

# The Textile Kit™

eco+ edition



# The Textile Kit™

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The **Eco+ Edition** of **The Textile Kit** is aimed at helping future textile industry professionals, as well as consumers, explore the challenges in achieving a more sustainable textile industry. Sustainability is a complicated goal, sometimes at odds with the way consumers and the industry view textile products. The desire for greater sustainability requires new ways of thinking. It may lead consumers to buy fewer products of higher quality, which last longer, and to re-use and recycle more, instead of tossing lightly used products into a landfill. Such mindsets profoundly affect both production and consumption, in a culture where currently over half of clothing produced is sent to a landfill or incinerated within a year of being made.

As the portion of the fashion industry with the most obvious environmental impact on air and water quality, the textile industry has made strides to become more environmentally friendly. Some notable manufacturers and retailers are leading the way via strong sustainability initiatives. But cost and competition, or perhaps a lack of awareness, have caused other companies to continue in old ways that "still work," but may not be sustainable over time. Many textile goods are imported from less developed countries with lower environmental standards, where costly changes for the sake of the environment are unlikely in the short run. The task of this generation is to make choices that move us in a more sustainable direction.

While one product may not "sound" as good as another for the environment, it may upon closer examination have reasons to recommend it. As a case in point, to produce a cotton t-shirt may consume less energy than to produce one made of polyester, but if the consumer uses a clothes dryer, the slower-drying cotton garment might ultimately use more energy over its product life cycle than one made of polyester. To further cloud the issue, marketing aimed at people interested in making sustainable choices may be confusing or misleading (sometimes called "greenwashing"), causing even those with the best intentions to make relatively "bad" choices for "good" reasons. The answer to the question, "Which choice is better for the environment?" is often complicated, but the discussion is worth having.

May you go forth with your eyes wide open, ready to creatively and inventively help put us, both as producers and consumers, on a path to sustainable textile production and consumption. Let us seek the truth about what we can do to keep our planet healthy, yet make rational decisions about how to meet people's current needs within that context. One way to achieve this balance is to better understand the impact of our choices. We hope the **Eco+ Edition** of **The Textile Kit** will aid in advancing that understanding, as we answer some of these important questions and raise new ones.



#N1 - N15 (Narrow Samples): Fibers, Yarns, and Narrow Fabrics

			<p>#5A</p> <p>Machine Wash Cold With Mild Detergent. Wash Dark Colors Separately. Do Not Bleach. Hang To Dry 100% COTTON</p>	<p>#13</p> <p>Machine Wash Warm. No Bleach. Tumble Dry Low. Remove Promptly. 65% POLYESTER 35% COTTON</p>
<p><b>Sample N1 / cotton fiber</b> 100% cotton / fiber stage (natural color) / natural cellulose fibers, conventional cotton / fiber type impacts textile performance / seed hair fiber from cotton plant / cotton is the most widely used apparel fiber</p>	<p><b>Sample N2 / cotton yarn</b> 100% cotton / yarn stage (natural color) / 20/2 yarn / simple, 2-ply yarn / yarn type impacts textile performance / two plies of 20-denier yarn / two strands twisted together</p>	<p>Sample N3 / various fabrics / natural cellulose fibers / polyester / acrylic / wool / used for textile testing / courtesy of SDL Atlas, www.sdlatlas.com</p>	<p><b>Sample N4 / care label</b> (100% cotton) possible care label for product made of 100% cotton / ONE common care label that MIGHT be used on a product with this fiber content</p>	<p><b>Sample N5 / care label</b> (65% poly/35% cotton) possible care label for product made of 65% polyester/35% cotton / ONE common care label that MIGHT be used on a product with this fiber content</p>
<p>#27</p> <p>100% WOOL DRY CLEAN ONLY</p>				
<p><b>Sample N6 / care label</b> (100% wool) possible care label for product made of 100% wool / ONE common care label that MIGHT be used on a product with this fiber content</p>	<p><b>Sample N8 / color grown organic cotton yarn</b> 100% natural / colored organic cotton / natural cellulose fibers, organically grown in brown color / combed yarn / slub yarn / cotton grown in color / grew in this color (via revival of ancient cotton strains), eliminating the need for dyeing / somewhat smooth / thick and heavy yarns / requires no dyeing</p>	<p><b>Sample N9 / certified organic cotton yarn</b> 100% Pakucho brand certified fair trade and organic Pima cotton / natural cellulose fibers / GOTS (Global Organic Textile Standards) certified organically grown, long staple cotton / soft twist yarn / natural botanical dyed / Pima breed of cotton produces extra-long staple (ELS) fibers / fair trade cotton / made from soft roving / dyed by hand</p>	<p><b>Sample N9 / color grown certified organic cotton yarn</b> 97% Pakucho brand certified organic color grown cotton/3% fine virgin copper / natural cellulose fibers, GOTS certified organically grown / mineral/cellulosic fiber blend / antimicrobial / grew in this color / fair trade cotton / metal avoids static buildup / antimicrobial due to copper</p>	<p><b>Sample N10 / recycled cotton yarn</b> 75% recycled cotton/25% acrylic / recycled natural cellulose fibers from textile waste originating in the apparel and textile industry and blended with acrylic / simple, 8-ply yarn / 2nd Time Cotton brand yarn contributes "to the conservation and global re-utilization of products" / made in the U.S.A. / eight strands as one</p>
<p><b>Sample N11 / Egyptian cotton yarn</b> 100% Egyptian cotton / natural cellulose fibers, long staple cotton / combed yarn / 10/3 yarn / Egyptian Giza breed of cotton produces super extra- long staple (ELS) fibers / very smooth / three plies of 10- denier yarn</p>	<p><b>Sample N12 / flax fiber</b> 100% flax (linen) / natural cellulose fibers, super fine flax / bast fiber from stem of flax plant / flax (linen) is an ancient textile fiber</p>	<p><b>Sample N13 / linen yarn</b> 100% flax (linen) / natural cellulose fibers / simple, 4-ply yarn / courtesy of Louet North America www.louet.com / four strands as one</p>	<p><b>Sample N14 / hemp yarn</b> 100% Hemp / natural cellulose fibers / hard / bast fiber from stem of hemp plant / ancient textile fiber / similar to flax / legal to sell in U.S.A. and as of 2018 also may be legal to grow based on each state's laws / each ply contains multiple plies</p>	<p><b>Sample N15 / wool fiber</b> 100% wool / natural protein fibers / wool grown in color / from Corriedale breed of sheep / requires no dyeing</p>




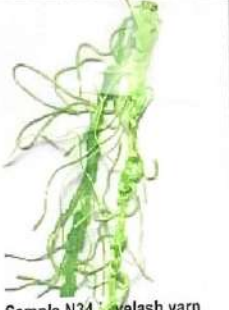


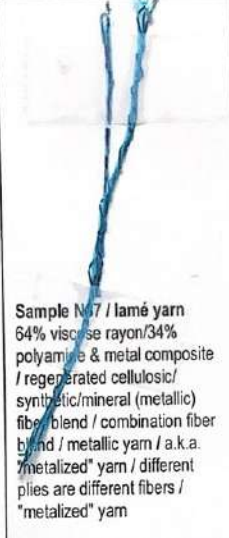




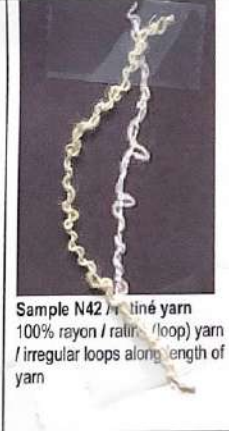
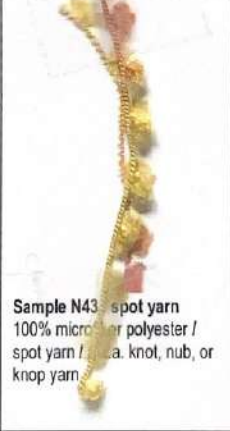

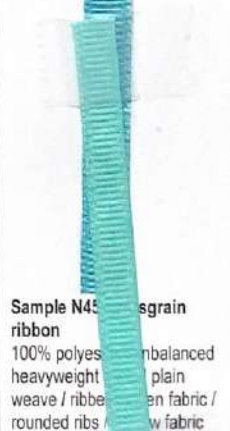


#N16 - N30 (Narrow Samples): Fibers, Yarns, and Narrow Fabrics

 <p><b>Sample N16 / Merino wool yarn</b> 100% Merino wool / natural protein fibers / superwash / from Merino breed of sheep / courtesy of Louet North America / <a href="http://www.louet.com">www.louet.com</a> / washable wool</p>	 <p><b>Sample N17 / chlorine-free superwash wool yarn</b> 100% wool / natural protein fibers / washed yarn / chlorine-free superwash / from sheep / courtesy of Schoeller Spinning Group <a href="http://www.schoeller-wool.com">www.schoeller-wool.com</a> / very smooth / new technology eliminates chlorine, which causes environmental harm according to <a href="http://www.epa.gov">www.epa.gov</a></p>	 <p><b>Sample N18 / boucle yarn</b> 78% mohair/13% wool/ 9% nylon / natural protein fiber/synthetic fiber blend / bouclé (loop) yarn / mohair from Angora goats, wool from sheep / regular loops along length of yarn</p>	 <p><b>Sample N19 / angora yarn</b> 100% angora / natural protein fibers / acid dyed / from Angora rabbits / acid dye a major dye class for wool, silk, and nylon</p>	 <p><b>Sample N20 / baby camel yarn</b> 100% baby camel / natural protein fibers/ from baby camels</p>
 <p><b>Sample N21 / cashmere yarn</b> 100% cashmere / natural protein fibers / simple, 2-ply yarn / from cashmere goats / two strands twisted together</p>	 <p><b>Sample N22 / alpaca yarn</b> 100% alpaca / natural protein fibers / woolen yarn / from alpaca, similar to llama / somewhat fuzzy</p>	 <p><b>Sample N23 / yak yarn</b> 100% yak / natural protein fibers / simple, 3-ply yarn / from yak / three strands and one</p>	 <p><b>Sample N24 / silk fiber</b> 100% silk / natural protein fibers / tussah silk, from wild silkworms, staple fibers</p>	 <p><b>Sample N25 / silk yarn</b> 100% silk / natural protein fibers / cultivated silk, from domesticated silkworms, filament fibers</p>
 <p><b>Sample N26 / variegated rayon</b> 100% rayon, dyed with more than one color along the length of the yarn / regenerated cellulose fibers, a.k.a. viscose rayon yarn / a.k.a. ombre and space dyed yarn / rayon was the first manufactured fiber / spiral a.k.a. corkscrew yarn</p>	 <p><b>Sample N27 / rayon (from bamboo) yarn</b> 100% rayon (from bamboo) / regenerated cellulose fibers / rayon made from bamboo is chemically indistinguishable from rayon made from other sources of cellulose</p>	 <p><b>Sample N28 / TENCEL® lyocell fiber</b> 100% TENCEL® lyocell / regenerated cellulose fibers / made from fast-growing eucalyptus trees, TENCEL® is a registered trademark of Lenzing Fibers <a href="http://www.lenzing.com">www.lenzing.com</a>.</p>	 <p><b>Sample N29 / TENCEL® lyocell yarn</b> 100% TENCEL® lyocell / regenerated cellulose fibers / made from fast-growing eucalyptus trees, TENCEL® is a registered trademark of Lenzing Fibers <a href="http://www.lenzing.com">www.lenzing.com</a>.</p>	 <p><b>Sample N30 / fishing line</b> 100% nylon / synthetic fiber / monofilament yarn / generic nylon / nylon was the first synthetic fiber / fiber cross section = round / single filament constitutes the yarn</p>



# #N31 - N45 (Narrow Samples): Fibers, Yarns, and Narrow Fabrics

 <p><b>Sample N31 / chenille yarn</b> 100% nylon / synthetic fibers / chenille yarn / nylon is highly resilient, thus a good choice for pile yarns / fuzzy yarn</p>	 <p><b>Sample N32 / polyester resin</b> 100% polyester / synthetic fiber / polyester is the most widely used fiber overall / courtesy of DAK Americas <a href="http://www.alpek.com">www.alpek.com</a></p>	 <p><b>Sample N33 / polyester staple fiber</b> 100% polyester / synthetic fibers / polyester filaments can be cut into staple (short) fibers to better mimic cotton / courtesy of DAK Americas <a href="http://www.alpek.com">www.alpek.com</a></p>	 <p><b>Sample N34 / eyelash yarn</b> 100% polyester / synthetic fibers / eyelash yarn / generic polyester / loosely braided yarn</p>	 <p><b>Sample N35 / acrylic yarn</b> 100% acrylic / synthetic fibers / generic acrylic / acrylic can imitate wool</p>
 <p><b>Sample N36 / elastic thread</b> 62% polyester/38% rubber / synthetic/elastomeric fiber combination / covered yarn / most rubber is synthetic / polyester over rubber</p>	 <p><b>Sample N37 / lamé yarn</b> 64% viscose rayon/34% polyamide &amp; metal composite / regenerated cellulosic/ synthetic/mineral (metallic) fiber blend / combination fiber blend / metallic yarn / a.k.a. "metalized" yarn / different plies are different fibers / "metalized" yarn</p>	 <p><b>Sample N38 / A-MAIZing™ yarn</b> 100% corn fiber (PLA = polylactic acid) / renewable synthetic fibers from cellulose / narrow knit yarn / narrow weft knit / melt-spun fermented cornstarch / A-MAIZing™ is trademark of SWTC Inc. <a href="http://www.swtcyarn.com">www.swtcyarn.com</a> / very narrow knit / tubular/tube knit</p>	 <p><b>Sample N39 / SOYSIL™ brand yarn</b> 100% SOYSIL™ brand fiber (azlon) / renewable regenerated protein fibers / from naturally occurring protein / SOYSIL™ is a registered trademark of SWTC Inc. <a href="http://www.swtcyarn.com">www.swtcyarn.com</a></p>	 <p><b>Sample N40 / SeaCell® yarn</b> 51% silk / 49% merino wool/20% SeaCell® lyocell / natural manufactured fiber blend / blend of cellulose and seaweed / SeaCell® is a registered trademark of Smart Fiber AG <a href="http://www.smartfiber.info">www.smartfiber.info</a></p>
 <p><b>Sample N41 / tweed yarn</b> 80% wool/20% nylon / fancy single yarn with flecks of a different color / a.k.a. flake, fleck, or seed yarn</p>	 <p><b>Sample N42 / ratié yarn</b> 100% rayon / ratié (loop) yarn / irregular loops along length of yarn</p>	 <p><b>Sample N43 / spot yarn</b> 100% microfiber polyester / spot yarn / a.k.a. knot, nub, or knop yarn</p>	 <p><b>Sample N44 / bias tape</b> polyester / bias-cut plain fabric / narrow fabric</p>	 <p><b>Sample N45 / segrain ribbon</b> 100% polyester / unbalanced heavyweight plain fabric / ribbed fabric / rounded ribs / narrow fabric</p>



#N46 - N58 (Narrow Samples): Fibers, Yarns, and Narrow Fabrics

 <p><b>Sample N46 / satin ribbon</b> 100% polyester / satin weave / double faced / double-faced satin woven fabric / satin weave on both sides / three sections of yums / narrow fabric</p>	 <p><b>Sample N47 / twill tape</b> 100% cotton / twill weave / narrow fabric</p>	 <p><b>Sample N48 / Jacquard</b> 100% cotton / extra yarn woven in weave / fabric / narrow fabric</p>	 <p><b>Sample N49 / fabric elastic</b> varies with elastomeric / narrow fabric</p>	 <p><b>Sample N50 / braided elastic</b> 100% cotton / elastomeric braid / narrow fabric</p>
 <p><b>Sample N51 / braided fabric</b> 100% cotton / narrow fabric</p>	 <p><b>Sample N52 / needlepoint fabric</b> 100% rayon / needlepoint fabric / a knit fabric</p>	 <p><b>Sample N53 / leather</b> 100% cowhide / aniline / leather</p>	 <p><b>Sample N54 / certified organic wool yarn</b> 100% certified organic wool / natural protein fiber / GOTS certified organically grown, spun, and dyed / organic wool / Green Line brand / made in U.S.A.</p>	 <p><b>Sample N55 / Piñatex®</b> pineapple leaf fiber / new sustainable leather alternative / fiberweb / natural, sustainably sourced material / low environmental impact / nonwoven mesh base with specialized proprietary finish / pineapple leaves used to make Piñatex® are the byproduct of existing agriculture</p>
 <p><b>Sample N56 / Penina Core® using Repreve®</b> 100% polyester / virgin and recycled synthetic fiber combination / continuous filament Repreve® core / virgin polyester staple wrap / contains recycled polyester / recycled core made from plastic drinking bottles / core-spun thread for maximum seam quality and minimal sewing problems / made in the U.S.A. / courtesy A&amp;E / www.amefird.com</p>	 <p><b>Sample N57 / reflective bungee cord</b> 100% nylon / rubber core / synthetic/elastic fiber combination / reflective / contains reflective nylon tracers / highly elastic / 100% elongation (+/- 10%) / many clothing items contain reflective elements / provides reflection in low light environments for safety and ability to locate</p>	 <p><b>Sample N58 / conductive thread</b> nylon/natural silver / 18-denier thread contains approx. 96 individual nylon filaments, each coated with a micron-thick layer of natural silver / conducts electricity / resistance sufficient for something like powering LEDs / made in U.S.A.</p>		



# The Textile Kit™

Sample #

1

Sample Name

unbleached muslin

Fiber Content

100% cotton

Main Features

woven fabric (natural color) / carded yarns /

balanced

midweight plain weave / unfinished fabric

Other Notes

fabrication type impacts textile performance /

somewhat smooth / muslin typically has 150 or lower thread

count / grey goods a.k.a. greige goods



Sample #

2

Sample Name

Rock-lon® drapery lining

Fiber Content

100% cotton

Main Features

bleached / water resistant finish / optically

brightened /

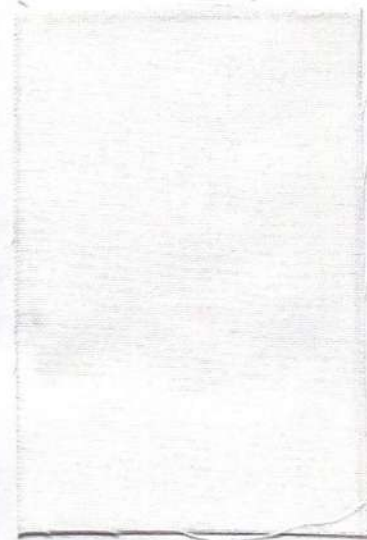
RAIN-NO-STAIN®

Other Notes

finishing impacts textile performance / Rock-lon®

is a registered trademark of Rockland Industries /

whitened and brightened / DWR = durable water repellent finish



Sample #

3

Sample Name

glazed chintz

Fiber Content

100% cotton

Main Features

Other Notes

stylized flowered pattern / printing and finishing

impact textile performance / glazed chintz is crisp and

lustrous / pigment ink used / enhanced lustre



# The Textile Kit™

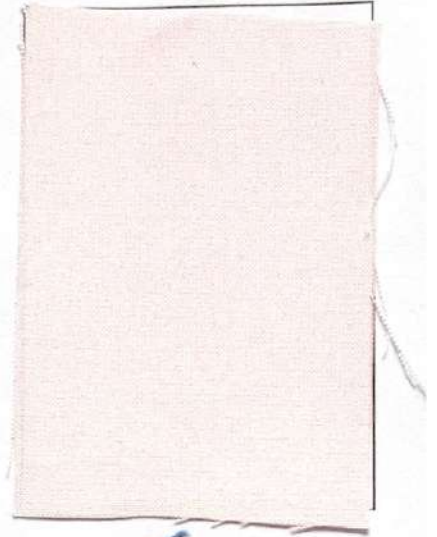
Sample # 4

Sample Name pinpoint oxford

Fiber Content 100% Pima cotton

Main Features natural cellulose fibers, long staple cotton  
ring-spun yarns / basket weave

Other Notes Pima breed of cotton produce extra-long  
staple (ELS) fibers/ring spun a.k.a. conventional spun yarns/  
higher thread count than regular oxford cloth



Sample # 5

Sample Name certified organic cotton duck

Fiber Content 100% certified organic cotton

Main Features natural cellulose fibers, certified  
organically grown / basket weave

Other Notes organizations with varying standards "certify"  
cotton fibers as organically grown / coarse  
heavy



Sample # 6

Sample Name handkerchief linen

Fiber Content 100% flax (linen)

Main Features natural cellulose fibers

Other Notes flax (linen) is a prestige fiber





# The Textile Kit™

Sample # 76

Sample Name aida cloth

Fiber Content 100% cotton

Main Features basket weave

Other Notes open weave



Sample # 77

Sample Name monk's cloth

Fiber Content 100% cotton

Main Features basket weave

Other Notes most commonly 4x4



Sample # 78

Sample Name suish

Fiber Content 100% silk

Main Features even-sided twill

Other Notes lightweight, filament yarns



# The Textile Kit™

Sample # 79

Sample Name serge

Fiber Content 80% acrylic / 20% wool

Main Features intimate fiber blend / even-sided twill /  
union dyed

Other Notes fibers blended before spinning yarns / heavyweight  
(7.75 OSY or ounces per square yard) / spun yarns / union dyeing  
achieves one color when dyeing a fiber blend



Sample # 80

Sample Name outing flannel

Fiber Content 100% cotton

Main Features \_\_\_\_\_

Other Notes broken twill



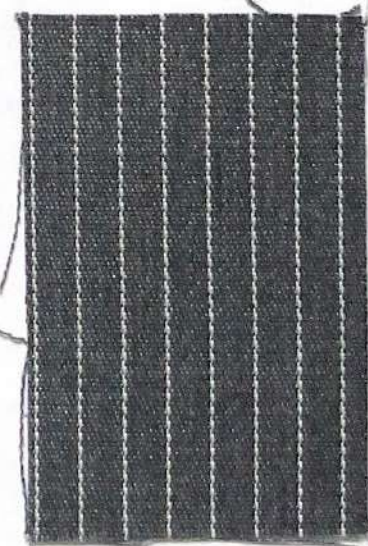
Sample # 81

Sample Name pinstripe suiting

Fiber Content 65% polyester / 35% cotton

Main Features \_\_\_\_\_

Other Notes gray yarns are spun yarns / heathered a.k.a.  
mottled / 2/1 twill



## The Textile Kit™

Sample # 191

Sample Name t-shirt knit (striped jersey)

Fiber Content 100% cotton

Main Features single weft knit, plain jersey /  
yarn dyed

Other Notes small gauge / yarn was dyed before  
knitting / each stripe a different  
color yarn.



Sample # 192

Sample Name juvenile knit

Fiber Content 100% cotton OR cotton / spandex

Main Features single weft knit, printed jersey /  
target market print

Other Notes small gauge / pattern was printed  
after knitting / intended for babies or  
young children



Sample # 193

Sample Name sweater knit

Fiber Content varies with sample

Main Features large gauge knit

Other Notes large loops



# The Textile Kit™

Sample # 124

Sample Name ITY jersey

Fiber Content microfiber polyester/spandex

Main Features interlock twist yarns / single weft knit jersey

Other Notes ITY = interlock twist yarn / ITY gives lively dry hand



Sample # 125

Sample Name onion skin

Fiber Content 96% polyester 4% lycra @ spandex

Main Features crepe twist yarns / single weft knit jersey

Other Notes crepe twist is highest crepe twist yarn gives lively dry hand



Sample # 126

Sample Name jacquard jersey (tuck stitch)

Fiber Content varies with sample

Main Features single weft knit

Other Notes stitch



Other Notes  
Sample  
Sample  
Fiber Cor  
Main Feat  
Other Notes

# The Textile Kit™

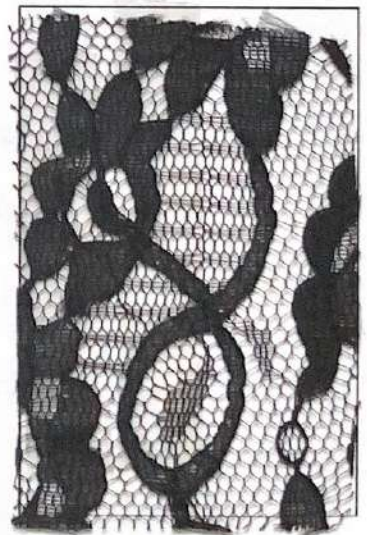
Sample # 151  
Sample Name cuttle dot  
Fiber Content 100% microfiber polyester  
Main Features synthetic microfibers / tricot warp  
pile knit / embossed  
Other Notes microfibers can be as fine as fur /  
sliver pile / 400 GSM or grams per square  
meter / surface design added



Sample # 152  
Sample Name flat lace  
Fiber Content 100% polyester  
Main Features raschel warp knit  
Other Notes most "lace" is knit



Sample # 153  
Sample Name raised lace  
Fiber Content 100% polyester  
Main Features raschel warp knit  
Other Notes raised lace a.k.a. re-embroidered



# The Textile Kit™

Sample # 154

Sample Name stretch bee

Fiber Content 97% polyester / 3% spandex

Main Features raschel warp knit

Other Notes stretch due to spandex



Sample # 155

Sample Name net

Fiber Content 100% polyester

Main Features raschel warp knit

Other Notes a finer, softer version is tulle



Sample # 156

Sample Name point d'esprit

Fiber Content 100% nylon

Main Features raschel warp knit

Other Notes "spot" knit net



# The Textile Kit™

Sample # 157

Sample Name micro mesh

Fiber Content 100% nylon

Main Features synthetic fibers / raschel warp  
knit

Other Notes nylon has great stretch and recovery  
a.k.a. hex mesh or hex knit



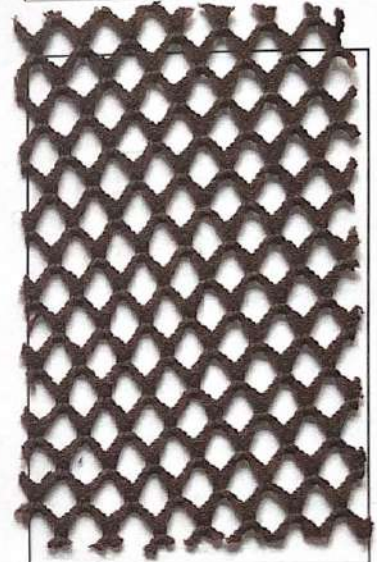
Sample # 158

Sample Name fishnet mesh

Fiber Content 100% nylon

Main Features raschel warp knit

Other Notes open mesh



Sample # 159

Sample Name athletic mesh

Fiber Content 100% nylon

Main Features raschel warp knit

Other Notes open mesh



# The Textile Kit™

Sample #

208

Sample Name

Supercharged Navy Performance Denim

Fiber Content

50% polyester / 46% TENCEL™ Modal with Eco Color technology / 11% spandex

Main Features

warp-faced twill / solution dyed / delivers a powerful

dense black

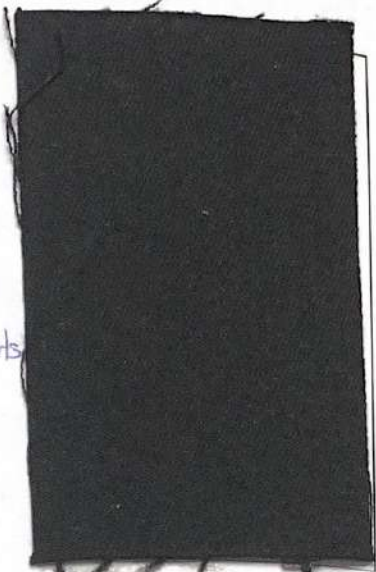
color with excellent colorfastness and sustainability benefits

Other Notes

solid color denim / 8.5 OZ / solution dyeing

avoids typical fading seen in black garments / Courtesy

of Lenzing Fibers [www.lenzing.com](http://www.lenzing.com)



Sample #

Sample Name

Fiber Content

Main Features

Other Notes



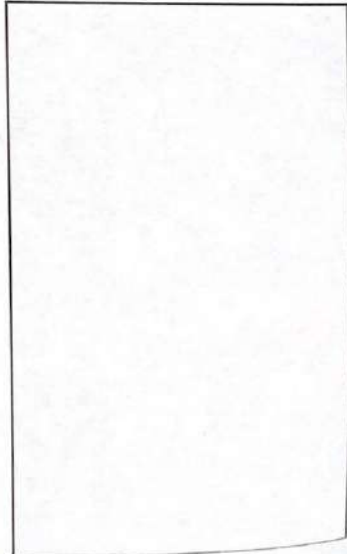
Sample #

Sample Name

Fiber Content

Main Features

Other Notes





# The Textile Kit™

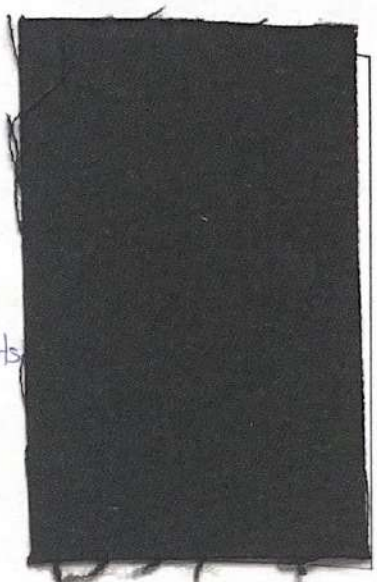
Sample # 208

Sample Name Supercharged Navy Performance Denim

Fiber Content 50% polyester / 46% TENCEL™ Modal with Eco Color technology / 4% spandex

Main Features warp-faced twill / solution dyed / delivers a powerful dense black color with excellent colorfastness and sustainability benefits

Other Notes solid color denim / 8.5 oz/y / solution dyeing avoids typical fading seen in black garments / Courtesy of Lenzing Fibers [www.lenzing.com](http://www.lenzing.com)



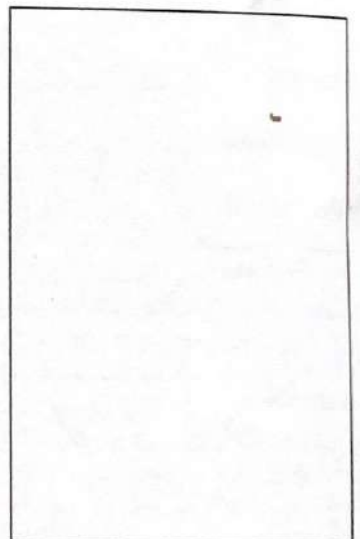
Sample # \_\_\_\_\_

Sample Name \_\_\_\_\_

Fiber Content \_\_\_\_\_

Main Features \_\_\_\_\_

Other Notes \_\_\_\_\_



Sample # \_\_\_\_\_

Sample Name \_\_\_\_\_

Fiber Content \_\_\_\_\_

Main Features \_\_\_\_\_

Other Notes \_\_\_\_\_

