



Carnegie

# COATED FABRICS

PRODUCT GUIDE



## PERFORMANCE DRIVEN OPTIONS

Our “PVC-Free” philosophy prompts us to continually strive to offer the most performance driven and environmentally forward coated options available. Our wide variety of coated products are suitable for high-traffic environments that require the most rigorous durability and cleanability standards.

CARNEGIE IS  
COMMITTED  
TO FINDING  
SUSTAINABLE  
AND HIGH-  
PERFORMING  
ALTERNATIVES

PVC-Free

No added finishes

Durable (Avg. 250,000+ DR)

Inherently antibacterial & antimicrobial

Bleach Cleanable

Wipeable

Approved for Hospital Grade Disinfectants

Healthier Hospital Compliant

Mindful Materials

DMF-Free

Warranty: 5 - 10 years

CARNEGIE'S  
COATED  
FABRICS ARE  
ALWAYS FREE  
OF HARSH  
CHEMICALS

Antimicrobials

Antimony

Bisphenol A (BPA)

Chlorine

DMF

Fluorocarbons

Formaldehyde

Halogenated fire retardants

Heavy metals

Ozone-depleting chemicals

PFC

Phthalates

Plasticizers

PVC

Stain resistant finishes

# RANGE OF COATED FABRICS

Stiff, brittle and cheap.  
Made with harmful additives and toxic plasticizers.

Woven fabric with coated performance.  
Superior durability.

Optimal print quality,  
elevated textile looks.



Highest grade resin for a resilient, breathable, and soft touch. Innate resistance to stains.

Cleaner chemistry, no hydrolysis issues.

Silicone with unmatched performance, superior cleanability. Solvent, additive, and finish free.

Carnegie's Range of Coated Fabrics

# POLYCARBONATE POLYURETHANES

Not all polyurethanes are created equal. Rest easy knowing that all of Carnegie's polyurethanes are made from the highest quality of resin, which translates to performance and longevity in the field.



PVC-Free



Breathability



Superior  
Cleanability



Superior  
Hydrolysis



Superior  
Abrasion



# POLYCARBONATE POLYURETHANE

## Are there different kinds of Polyurethanes?

Carnegie's Polyurethane coated fabrics are made from only the highest quality resin available, known as Polycarbonate Polyurethanes. More durable with a higher resistance to humidity and a greater hydrolysis rating, it outperforms the other polyurethanes on the market.

## PU Polymer Resin

PU resins are a soft polymer.  
Quality of resin used relates to hydrolysis performance.

### Polycarbonate

- High Abrasion
- High Resistance to Humidity
- Hydrolysis 7-10 Weeks

### Polyether

- Avg Abrasion
- Avg Resistance to Humidity
- Hydrolysis 3-5 Weeks

### Polyester

- Low Abrasion
- Low Resistance to Humidity
- Hydrolysis 1-2 Weeks

## Featured Products

View all patterns [here](#)

# CLEAN SLATE

Go above and beyond with Clean Slate—a category of easily cleanable coated fabrics with a stain inhibiting system that prevents ink, indigo denim dye, and other stains from setting into the material.



Pen & Ink  
Resistant



PVC-Free



Breathability



Superior  
Cleanability



Superior  
Hydrolysis



Superior  
Abrasion





# CLEAN SLATE

## Pen & Ink Resistant

Our Clean Slate fabrics protect you from those troublesome pen & ink mishaps. Also resistant to denim dye transfer, its graffiti-free technology keeps stains on the surface—even ink from a ballpoint pen will easily wipe away with only a dry cloth.

## Clean Slate Performance

Cleanable with bleach, Isopropyl Alcohol and Virex II 256  
95% recovery rate prevents puddling concerns  
Minimum 250K double rubs Wyzenbeek  
Inherently Antibacterial + Antimicrobial  
Extremely low VOCs  
Minimum 7 week hydrolysis  
Inherently flame resistant  
5-year warranty

## Featured Products

View all patterns [here](#)

## Resources

[Cleaning Matrix](#)  
[Clean Slate Video](#)

# TEKLOOM

If you think it's woven, but it's not—it might be Tekloom.  
Get the look and feel of a woven textile with the  
performance, durability, and cleanability of a coated fabric.



Pen & Ink  
Resistant



PVC-Free



Superior  
Cleanability



Superior  
Hydrolysis



Superior  
Abrasion



# CLEAN SLATE: TEKLOOM

## Pen & Ink Resistant

Tekloom products are a result of a brand new technology that fuses the look of a woven with the performance of a coated fabric. As part of our Clean Slate group, our Tekloom products are also both ink and stain resistant.

## Tekloom Performance

Ink + Stain Resistant  
1 million double rubs Wyzenbeek  
Approved for IMO use  
Approved for hospital grade cleaners  
Inherently Antibacterial + Antimicrobial  
15 week hydrolysis  
Extremely low VOCs  
Inherently flame resistant  
5 year warranty

## Featured Products

View all patterns [here](#)

## Resources

[Cleaning Matrix](#)  
[Clean Slate Video](#)

# TPE

The eco-conscious, new kid on the block, TPE uses innovative technology that is free of harmful substances and eliminates all hydrolysis issues.



PVC-Free



Breathability



Superior  
Cleanability



Superior  
Hydrolysis



Superior  
Abrasion



# TPE

## The Next Step in Coated Innovation

The next step in coated innovation, Thermoplastic Elastomers (TPE) are a versatile new compound that has the best of the rubber and thermoplastic worlds. It is impervious to hydrolysis and will not have the issues other low quality PUs have in the field.

## TPE Performance

- Approved for hospital grade cleaners
- Minimum 200K double rubs Wyzenbeek
- HHL / Kaiser approved
- Red List Free
- 15+ week hydrolysis
- No hydrolysis or puddling issues
- Inherently Antibacterial + Antimicrobial
- Extremely low VOCs
- Inherently flame resistant

## Featured Products

[Escapade](#)

# SILICONE HYBRIDS

Turn heads with printed silicone hybrids that mimic rich woven patterns. Infuse your project with an elevated textile look that lasts.



IMO



PVC-Free



Breathability



Superior  
Cleanability



Superior  
Hydrolysis



Superior  
Abrasion



# SILICONE HYBRIDS

## Unparalleled Printed Design

Our collection of silicone hybrid coated fabrics are designed to have an unparalleled woven look. We offer a broad range of designs that fit seamlessly into high-traffic areas that require the highest performance standards.

## Silicone Hybrid Performance

Approved for IMO use  
Minimum 250k double rubs  
Wyzenbeek  
Approved for hospital grade cleaners  
10 week hydrolysis  
Inherently Antibacterial + Antimicrobial  
Extremely low VOCs  
Inherently flame resistant  
5-year warranty

## Featured Products

View all patterns [here](#)

## Resources

[Sewing Tips for Silicone Hybrids](#)

# SILTECH

Superb performance, zero finishes. Silicone is the champion of coated fabrics when it comes to green credentials.

Carnegie



Indoor /  
Outdoor



IMO



PVC-Free



Breathability



Superior  
Cleanability

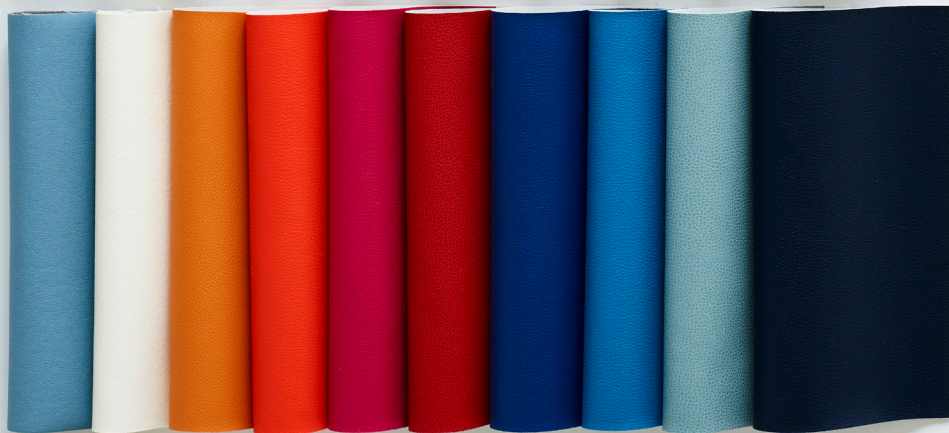


Superior  
Hydrolysis



Superior  
Abrasion





# SILTECH

## Next Generation Silicone

Siltech fabrics are second generation silicone technology using three layers of silicone for increased strength and an improved natural hand. Siltech products deliver unmatched scratch and tear resistance, along with incredible stain resistance and ease of cleaning—all with no added finishes.

## Siltech Performance

Indoor/Outdoor  
IMO Wheelmark  
Double knit backing for stability + controlled stretch  
Unmatched scratch + tear resistance  
Approved for hospital grade cleaners  
Inherently Antibacterial + Antimicrobial  
Extremely low VOCs  
Minimum 200k double rubs Wyzenbeek  
Inherently flame resistant  
10-year warranty

## Featured Products

View all patterns [here](#)

## Resources

[Cleaning Matrix](#)

[Sewing Tips for Siltech](#)

# HOW TO CHOOSE THE RIGHT COATED FABRIC

Looking for a coated fabric? Here's how to choose the right one for you.

With so many different types of coated fabrics out there, how do you know which one is the right one for your project? We can help you with that.

Follow the links to easily select and filter to your exact parameters. Whether your priority is location, color, or performance, all of our coated fabrics have been rigorously tested, thoroughly evaluated, and designed with you in mind.

LOCATION	<a href="#">Indoor</a>	<a href="#">Indoor/Outdoor</a>	<a href="#">IMO Cruise</a>
			<a href="#">IMO Wheelmark</a>
			<a href="#">IMO 2010 FTP Part 8 for Upholstery as Stocked</a>
DESIGN & COLOR	<a href="#">Solids / Textures</a>	<a href="#">Patterns</a>	<a href="#">Leather Looks</a>
PERFORMANCE	<a href="#">Cleanable</a>	<a href="#">Performance</a>	<a href="#">Environmental</a>
	<a href="#">Clean Slate</a>	<a href="#">Hydrolysis</a>	<a href="#">PVC-Free</a>
	<a href="#">Bleach Cleanable</a>	<a href="#">Breathability</a>	<a href="#">Mindful Materials</a>
	<a href="#">Suitable for Hospital-Grade Cleaners</a>	<a href="#">Abrasion</a>	<a href="#">Healthier Hospitals Initiative</a>

# Carnegie

## Coated Fabric Matrix

Carnegie is a PVC-Free Company

	Vinyl (PVC)	Low Quality Polyurethane (PU)	High Quality Polyurethane (PU)	Thermoplastic Elastomer (TPE)	Silicone	Printed Silicone Hybrid	Tekloom
<b>Description</b>	A type of thermoplastic made from ethylene (derived from oil/gas) and chlorine (produced from industrial grade salt), applied to a base material.	A polyurethane which uses low quality Polyether or Polyester resin and is made using the conventional wet manufacturing method.	A polyurethane which uses Polycarbonate resin, the highest quality resin available, made using the conventional wet manufacturing method.	A compound made from rubber and thermoplastic materials.	A polymer made from silica (derived from sand) with a textile backing.	Hybrid quality made with a silicone top layer, high quality Polycarbonate PU middle, and a polyester backing.	Woven polyester fabric chemically bonded with a TPE (Thermoplastic Elastomer) top layer.
<b>AESTHETICS</b>							
<b>Price</b>	\$ - \$\$	\$ - \$\$	\$\$ - \$\$\$	\$ - \$\$	\$\$\$	\$\$\$	\$\$\$
<b>Emboss Depth</b>	Deep	Medium	Medium	Medium	Shallow	Shallow	N/A
<b>Print Options</b>	Traditional or Digital Printing	Traditional or Digital Printing	Traditional or Digital Printing	Traditional or Digital Printing	Traditional or Digital Printing	High quality registered printing	N/A
<b>PERFORMANCE</b>							
<b>Stretch</b>	No	Low Quality PU's can puddle	No (if used with high-quality backing)	No	No (if used with high-quality backing)	No (if used with high-quality backing)	No
<b>Cleanability</b>	☆☆☆ Topcoat required	☆☆ Topcoat often required	☆☆ Topcoat often required	☆☆	☆☆☆	☆☆☆	☆☆☆
<b>Durability</b>	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆
<b>Hand / Seating Comfort</b>	Firm	Soft	Soft	Soft	Soft	Soft	Medium
<b>Breathability</b>	No	Yes	Yes	Yes	Yes	Yes	No
<b>Thermal Sensitivity</b>	Must pass cold crack	3-6 weeks Hydrolysis	7-10 weeks Hydrolysis	None	None	10 weeks Hydrolysis	15 weeks Hydrolysis
<b>ENVIRONMENTAL</b>							
<b>Fossil Fuel Efficiency</b>	☆	☆	☆	☆☆	☆☆☆	☆☆	☆☆
<b>Production Energy Use</b>	High	Medium	Medium	Medium	High	High	Low
<b>Recyclable</b>	Yes- Beware of legacy contaminants	No	No	No	No	No	No
<b>Plasticizers / Phthalates</b>	Yes	None	None	None	None	None	None
<b>Chemical Issues</b>	Chlorine chemistry / dioxin emissions	May contain DMF (Dimethylformamide)	The best PU's are DMF-Free	None	None	None	None
<b>Performance Additives</b>	Check for flame retardant (FR), stain repellent, antimicrobial, antibacterial, or UV additives	Check for FR, stain repellent or antimicrobial additives	Check for FR, stain repellent or antimicrobial additives	Check for FR, stain repellent or antimicrobial additives	None	None	None

\* This matrix has been formulated using significant 3rd party testing and thorough research around coated upholstery materials. Numerous manufacturing partners have been consulted and Carnegie's own experience in sales and performance of coated materials have been taken into consideration.

☆ = Average    ☆☆☆ = Satisfactory    ☆☆☆☆ = Outstanding

# COATED FABRICS GLOSSARY

## **Abrasion**

The rubbing, scraping off, or scuffing of the surface of a fabric.

## **Antimicrobial**

The ability of a fabric to actively decrease the amount of microbes on its surface— however this does not guarantee the complete elimination of microbes. A fabric can be considered antimicrobial due to an added antimicrobial finish or the inherent properties of the cloth.

## **Bleach Cleanable**

A fabric that has been engineered to withstand the effects of bleach when cleaned with a recommended, diluted bleach solution.

## **Cleaning**

The ability to remove soil and stains from the surface of a fabric, requiring the use of soap or detergent and water. While cleaning helps to remove germs from the surface, it does not kill them but does help to lower their numbers and the risk of spreading infection.

## **Clean Slate**

A category of coated fabrics with a stain inhibiting system that prevents ink, indigo denim dye, and other stains from setting into the material, and allows for easy cleaning.

## **Coated Fabric**

A fabric or similar substrate made with one or more layers of a film-forming polymer, chemically bonded together to create an impermeable and very cleanable surface. General term for a wide variety of different types of coated fabrics.

## **Colorfastness**

A material's resistance to fading or running.

## **Denim Dye Transfer**

The transfer of improperly set dyes used in the manufacturing of denim products to another surface.

## **Disinfectants**

A cleaning agent used to kill germs on a surface. It is important to follow the label as disinfectants have varying contact times in order to be best effective—as recommended by each manufacturer. We also recommend following the rinsing protocol for each product.

## **Disinfecting**

The method of using a recommended chemical to kill germs on the surface of a fabric. Disinfecting does not necessarily clean a dirty surface, it is important to clean a surface before disinfecting, as germs and other viruses can hide under other soils. It is important to rinse the surface with water or a clean, damp cloth to remove any residue left by cleaners or disinfectants, as harsh chemicals can be damaging to any surface if not used properly.

## **Dimethylformamide (DMF)**

A harmful methyl-based solvent sometimes added in the production of polyurethane to make it into an emulsion state to be coated onto a material (backing), giving the fabric its softness. All of our coated products are DMF-free, and instead use eco-friendly, ethyl-alcohol based, rather than methyl-based solvents.

## **Double Rub**

A measurement of a fabric's resistance to abrasion, determined by the Wyzenbeek test (US) or Martindale test (EU). Each double rub is one back and forth pass over a stretched piece of fabric by a mechanical arm. The test is run until the fabric shows noticeable wear.

## **Emboss**

A calendering process in which textiles are engraved with the use of heated rollers under pressure to produce a raised design on the fabric surface.

## **Flame Retardant**

A fabric that resists or retards the spreading of flames. A flame retardant fabric can be made by using materials that are themselves flame retardant, or by using additional finishes.

# COATED FABRICS GLOSSARY

## **Hospital Grade Cleaners**

A disinfectant that is registered with the Environmental Protection Agency (EPA) as a hospital-level disinfectant that performs the functions of bactericides (kill harmful bacteria), virucides (kill pathogenic viruses), and fungicides (destroy fungus).

## **Hydrolysis**

A breakdown or delamination of the polyurethane film layer from the backing substrate in the form of cracking and peeling due to extreme heat and humidity—most often due to PUs that are formulated with inexpensive inferior resins. Also refers to the test that measures the ability of a fabric to withstand exposure to heat and humidity.

## **Impermeable**

The inability of a liquid to pass through a material.

## **Jungle Test**

A test to measure a fabric's ability to withstand prolonged exposure to heat and humidity (see 'Hydrolysis'). The material is subjected to relative humidity of 95% and a temperature of 70° C (158° F) for several weeks and compared to the control sample for degradation and various physical properties. Note: The number of weeks of hydrolysis testing is sometimes referred to in years (e.g. 7 Year Hydrolysis) but there is no direct correlation of testing weeks to years of service in the field.

## **Leather**

The hide of an animal with the fur removed.

## **Leather-Look**

A man-made simulated leather.

## **Lamination**

The process that bonds the base fabric and the polyurethane top layer of a coated fabric together.

## **Lightfastness**

A material's degree of resistance to the fading effect of light.

## **Microbe Resistant**

Generally refers to a fabric that may not inhibit the growth of microbes, but also does not promote the spread of microbes. In other words, the amount of microbes does not decrease, but it does not increase either.

## **Moisture Barrier**

A material that is impervious to water or other liquids (see Impermeable). Can also refer to a finish added after the fabric is woven.

## **Pen & Ink Resist**

(see 5. Clean Slate)

## **Polyurethane (PU)**

A composite material made of one or more layers of polymer resins joined by urethane links and a woven or non-woven textile backing. Commonly referred to as 'PU', it is considered to be a highly resilient, flexible, and durable material.

## **Polycarbonate Polyurethane**

The highest performing polyurethane resin on the market. It has a higher resistance to humidity and greater hydrolysis rating than other lesser polyurethanes. The other PU resins are Polyether (PET) and Polyester (PES).

## **Phthalates**

A group of chemicals that are used to make plastics more durable, often referred to as plasticizers and primarily used to soften polyvinyl chloride (PVC).

## **Puddling**

Puddling occurs because polyurethane is a soft plastic and can stretch when upholstered on a seat if not properly supported. The best way to counter this is to choose a high quality product with a backing that has memory, and will help retain the original shape of the coated fabric.

## **Silicone**

Generic name for certain compounds obtained from silicon, a component of sand. Used in the manufacturing of coated products to impart performance properties.

# COATED FABRICS GLOSSARY

## **Siltech**

Carnegie's collection of third-generation silicone coated products. (see Silicone)

## **Silicone Hybrid**

Carnegie's collection of printed, coated fabrics made from a hybrid of silicone and polycarbonate polyurethane—taking advantage of the best properties of both materials.

## **Solvents**

A class of chemical compounds—generally in liquid form—used to dissolve, suspend or extract other materials. General term for chemicals used in a wide variety of everyday applications, including the production of coated fabrics.

## **Stretch and Recovery**

A fabric's ability to withstand repeated flexing of the material.

## **Tekloom**

The brand name for a proprietary process where a woven textile is chemically bonded with the durable components of a coated top layer to create a fused hybrid textile.

## **Thermoplastic**

A word used to describe fibers that are heat-sensitive. Most man-made fibers are thermoplastic, which have the property of softening or fusing when heated and of hardening again when cooled. With the application of heat and pressure, it can be molded and remolded.

## **Thermoplastic Elastomer (TPE)**

A compound made from rubber and thermoplastic materials that consists of both thermoplastic and elastomeric properties. TPE coated fabrics are engineered to be impervious to hydrolysis issues due to their ability to stretch and return to their original shape, creating a longer life and better physical range than other materials.

## **Vinyl**

A synthetic plastic polymer made from polymerizing vinyl chloride (PVC). Also used as the term to refer to fabrics coated with a vinyl-based coating used for such purposes as upholstery. Due to the inherent rigidity of the material, PVCs require plasticizers to soften or make it more flexible for use. These harmful plasticizers can be released during use and in vinyl manufacturing, which can be harmful to your health and the planet.

## **VOCs**

Organic compounds that have a high vapor pressure at room temperature, potentially emitting chemicals and particles into the air that may negatively impact human health.

## **Wyzenbeek**

A third-party certified test used predominantly in the US to measure the durability and abrasion resistance of a fabric. During this process, a piece of cotton duck is repeatedly rubbed over the test fabric using a mechanized arm. Every back and forth motion of the arm counts as one "double rub." (see Double Rub)

## Order a Sample

To order samples visit  
our website or contact  
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