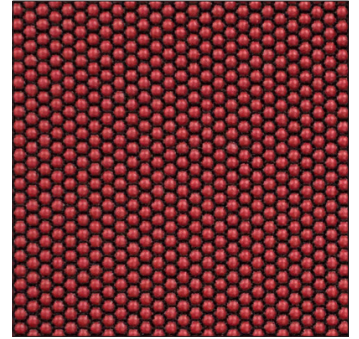
700665-780
Nutmeg
Hex 70/08-400
Black Poly 600D



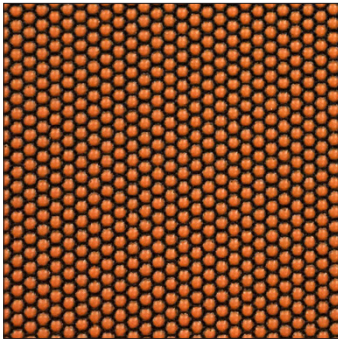
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Slate Blue
Hex 70/08-400
Black Poly 600D



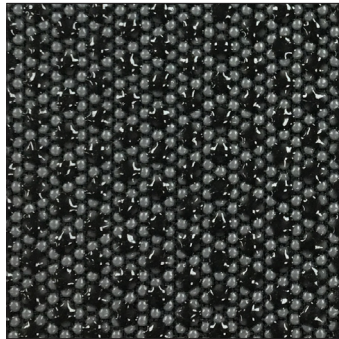
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Mushroom
Hex 70/08-400
Black Poly 600D



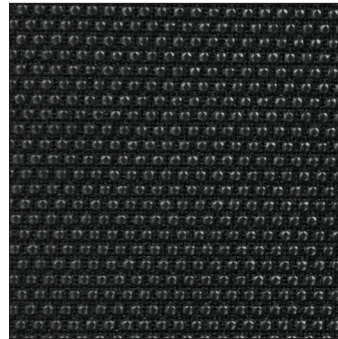
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Red Wine
Hex 70/08-400
Black Poly 600D



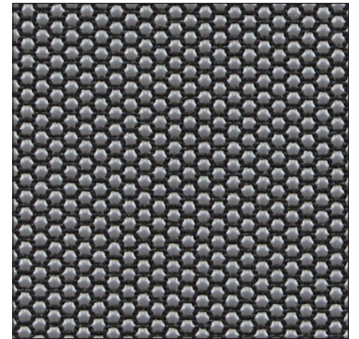
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Pumpkin
Hex 70/08-400
Black Poly 600D



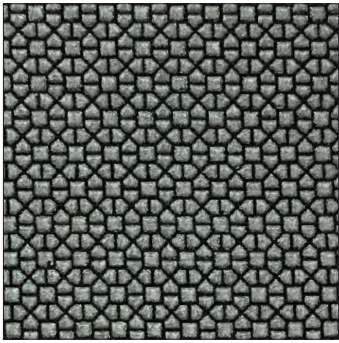
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Hex 70/08-400
Black Poly 600D+Silicone



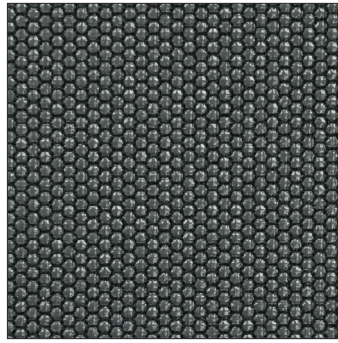
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Onyx Black
Hex 80/14-400
Black Poly 600D



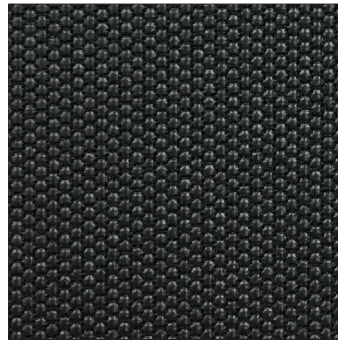
SuperFabric® Am99™
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Black Poly 600D



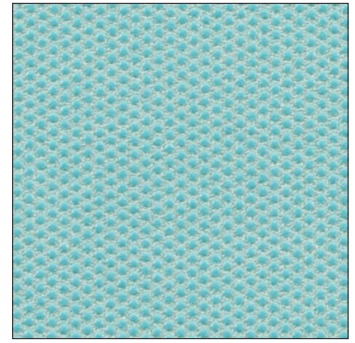
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Silver
Penta 83/11-400
Black Poly 600D



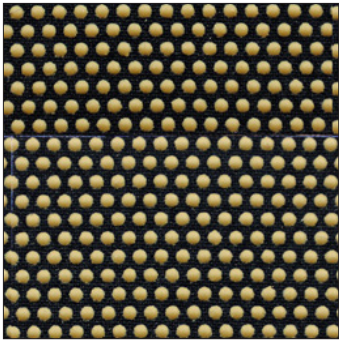
701020-900
Pewter Gray
Hex 60/10-200
Black Poly 600D



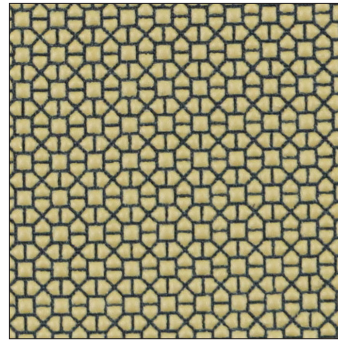
701020-905
Dusky Black
Hex 60/10-200
Black Poly 600D



SuperFabric® Am99™
701500-096
Hex 50/18-300 Dream Blue
White Poly 600D



SuperFabric® AmFr™
720105-065
Dot 80/40-300
Multicam AmFr™
600D FR Black Poly



SuperFabric® AmFr™
720115-065
Penta 83/11-400
Multicam AmFr™
600D FR Black Poly

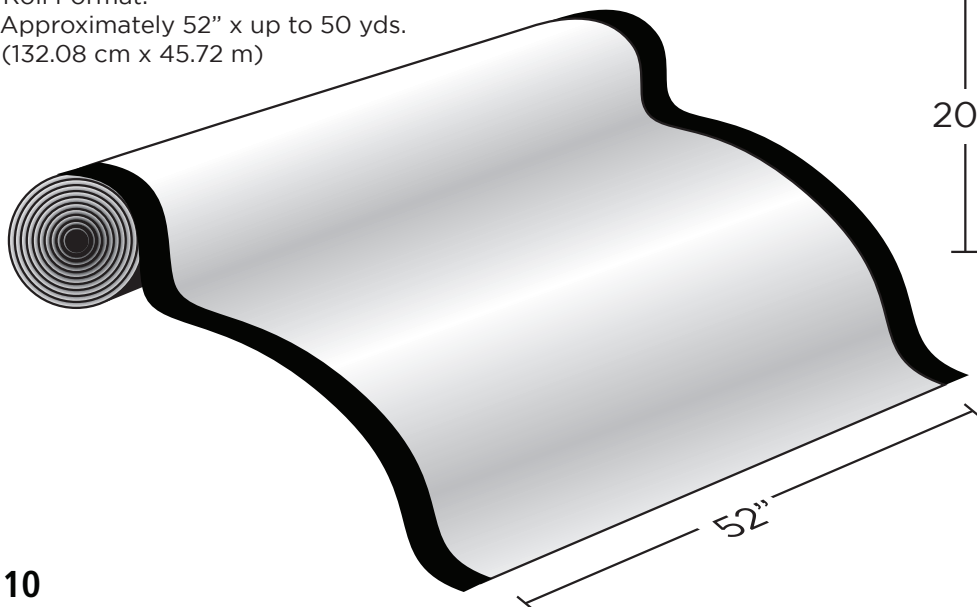


SuperFabric® AmFr™
720135-065
Hex 60/18-300
Multicam AmFr™
600D FR Black Poly

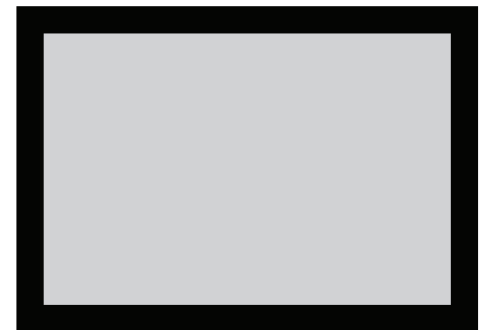
SuperFabric® material Formats:

SuperFabric® materials are available in rolls or sheets. Item numbers that begin with 6 are roll items. Item numbers that begin with 7 are sheet items. The measurements indicate the actual areas of printed guard plates, not the sizes of the fabric they are printed on. Black edges indicate approximate areas of unprinted fabric.

Roll Format:
Approximately 52" x up to 50 yds.
(132.08 cm x 45.72 m)



30"



Sheet Format:
Approximately 20" x 30"
(50.8 cm x 76.2 cm)

* Semi-matte finish
 ** Semi-gloss finish
 *** Matte finish

GUARD PLATE COLORS

BASE FABRIC COLORS

600D POLYESTER

100D POLYESTER

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STRETCH NYLON/ SPANDEX



BLACK

3-LAYER WATERPROOF POLYESTER



BLACK

NEOPRENE 1MM



BLACK

600D POLYESTER WITH P/U BACKING



BLACK

PANTONE numbers represent the closest visual match to actual resin color. Perceived color will depend on many factors including lighting, base fabric color, pattern, etc.

†Available as special-order only.

‡Fire-resistant guard plates. Available as special-order only.



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This information guide was developed to show some of the properties and attributes of SuperFabric® materials. There may be variations from lot to lot and sample quantity to production. Such variations include, but are not limited to, color, performance, and feel of the guard plates, as well as fabric variations. Pricing, performance, and availability are subject to change.

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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Pat. 5906873, other patents pending.

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