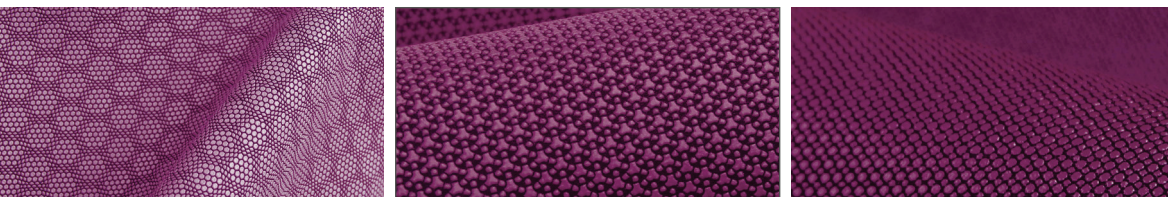




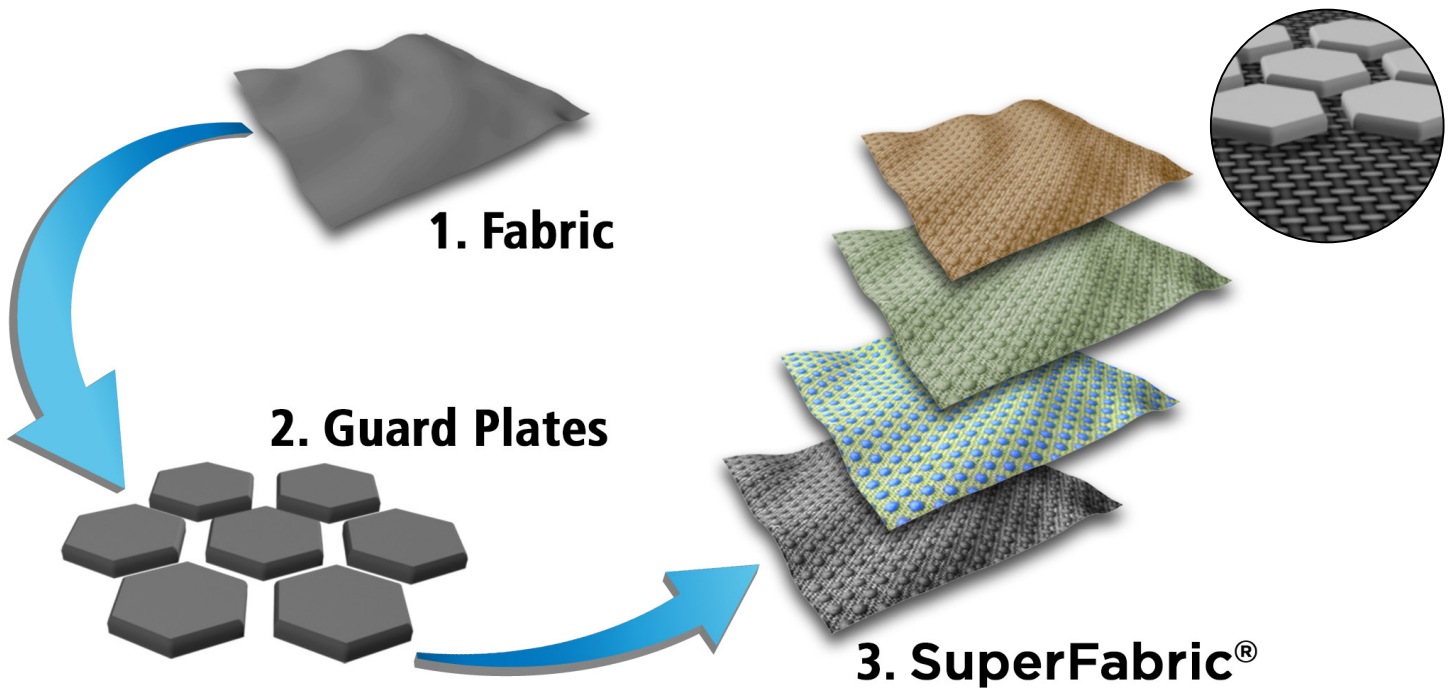
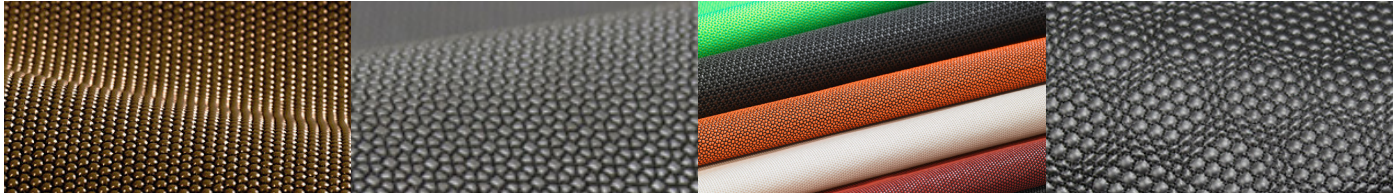
# Information Guide



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, 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.



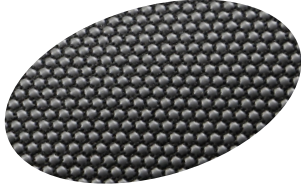
Side View: Small guard plates allow a high degree of flexibility while providing superior protection



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

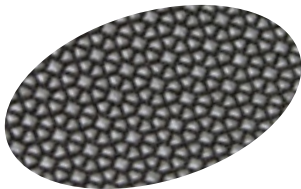
# Types of SuperFabric® Material

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.



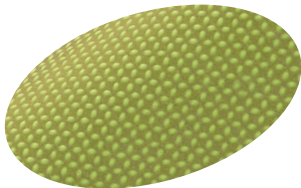
## **PERFORMANCE SuperFabric®**

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.



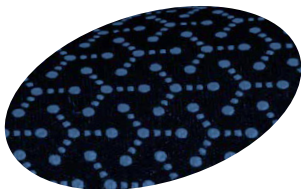
## **LIGHTWEIGHT SuperFabric®**

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.



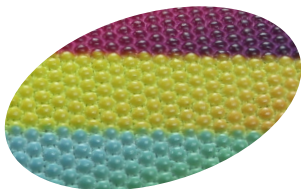
## **REFLECTIVE SuperFabric®**

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.



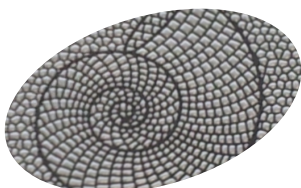
## **STRETCH SuperFabric®**

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.



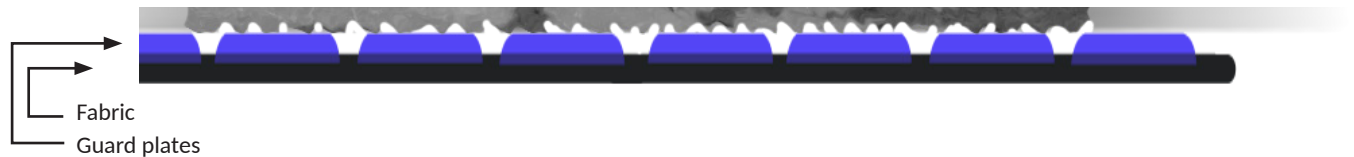
## **CUSTOM SuperFabric®**

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

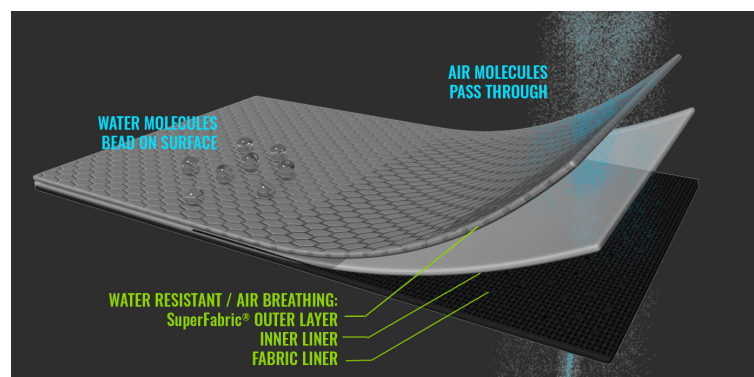
## • ABRASION RESISTANT

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.



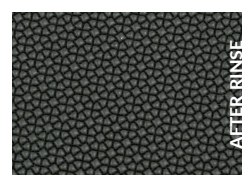
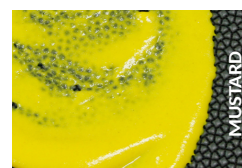
## • BREATHABLE and WATER RESISTANT

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.



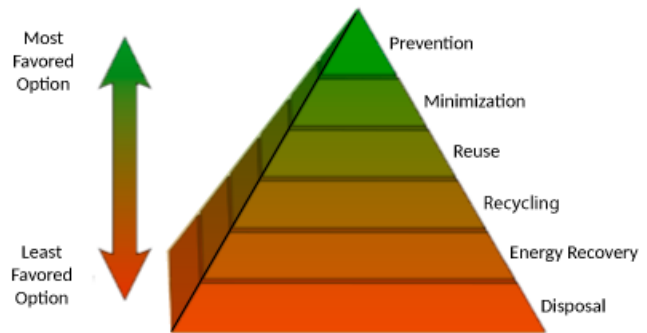
## • STAIN RESISTANT

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.



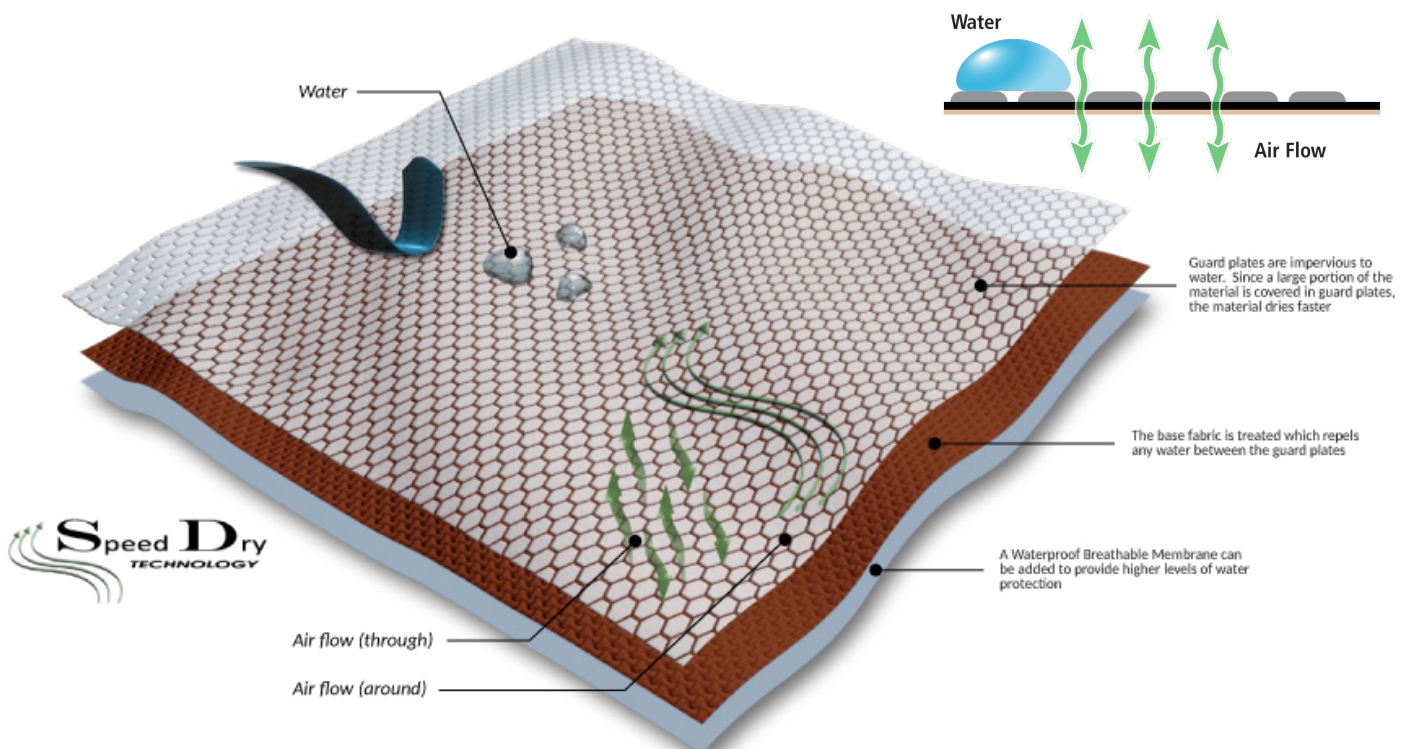
## • SLASH RESISTANT

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® adds an exciting offering to its selection of products with the addition of SuperFabric®-Am99™.

SuperFabric® materials are already known 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.

SuperFabric®-Am99™ offers these benefits:

- Microbe Resistant
  - Odor-Resistant
  - Mold and Mildew Resistant
  - Durable
  - Stain Resistant
  - Quick Drying
- 

Antimicrobial agents used in Am99™ protects its surface from damage or deterioration by microbes.

- Bacteria
- Fungi
- Mold
- Mildew
- Algae

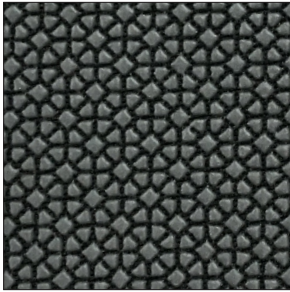
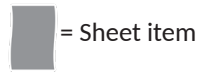
\* SuperFabric®-Am99™ is formulated with antimicrobial properties to protect the SuperFabric® itself from stains, odors, and damage caused by bacteria and other microbes. Antimicrobial protection is limited to the SuperFabric® material. Higher Dimension Materials makes no direct or implied claims to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

This revolutionary textile contains one or more of silver glass (EPA Registration Number 73148-1) embedded into its guard plates, and/or Silane Quaternary Ammonium Compounds agents (EPA Registration Number 83019-1, EPA Registration Number 83019-2, EPA Registration Number 83019-3, EPA Registration Number 83019-4) that are either incorporated into the guard plates or chemically bound to the substrate fabric, 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.

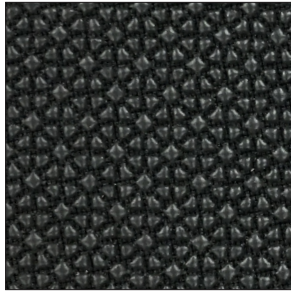
# SuperFabric® Materials

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.

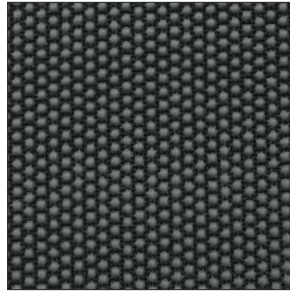
Item #, resin color, pattern, base fabric  
Items are shown slightly enlarged



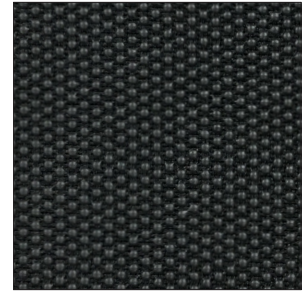
**600100-960**  
Dolphin Gray  
Penta 83/21-350  
Black Poly 600D



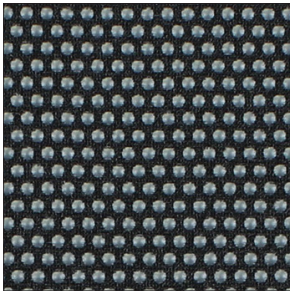
**600100-962**  
Mystic Black  
Penta 83/21-350  
Black Poly 600D



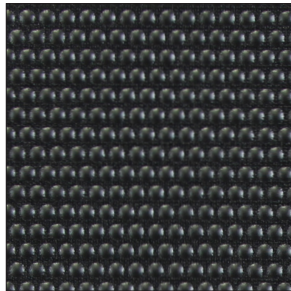
**600107-900**  
Pewter Gray  
Hex 60/18-300  
Black Poly 600D



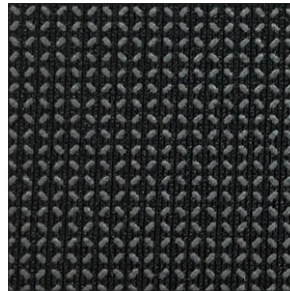
**600107-905**  
Dusky Black  
Hex 60/18-300  
Black Poly 600D



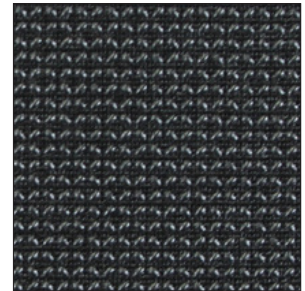
**600120-900**  
Pewter Gray  
Dot 80/40-300  
Stretch Nylon/Spandex



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



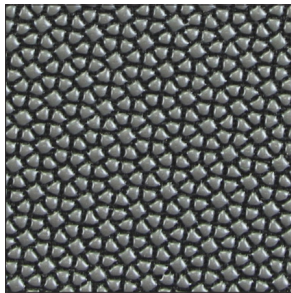
**600135-900**  
Pewter Gray  
XGP 60/30  
Black Poly 100D



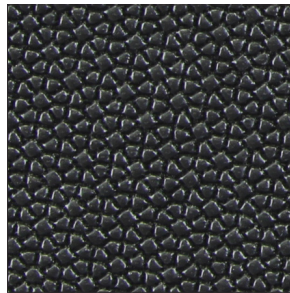
**600135-905**  
Dusky Black  
XGP 60/30  
Black Poly 100D



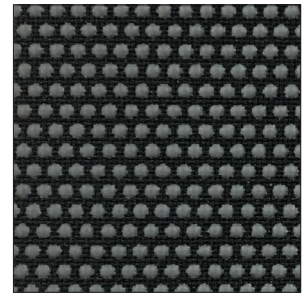
**600147-780**  
Nutmeg  
Hex 80/18  
Brown Poly 600D



**600195-960**  
Dolphin Gray  
Mini Penta  
Black Poly 600D



**600195-962**  
Mystic Black  
Mini Penta  
Black Poly 600D

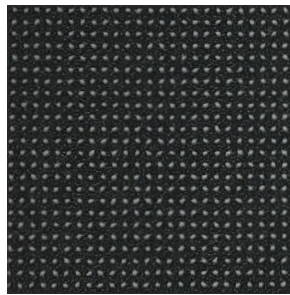


**600200-900**  
Pewter Gray  
Dot 80/40-300  
Black Poly 600D





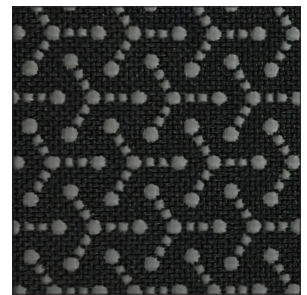
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Dot 80/40-300  
Black Poly 600D



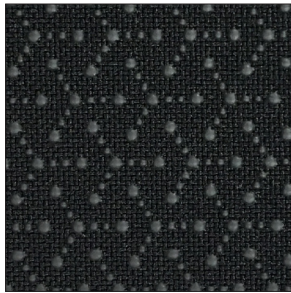
**600256-900**  
Pewter Gray  
XGP Small  
Black Poly 100D



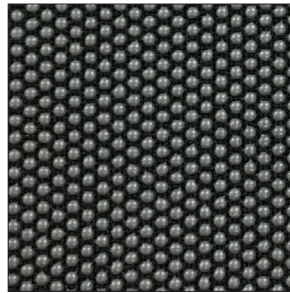
**600256-905**  
Dusky Black  
XGP Small  
Black Poly 100D



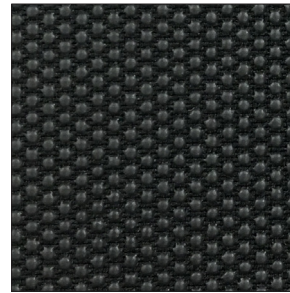
**600815-900**  
Pewter Gray  
Jax  
Black Poly 600D



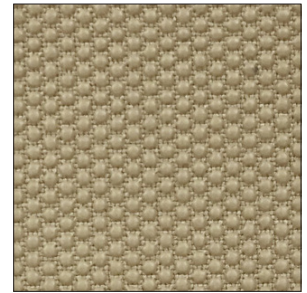
**600815-905**  
Dusky Black  
Jax  
Black Poly 600D



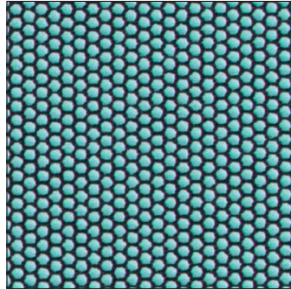
**601050-620**  
Stormcloud Gray  
Hex 80/18  
Black Poly 600D



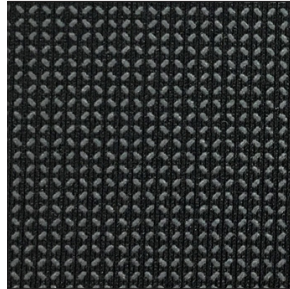
**601050-905**  
Dusky Black  
Hex 80/18  
Black Poly 600D



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



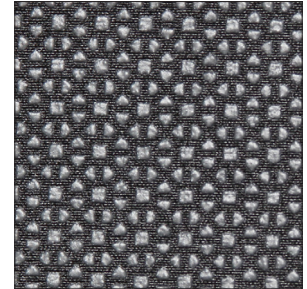
**SuperFabric® Am99™**  
**601200-096**  
Hex 60/18-300 Dream  
Blue  
Black Poly 100D



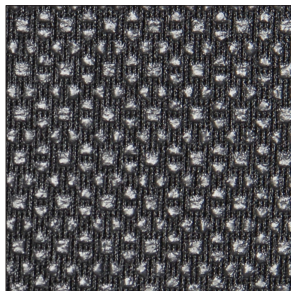
**700105-900**  
Pewter Gray  
XGP 60/30  
Stretch Nylon/Spandex



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



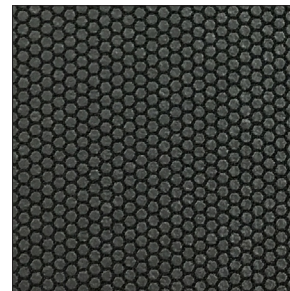
**700108-960**  
Dolphin Gray  
80/28-400 Penta  
Stretch Nylon/Spandex



**700108-962**  
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



**700180-900**  
Pewter Gray  
XGP 60/30  
Black JT Stretch 3-Layer

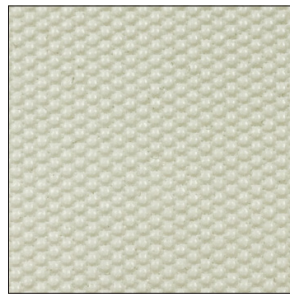




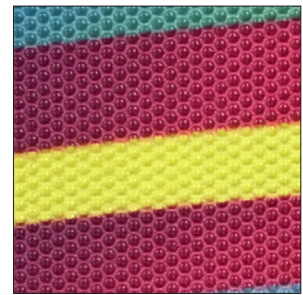
**700180-905**  
Dusky Black  
XGP 60/30  
Black JT Stretch 3-Layer



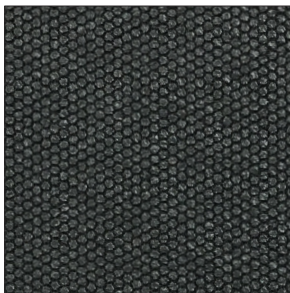
**700192-638**  
Coyote Brown  
Hex 80/14-400  
Coyote Poly 600D



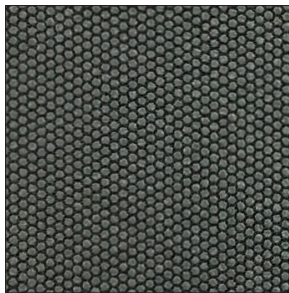
**700300-722**  
Eggshell White  
Hex 70/08-400  
White Poly 600D



**700305-722**  
Multicolor Example  
Hex 70/08-400  
White Poly 600D



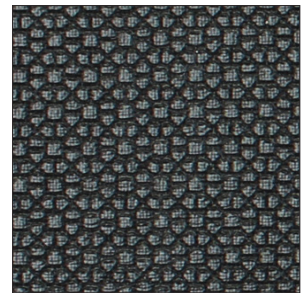
**700538-700**  
Raven Black  
Hex 50/05-200  
Black Poly 100D



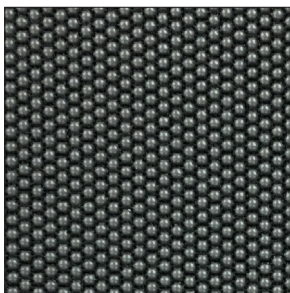
**700538-800**  
Charcoal Gray  
Hex 50/05-200  
Black Poly 100D



**700554-700**  
Raven Black  
Hex 50/05-200  
Black Poly 100D+Silicone



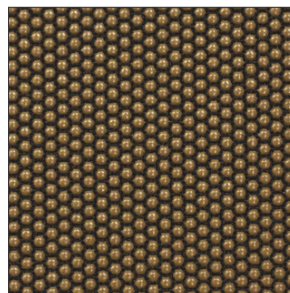
**700590-701**  
Rough Black  
Penta 83/11-400  
Black Poly 600D



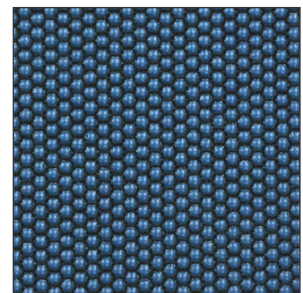
**700665-620**  
Stormcloud Gray  
Hex 70/08-400  
Black Poly 600D



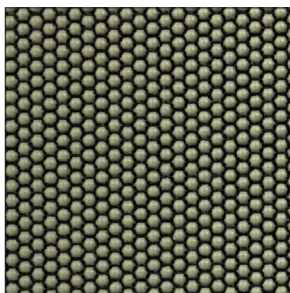
**700665-720**  
Onyx Black  
Hex 70/08-400  
Black Poly 600D



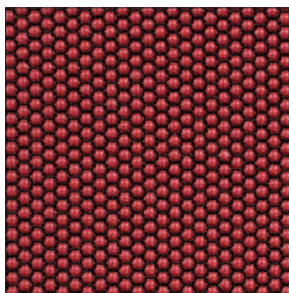
**700665-780**  
Nutmeg  
Hex 70/08-400  
Black Poly 600D



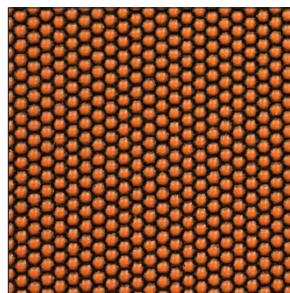
**700665-910**  
Slate Blue  
Hex 70/08-400  
Black Poly 600D



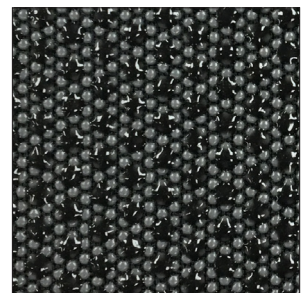
**700665-920**  
Mushroom  
Hex 70/08-400  
Black Poly 600D



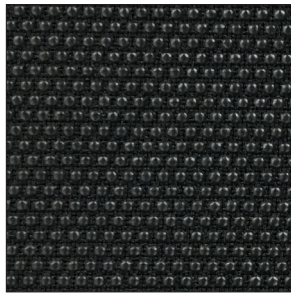
**700665-930**  
Red Wine  
Hex 70/08-400  
Black Poly 600D



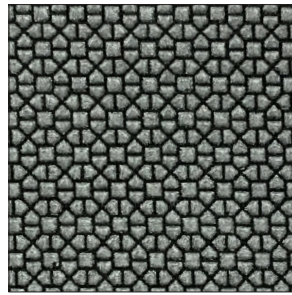
**700665-953**  
Pumpkin  
Hex 70/08-400  
Black Poly 600D



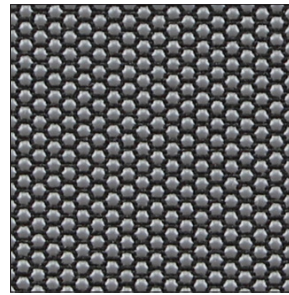
**700670-620**  
Stormcloud Gray  
Hex 70/08-400  
Black Poly 600D+Silicone



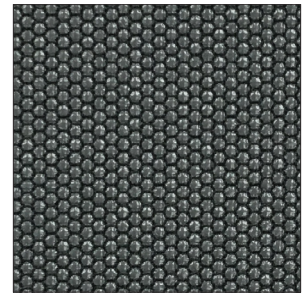
**700690-720**  
Onyx Black  
Hex 80/14-400  
Black Poly 600D



**700810-935**  
Silver  
Penta 83/11-400  
Black Poly 600D



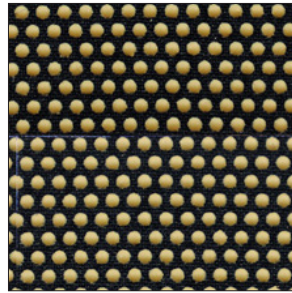
**SuperFabric® Am99™**  
**700920-880**  
Hex 70/18-300 Gray  
Black Poly 600D



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



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



**SuperFabric® 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

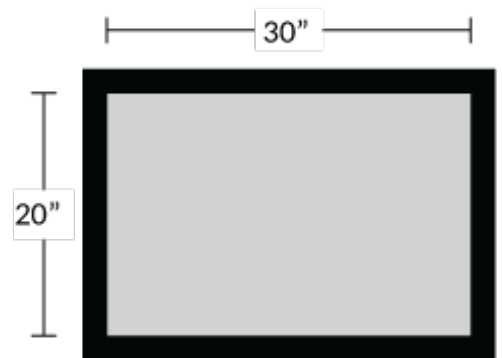
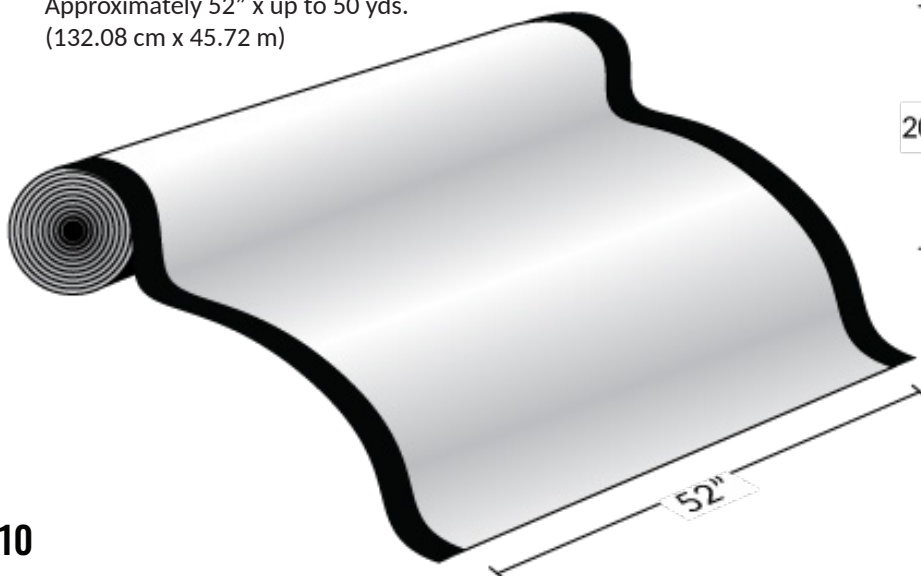


**SuperFabric® AmFr™**  
**720135-065**  
Hex 60/18-300  
Multicam AmFr™  
600D FR Black Poly

## 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)



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

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



## GUARD PLATE COLORS

|   |   |   |   |
|---|---|---|---|
|    |    |    |    |
| 700<br>RAVEN BLACK*<br>PANTONE 426C   | 720<br>ONYX BLACK**<br>PANTONE 426C   | 905<br>DUSKY BLACK*<br>PANTONE 447C   | 962<br>MYSTIC BLACK*<br>PANTONE BLACK C   |
|    |    |    |    |
| 620<br>STORMCLOUD GRAY**<br>PANTONE 425C  | 800<br>CHARCOAL GRAY**<br>PANTONE 446C  | 900<br>PEWTER GRAY***<br>PANTONE 425C   | 960<br>DOLPHIN GRAY**<br>PANTONE 425C   |
|    |    |    |    |
| 920<br>MUSHROOM<br>PANTONE 403C   | 930<br>RED WINE<br>PANTONE 201C   | 953<br>PUMPKIN ORANGE<br>PANTONE 1595C  | 780<br>NUTMEG BROWN<br>PANTONE 463C   |
|  |  |  |  |
| 910<br>SLATE BLUE<br>PANTONE 7462C  | 935<br>SILVER<br>PANTONE 877C   | 638<br>COYOTE BROWN<br>PANTONE 4485C  | 925<br>SANDSTONE TAN<br>PANTONE 7529C   |
|  |  |  |  |
| 722<br>EGGSHELL WHITE<br>PANTONE COOL GRAY<br>1C                                    | 812<br>OLIVE GREEN†<br>PANTONE 5753C  | 774<br>BONE WHITE†<br>PANTONE 7541C   | 027<br>MINT†<br>PANTONE 344C  |
|  |  |  |  |
| 036<br>SKY BLUE†<br>PANTONE 7542C   | 968<br>MULTI-CAM (FR)‡<br>PANTONE 7497C   | 016<br>FR BLACK‡<br>PANTONE BLACK C   | 033<br>MULBERRY†<br>PANTONE 5125C   |
|  |  |  |   |
| 950<br>TURKISH COFFEE<br>PANTONE 440C   | 089<br>HI-VIS YELLOW<br>PANTONE 388C  | 096<br>DREAM BLUE<br>PANTONE 310C   |   |

## BASE FABRIC COLORS



### 600D POLYESTER

|  |   |
|--|---|
|  |  |
| BLACK  | GRAY  |
|  |  |
| COYOTE   | BROWN   |
|  |  |
| WHITE  | GREEN   |



### 100D POLYESTER

|   |  |
|---|--|
|  |  |
| BLACK   | COYOTE   |



### STRETCH NYLON/ SPANDEX

|  |   |
|--|---|
|  |  |
| BLACK  | BLACK   |



### 3-LAYER WATERPROOF POLYESTER

|  |   |
|--|---|
|  |  |
| BLACK  | BLACK   |

### NEOPRENE 1MM

|  |   |
|--|---|
|  |  |
| BLACK  | BLACK   |

### 600D POLYESTER WITH P/U BACKING

|  |   |
|--|---|
|  |  |
| BLACK  | 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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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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