

December 13, 2011

**PUBLIC VERSION**

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Ms. Kim Glas, Chairman  
Committee for the Implementation  
of Textile Agreements  
U.S. DEPARTMENT OF COMMERCE  
Room H3100  
14<sup>th</sup> and Constitution Ave., N.W.  
Washington, DC 20230

Re: CAFTA Commercial Availability Request  
162.2011.11.29.Fabric.SS&AforHansollTextileLtd:  
Response with an Offer to Supply

Dear Chairman:

On behalf of Pettenati Centro America, S.A. de C.V. ("Pettenati" or the "Company"), and pursuant to Article 3.25 of the Dominican Republic-Central America-United States Free Trade Agreement ("CAFTA-DR") and *Modifications to the CAFTA-DR Commercial Availability Final Procedures; Notice of Modified Procedures*, 73 Fed. Reg. 53,200 (Dep't Comm. 2008) (the "MFP"), we hereby submit a "Response with an Offer to Supply" ("Response"). *See MFP 2(i)* (73 Fed. Reg. at 53,201). The Company is both an "Interested Entity" and a "CAFTA-DR Supplier" as defined in the *MFP 2(b)* and *2(h)*, respectively. *Id.* Due Diligence Certifications required by the *MFP 3(b)(1)* and *3(b)(2)* (73 Fed. Reg. at 53,202) are attached at the end of this Response.

As detailed below, the Company is able to supply the fabric as described in the CAFTA Commercial Availability Request 162.2011.11.29 Fabric.SS&AforHansollTextileLtd. (the "Request"), which is found at <http://web.ita.doc.gov/tacgi/CaftaReqTrack.nsf/90368847945b151d852570fc0062ac96/ef60c8ba8651d89185257957006ffa54?OpenDocument>, in commercial quantities and in a timely manner.

When Pettenati initially was contacted by Sorini, Samet & Associates, LLC ("SS&A") on behalf of Hansoll Textile Ltd. ("Hansoll" or the "Requesting Party") to determine the Company's ability to supply the requested fabric, the Company was confused about Hansoll's fabric specifications, but believed it essentially understood what Hansoll was requesting because the descriptions were similar to other solid-color fabrics that Pettenati had developed in the past. Since it largely understood

\*admitted to a bar other than DC; practice limited to federal courts & agencies  
HARVEY B FOX (1941-2010)  
AFFILIATE  
AM&S TRADE SERVICES LLC  
CARLOS MOORE, PRESIDENT

Hansoll's Request, it responded that it could possibly produce the requested fabrics, but it needed additional information from Hansoll, such as fabric samples, target prices, and lead times. Hansoll did not provide the additional requested information after repeated requests and, as a result, Pettenati believed that Hansoll was no longer interested in obtaining the subject products. See e-mail correspondence between the Requesting Party and the Company attached hereto as Exhibits 3-6.

When Pettenati received the original e-mail request, it considered the criteria set forth therein confusing. The denier numbers provided did not correspond to the type of fabric that Hansoll is requesting. A denier is a unit of yarn measurement that is defined in terms of grams per 9,000 meters, i.e., a denier is a unit of metric measurement, which is uniform worldwide (Exhibit 1). In Hansoll's original September 30, 2011, e-mail request to Pettenati, it provided its fabric specifications "listed in English measurements." (Exhibit 3 ("All Values listed in "English measurements")). Among this list of "English measurements," Hansoll had included parameters for denier. As noted above, denier is an internationally uniform unit and only exists in metric form; thus, the initial "denier" information allegedly provided in English measurements, which are not applicable to polyester filament yarn, could not have been correct. Pettenati is unaware of the source of those denier numbers. Realistic denier numbers of one identical fabric and five similar fabrics are provided in Exhibit 8. Apparently, when Hansoll converted its fabric specifications from "English measurements" to metric units to comply with the *MFP*, it appears that it also attempted to convert the denier numbers. Nevertheless, as stated above, denier is internationally uniform, and there is never a need to convert it.

Pettenati, in attempting to understand the different denier numbers provided by Hansoll in both its original e-mail request and the Request to which the Company now responds, determined that Hansoll had apparently calculated these numbers by converting the originally labeled denier numbers to "metric yarn" numbers, which are a completely different unit for measuring yarn. (Exhibit 2). For example, in Hansoll's Request, which allegedly is partially the result of converting the solid-fabric specifications from English to metric measurements, it appears that Hansoll attempted to convert the original #1 Denier numbers provided in Exhibit 3, 166.6 and 195.7, by first considering where those numbers are located in Exhibit 2, column 3, "Denier," and then considering the equivalent in Exhibit 2, column 1, "Metric." The result of that erroneous conversion exercise is 54 denier and 46 denier, respectively. Those are the numbers set forth for #1 Denier in the Request. Not only did Hansoll replace the denier numbers with those metric yarn numbers, it also switched the lower parameter number in the "English measurement" with the higher parameter number in the "metric measurement" and visa versa, i.e., the higher and lower denier parameters in the "English measurement" became the lower and higher denier parameters in the "metric measurement," respectively. Pettenati is unable to understand Hansoll's conversion methodology.

Although these denier numbers in the original e-mail request were confusing, Pettenati recognized the various requirements that Hansoll had requested because those requirements, other than the denier numbers, matched those of fabrics that Pettenati had previously developed for [ \* \* \* \* \* ]. (Exhibit 8, Chart 1 – Fabric K0292). As a result, the Company believes that

the fabric requested by Hansoll is identical to a fabric that Pettenati developed for [ \* \* \* \* \*  
\* \* \* \* \* ] earlier in 2011. Based on those assumptions, Pettenati is able to supply the fabric requested by Hansoll.

In light of Pettenati's original belief that Hansoll was no longer interested in the fabric -- due to Hansoll's lack of response to Pettenati's original willingness to potentially supply the fabric -- Pettenati was surprised when it saw that Hansoll had submitted the Request for the same fabric. Nevertheless, because it has developed what it believes to be an identical fabric to, or in the alternative, similar fabrics to, that requested by Hansoll in the Request, it submits this Response with an Offer to Supply.

**(1) *File Number.* The Response must reference the CITA File Number assigned to the particular Request being addressed.**

**Response:** 162.2011.11.29.Fabric.SS&AforHansollTextileLtd

**(2) *Quantity.* The Response must supply the quantity of the subject product that the respondent is capable of currently supplying, in standard units of quantity. All measurements must be in metric units. If the English count system is used in any part, then a conversion to metric units must be provided.**

**Response:** Pettenati's total production capacity for the fabric subject product is 228,600 linear meters per month. Pettenati's total production capacity for all fabrics is above 3,500,000 linear meters per month.

**(3) *Production Capability/Demonstration of Ability to Supply.* A Response must contain information supporting the claim to supply the subject product, or one substitutable, in commercial quantities in a timely manner.**

**(i) The Response must report the quantity, in metric units, that the CAFTA-DR supplier produced of the subject product, or a substitutable product, in the preceding 24-month period.**

**Response:** Pettenati has not produced the exact product or a substitutable product in the preceding 24-month period.

**(ii) For products that have experienced cyclical demand or are not currently produced, the CAFTA-DR supplier must indicate the quantity that has been supplied or offered commercially in the past, with an explanation of the reasons it is not currently produced or offered.**

**Response:** In 2009, Pettenati developed the exact fabric, with the exception of DWR finishing (Exhibit 8, Chart 6-- Fabric K0105), pursuant to a request by [ \* \* \* \* \* ]. Pettenati and that buyer are now negotiating terms for a version of this exact fabric with DWR finishing. (Exhibit 8, Chart 1 -- Fabric K0292). Note that Pettenati has the capability of adding DWR finishing to fabric, and K0292 has this finishing.

**(iii) If the subject product involves a new style, weight, or other variation that is new to the market or new to the CAFTA–DR supplier, then the supplier must provide detailed information on its current ability to make the subject product in commercial quantities in a timely manner. Such information could include current production capacity, current loom availability, and standard timetables to produce.**

**Response:** As stated above, Pettenati's total production capacity of the subject product is 228,600 linear meters per month, and Pettenati's total production capacity for all fabrics is above 3,500,000 linear meters per month. Pettenati would need approximately 4 to 6 months lead time, depending on the yarn source, as well as a commitment and predicted total quantity needed from the customer. The yarn manufacturer would either be UNIFI Manufacturing, Inc. or C S Central America S.A. de C.V. (CSCA), from their plants in the United States and/or El Salvador.

**(iv) A CAFTA–DR supplier may support its claim to be able to produce the subject product through provision of a sample meeting exactly the specifications as presented in the Request. However, the provision of a sample is not required. Regardless of whether a sample is provided, a respondent must demonstrate its ability to produce the subject product by providing sufficient relevant information regarding their production capability. Such information could include past production of similar products and/or descriptions of equipment and identification of suppliers necessary to produce the subject product. If some operations, such as finishing, will be completed by other entities, the name of the facility and contact information must be provided.**

**Response:** No sample is being provided with this Response because Hansoll, after promising to provide Pettenati with a sample and its desired lead times, never kept those promises. In the past 24-month period, Pettenati has provided approximately 25,000 linear meters of the similar fabrics set forth in Exhibit 8. Those fabrics were made entirely by Pettenati.

**(v) The Response may provide, if relevant, the basis for the CAFTA–DR supplier's rationale that other products that are supplied by the CAFTA–DR supplier in commercial quantities in a timely manner are substitutable for the subject product(s) for purposes of the intended use, supported by measurable criteria.**

**Response:** This request is not relevant because Pettenati is able to provide the exact fabric that is the subject of the Request.

(vi) In its review of a Response, CITA will consider whether the CAFTA–DR supplier was responsive to the efforts employed by the requestor to obtain the subject product in the course of due diligence. In the event that a CAFTA–DR supplier was not responsive, a CAFTA–DR supplier must provide a reasonable explanation in its Response as to why it did not respond to earlier inquiries by the requestor in the course of due diligence. CITA will reject a Response if it does not include such explanation.

**Response:**

**SUMMARY CHRONOLOGY OF DUE DILIGENCE EVENTS**

<b>Date</b>	<b>Sender</b>	<b>Subject</b>	<b>Support</b>
Sep. 30, 2011	SS&A	Initial inquiry re fabric availability	Exhibit 3
Sep. 30, 2011	Pettenati	Reply re request for additional information and identification of brands	Exhibit 3
Oct. 3, 2011	SS&A	Response re general information about SS&A	Exhibit 4
Oct. 4, 2011	Pettenati	Reply re ability to produce in commercial quantities but require additional information, i.e., sample, target price, quantities, lead times, vendor, and brand	Exhibit 4
Oct. 5, 2011	SS&A	Response that samples and lead times will be sent, quantities were already provided, and vendor/brand names are confidential	Exhibit 5
Oct. 5, 2011	Pettenati	Reply re where to send the samples and lead times	Exhibit 5
Oct. 13, 2011	Pettenati	Follow up to Oct. 5, 2011, e-mail requesting an update on samples	Exhibit 6
Oct. 19, 2011	Hansoll	Company inquiry with the same "English measurements" contained in the original Sept. 30, 2011, inquiry	Exhibit 7
Oct. 25, 2011	Hansoll	Follow up to Oct. 19, 2011, company inquiry	Exhibit 7
Nov. 15, 2011	SS&A or Hansoll	Follow up inquiry	Request at p. 8
Nov. 18, 2011	SS&A or Hansoll	Follow up inquiry	Request at p. 8

On September 30, 2011, Keith A. Jenkins, SS&A, submitted a fabric request to Pettenati on behalf of Hansoll (Exhibit 3). On the same day, Claudia Villacorta, Pettenati, responded to Mr. Jenkins to ask for more information about SS&A and what brands would be involved (Exhibit 3). On October 3, 2011, Mr. Jenkins responded to Ms. Villacorta's question about SS&A, but did not provide details about what brands would be involved (Exhibit 4). On October 4, 2011, Ms. Villacorta followed up with Mr. Jenkins again asking the brand involved, among other questions (see below) (Exhibit 4). In the same e-mail, Ms. Villacorta also informed Mr. Jenkins that, based on the information provided in Mr. Jenkins' original e-mail, Pettenati did have the capability to

produce the requested fabrics in commercial quantities, but needed additional information from Mr. Jenkins to determine whether Pettenati would be willing to produce such fabrics. The additional information requested was the requested performance criteria, the requested yarn, a fabric sample cut, a target price, requested quantities, lead times, and the vendor name. On October 5, 2011, Mr. Jenkins provided a limited response to Ms. Villacorta (Exhibit 5). In that response, Mr. Jenkins stated that he would soon be sending fabric samples and lead times by mail to Ms. Villacorta for analysis, that the quantities needed were listed in the original request from the e-mail of September 30, 2011, and that he would not disclose the names of vendors or brands for reasons of confidentiality. On the same day, October 5, Ms. Villacorta responded to Mr. Jenkins, providing him with a mailing address to which he could send the fabric samples and lead times (Exhibit 5). Ms. Villacorta never received fabric samples from Hansoll. On October 13, 2011, after receiving no response, Ms. Villacorta again e-mailed Mr. Jenkins to follow up on his e-mail of October 5, 2011 (Exhibit 6). In this e-mail, Ms. Villacorta requested that Mr. Jenkins update her on whether the fabric swatches were sent to the address that she had sent him, and also informed him that he could directly contact the OTEXA-CAFTA office in Washington, DC to conduct an investigation regarding a fabric request. Ms. Villacorta did not receive a response. Because Ms. Villacorta did not receive the requested sample from Mr. Jenkins for purposes of analysis, she determined that Hansoll was not seriously interested in seeking a supplier, and did not further contact Mr. Jenkins. On October 19 and on October 25, 2011, Mr. Shin-Heng ("Sean") Huh of Hansoll directly e-mailed Ms. Villacorta with the same request as Mr. Jenkins had originally sent on behalf of Hansoll (Exhibit 7). Ms. Villacorta did not respond to Mr. Huh, because, as noted above, she had already determined Hansoll was not seriously seeking a supplier, not only because she was not able to receive basic information from them in their prior correspondence, but also because Hansoll's renewed e-mail inquiry contained the same confusing criteria as Hansoll's original e-mail inquiry. In Hansoll's Request, filed with the Committee for the Implementation for Textile Agreements, Hansoll did not mention Ms. Villacorta's e-mail of September 30, SS&A's e-mail of October 3, SS&A's e-mail of October 5, or Ms. Villacorta's e-mails of October 5 and 13, 2011. In addition, Hansoll provided information about "follow-up" e-mails on November 15 and 18, 2011, of which Pettenati has no record of receipt (Request at p. 7-8).

**(4) *Due Diligence.* The Response must provide a complete description of the due diligence undertaken by the CAFTA-DR supplier to substantiate the ability to supply the subject product. If a CAFTA-DR supplier has participated in the requestor's undertaking of due diligence, the supplier must provide certain information in response to the requestor's inquiries.**

**(i) If a CAFTA-DR supplier has been responsive to a requestor in the undertaking of due diligence, the CAFTA-DR supplier must have stated its ability to supply or not supply the subject product. If the product can be supplied, the response to the inquiry must contain information supporting the CAFTA-DR supplier's claim to supply the subject product, or one substitutable, in commercial quantities in a timely manner.**

**Response:** As indicated in response to 3(vi), Pettenati was responsive to the requestor, SS&A (on behalf of Hansoll). Among Ms. Villacorta and Mr. Jenkins's correspondence, Ms. Villacorta indicated that, based on the information provided in Mr. Jenkins's original e-mail, Pettenati could possibly produce the requested fabrics in commercial quantities and supply them in a timely manner, but Ms. Villacorta needed samples and lead times as well as target prices, etc. from Mr. Jenkins to support Hansoll's request. That additional information was not provided by Mr. Jenkins, so Pettenati was unable to consider seriously Hansoll's initial inquiry or its renewed, October 19, 2011, inquiry.

Because Pettenati believes that it has already developed fabric identical to that requested by Hansoll, as set forth above, it has the ability to supply the fabric in commercial quantities in a timely manner. It also has the ability to supply similar fabrics in commercial quantities in a timely manner, as discussed in (3)(i)-(ii). Since Pettenati's response to request for information (3) provides a thorough response regarding Pettenati's claim to supply the same or a similar product in commercial quantities in a timely manner, those responses are herein incorporated by reference.

**(ii) If a CAFTA–DR supplier offers to supply the subject product, the supplier may support its offer by reporting the quantity, in metric units, that it has produced of the subject product, or a substitutable product, in the preceding 24-month period. If the CAFTA–DR supplier does not provide such information, it must, subject to section 6(b)(4)(vii), explain why the information it has provided sufficiently supports its offer to supply.**

**Response:** Because Mr. Jenkins did not provide Ms. Villacorta with sufficient information about Hansoll's needs, Pettenati was not able to consider seriously Hansoll's request. As this request for information is very similar to (3)(i), we herein incorporate our response to (3)(i) by reference.

**(iii) In response to a requestor's inquiry, for products that have experienced cyclical demand or are not currently produced, the CAFTA–DR supplier must provide the requestor the quantity that has been supplied or offered commercially in the past, with an explanation of the reasons it is not currently produced or offered.**

**Response:** Because this request for information directly corresponds with the request for information (3)(ii), we herein incorporate our response to (3)(ii) by reference.

**(iv) If the subject product involves a new style, weight, or other variation that is new to the market or new to the CAFTA–DR supplier, then the supplier must provide detailed information on its current ability to make the subject product in commercial quantities in a timely manner. Such information could include current production capacity, current loom availability, and standard timetables to produce the subject product.**

**Response:** Because this request for information is identical to the request for information (3)(iii), we herein incorporate our response to (3)(iii) by reference.

**(v) A CAFTA–DR supplier may support its claim to be able to produce the subject product through provision of a sample meeting the specifications as presented in an inquiry. However, the provision of a sample is not required. Regardless of whether a sample is provided, the CAFTA–DR supplier must demonstrate its ability to produce the subject product by providing sufficient relevant information regarding their production capability. Such information could include past production of similar products and/or descriptions of equipment and identification of suppliers necessary to produce the subject product. If some operations, such as finishing, will be completed by other entities, the name of the facility and contact information must be provided.**

**Response:** Because this request for information is identical to question (3)(iv) (except for the reference in (4)(v) to the CAFTA-DR supplier, rather than respondent, both of which are the same for purposes of the instant proceeding), we herein incorporate our response to (3)(iv) by reference.

**(vi) A response to a requestor's inquiry must provide, as applicable, the basis for the CAFTA–DR supplier's rationale that other products that are supplied by the CAFTA–DR supplier in commercial quantities in a timely manner are substitutable for the subject product for purposes of the intended use, supported by measurable criteria.**

**Response:** Because this request for information is essentially identical to the request for information (3)(v), we herein incorporate our response to (3)(v) by reference.

**(vii) Nothing in these procedures shall require any CAFTA–DR supplier to provide business confidential or other commercially sensitive information to a requestor. However, a CAFTA–DR supplier must provide the requestor a reasonable explanation why such information was not provided and why the information it has provided sufficiently supports its offer to supply.**

**Response:** Pettenati has marked customer names as confidential because this information is private information that, if disclosed to competitors, could negatively affect Pettenati's business. Despite the screening of this confidential information, Pettenati believes that it has provided sufficient information in its responses to questions (2) through (4) to show why the information it has provided sufficiently supports its offer to supply.

**(5) *Location of the CAFTA–DR supplier.* The Response must provide the name, address, phone number, and e-mail address of a contact person at the facility claimed to be able to supply the subject product.**

Ms. Kim Glas, Chairman

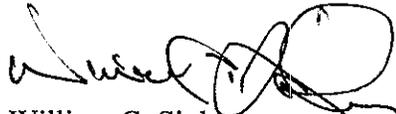
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Please contact the undersigned if you have any questions or comments regarding the foregoing.

Respectfully submitted,



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# **EXHIBIT 1**

# Units of textile measurement

From Wikipedia, the free encyclopedia  
(Redirected from Denier (unit))

Textile is measured in various units, such as: the denier and tex (linear mass density of fibres), super S (fineness of wool fiber), worst count, and yield (the inverse of denier and tex). Yarn is spun thread used for knitting, weaving, or sewing. Thread is a long, thin strand of cotton, nylon, or other fibers used in sewing or weaving. Both yarn and thread are measured in terms of cotton count and yarn density. Fabric is cloth, typically produced by weaving or knitting textile fibers, and is measured in units such as mommes (momme is a number that equals the weight in pounds of a piece of silk if it were sized 45 inches by 100 yards), thread count (a measure of the coarseness or fineness of fabric), ends per inch (e.p.i), and picks per inch (p.p.i).

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## Fiber/Fibre

### Denier

**Denier** or **den** is a unit of measure for the linear mass density of fibers. It is defined as the mass in grams per 9,000 meters. In the International System of Units the **tex** is used instead (see below). The denier is based on a natural standard: a single strand of silk is one denier. A 9,000 meter strand of silk weighs one gram. The term denier is from a French coin of small value (worth 1/12 of a sou). Applied to yarn, a denier was held to be equal in weight to 1/24 oz (this does not have units of mass per length!).

The term micro-denier is used to describe filaments that weigh less than one gram per 9,000 meter length.

One can distinguish between *Filament* and *Total* denier. Both are defined as above but the first only relates to a single filament of fiber (also commonly known as Denier per Filament or D.P.F) whereas the second relates to a yarn, an agglomeration of filaments.

The following relationship applies to straight, uniform filaments:

$$\text{D.P.F.} = \text{Total Denier} / \text{Quantity of Uniform Filaments}$$

The denier system of measurement is used on two and single filament fibers. Some common calculations are as follows:

$$\begin{aligned} 1 \text{ denier} &= 1 \text{ gram per } 9\,000 \text{ meters} \\ &= 0.05 \text{ grams per } 450 \text{ meters (1/20 of above)} \\ &= 0.111 \text{ milligrams per meter} \end{aligned}$$

In practice measuring 9,000 meters is both time-consuming and wasteful. Usually a sample of 900 meters is weighed and the result multiplied by 10 to obtain the denier weight.

- A fiber is generally considered a microfiber if it is 1 denier or less.
- A 1-denier polyester fiber has a diameter of about 10 micrometers.
- Denier is used as the measure of density of weave in tights and pantyhose, which defines their opacity.

One can calculate the diameter of a filament given its weight in denier with the following formula:

$$\varnothing = \sqrt{\frac{4.444 \times 10^{-6} \cdot \text{denier}}{\pi \rho}}$$

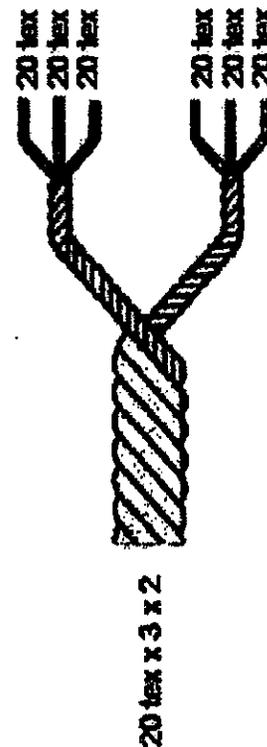
where  $\rho$  represents the material's density in grams per cubic centimeter and the diameter is in cm.

## Tex

**Tex** is a unit of measure for the linear mass density of fibers and is defined as the mass in grams per 1000 meters. Tex is more likely to be used in Canada and Continental Europe, while denier remains more common in the United States and United Kingdom. The unit code is "tex". The most commonly used unit is actually the decitex, abbreviated **dtex**, which is the mass in grams per 10,000 meters. When measuring objects that consist of multiple fibers the term "filament tex" is sometimes used, referring to the mass in grams per 1000 meters of a single filament.

Tex is used for measuring fiber size in many products, including cigarette filters, optical cable, yarn, and fabric.

One can calculate the diameter of a filament given its weight in dtex with the following formula:



Thread made from two threads

$$\varnothing = \sqrt{\frac{4 \times 10^{-6} \cdot \text{dtex}}{\pi \rho}}$$

where  $\rho$  represents the material's density in grams per cubic centimeter and the diameter is in cm.

Tex (g/km)	Yield (yards/#)
550	900
735	675
1100	450
1200	413
2000	250
2200	225
2400	207
4400	113

## S or super S number

Super S or S number is a direct measure of the fineness of the wool fiber. It is most commonly seen as a label on wool suits and other tailored wool apparel to indicate the fineness of the wool fiber used in the making of the apparel. The numbers may also be found on wool fabric and yarn.

## Worsted count

Worsted count (or spinning count) is an indirect measure of the fineness of the fiber in a worsted wool yarn expressed as the number of 560-yard <sup>[1]</sup> (1 yard = 0.9144 meters) lengths (hanks) of worsted yarn that a pound (0.45359237 kilograms) of wool yields. The finer the wool, the more yarn and the higher the count. It has been largely replaced by direct measures.

## Yield

Similar to tex and denier, **yield** is a term that helps describe the linear density of a roving of fibers. However, unlike tex and denier, yield is the inverse of linear density and is usually expressed in yards/lb.



Yarn spinning factory

## Yarn and thread

### Cotton count

- Cotton Count is another measure of linear density. It is the amount of skein material measured in hanks (840 yards) needed to create one pound. Under this system, the higher the number, the finer the yarn. In the United States a cotton count between one and 20 are referred to as coarse counts. A

regular single knit T-Shirt can be between 20 and 40 count, fine bed sheets are usually in the range of 40 to 80 count. The number is now widely used in the staple fiber industry.

- Hank: A length of 7 leas or 840 yards

One Lea – 120 yards

### Yarn Length

**Yarn Length in meters = Yarn count X 1693 X Yarn Weight in Kgs**

English Cotton count (Nec) is an indirect counting system i.e. the higher the number the finer the yarn.

- Thread: A length of 54 in (the circumference of a warp beam)
- Bundle: Usually 10 lbs
- Lea: A length of 80 threads or 120 yards<sup>[2]</sup>
- Denier: this is an alternative method. It is defined as a number that is equivalent to the weight in grams of 9000m of a single yarn. 15 denier is finer than 30 denier.
- Tex: is the weight in grams of 1 km of yarn.<sup>[3]</sup>

To convert Denier to Cotton Count \* 5315 – from Tex \* 590.5 Tex is 1/9 Denier

### Thread

Thread is a cotton yarn measure, equal to 54 inches.

### Yarn density conversion

Denier	m/g	Tex	Worsted	Cotton	Woolen(Run)	Linen(Lea)
50	180	5.6	160	106	56	298
75	120	8.3	106	72	37	198
100	90	11.1	80	53	28	149
150	60	16.6	53	35	19	99
200	45	22.2	40	27	14	74
300	30	33.4	27	18	9.3	50
400	22.5	44.4	20	13	7.0	37
500	18	55.5	16	11	5.6	30
700	12.9	77.7	11.4	7.6	4.0	2
1000	9	111	8.0	5.3	2.8	15
1500	6	166	5.3	3.5	1.9	10
2000	4.5	222	4.0	2.7	1.4	7

## Fabric

### Mommes

**Mommes** (mm) are units of weight traditionally used to measure the density of silk. It is akin to the use of thread count to measure the quality of cotton fabrics, but is calculated in a very different manner. Instead of counting threads, the Momme is a number that equals the weight in pounds of a piece of silk if it were sized 45 inches by 100 yards. This is because the standard width of silk is 45" wide, though silk is regularly produced in 55" widths, and, uncommonly, in even larger widths.

Silk can also be measured by weight in grams. 1 momme = 4.340 g/m<sup>2</sup>; 8 momme is close to 1 oz per square yard or 34 g/m<sup>2</sup>.

The usual range of momme weight for different weaves of silk are:

- Habutai – 5 to 16 mm
- Chiffon – 6 to 8 mm (can be made in double thickness, i.e. 12 to 16 mm)
- Crepe de Chine – 12 to 16 mm
- Gauze – 3 to 5 mm
- Raw silk – 35 to 40 mm (heavier silks appear more 'wooly')
- Organza – 4 to 6 mm
- Charmeuse – 12 to 30 mm –

The higher the momme, the more durable the weave, and the more suitable it is for heavy-duty use. And, the heavier the silk, the more opaque it becomes. This can vary even between the same kind of silk. For example, lightweight charmeuse is translucent when used in clothing, but 30mm charmeuse is opaque.

### Thread count

**Thread count** is a measure of the coarseness or fineness of fabric. It is measured by counting the number of threads contained in one square inch of fabric or one square centimeter, including both the length (warp) and width (weft) threads. The thread count is the number of threads counted along two sides (up and across) of the square inch, added together.<sup>[4]</sup> It is used especially in regard to cotton linens such as bed sheets, and has been known to be used in the classification of towels.

Thread count is often used as a measure of fabric quality, so that "standard" cotton thread counts are around 150 while good-quality sheets start at 180 and a count of 200 or higher is considered percale. Some, but not all, of the extremely high thread counts (typically over 500) tend to be misleading as they usually count the individual threads in 'plied' yarns (a yarn that is made by twisting together multiple finer threads). For marketing purposes, a fabric with 250 two-ply yarns in both the vertical and horizontal direction could have the component threads counted to a 1000 thread count although "according to the National Textile Association (NTA), which cites the international standards group ASTM, accepted industry practice is to count each thread as one,



Image showing how to determine the number of twists per inch in a piece

even threads spun as two- or three-ply yarn. The Federal Trade Commission in an August 2005 letter to NTA agreed that consumers 'could be deceived or misled' by inflated thread counts.<sup>[5]</sup> In 2002, ASTM proposed a definition for "thread count" <sup>[6]</sup> that has been called "the industry's first formal definition for thread count".<sup>[7]</sup> A minority on the ASTM committee argued for the higher yarn count number obtained by counting each single yarn in a plied yarn and cited as authority the provision relating to woven fabric in the *Harmonized Tariff Schedule of the United States*, which states each ply should be counted as one using the "average yarn number."<sup>[8]</sup>

## Ends per inch

**Ends per inch** (or e.p.i.) is the number of warp threads per inch of woven fabric.<sup>[9]</sup> In general, the higher the ends per inch, the finer the fabric is.

Ends per inch is very commonly used by weavers who must use the number of ends per inch in order to pick the right reed to weave with. The number of ends per inch varies on the pattern to be woven and the thickness of the thread. Plain weaves generally use half the number of wraps per inch for the number of ends per inch, whereas denser weaves like a twill weave will use a higher ratio like two thirds of the number of wraps per inch. Finer threads require more threads per inch than thick ones, and thus result in a higher number of ends per inch.

The number of ends per inch in a piece of woven cloth varies depending on what stage the cloth is at. Before the cloth is woven the warp has a certain number of ends per inch, which is directly related to what size reed is being used. After weaving the number of ends per inch will increase, and it will increase again after being washed. This increase in the number of ends per inch (and picks per inch) and shrinkage in the size of the fabric is known as the **take-up**. The take-up is dependent on many factors, including the material and how tightly the cloth is woven. Tightly woven fabric shrinks more (and thus the number of ends per inch increases more) than loosely woven fabric, as do more elastic yarns and fibers.

## Picks per inch

**Picks per inch** (or p.p.i.) is the number of weft threads per inch of woven fabric.<sup>[9]</sup> A pick is a single weft thread,<sup>[9][10]</sup> hence the term. In general, the higher the picks per inch, the finer the fabric is.

## References

- <sup>1</sup> ^ Collier 1970, p. 74
- <sup>2</sup> ^ Curtis 1921, p. Cotton count
- <sup>3</sup> ^ Collier 1970, p. 3
- <sup>4</sup> ^ Sheets.co.nz
- <sup>5</sup> ^ Federal Trade Commission Letter retrieved from NTA website February 9, 2009
- <sup>6</sup> ^ Revised Test Method Further Defines Fabric Count
- <sup>7</sup> ^ Hometextilestoday.com "Down For the (Thread) Count"
- <sup>8</sup> ^ Down For the (Thread) Count – 25 October 2004 – Home Textiles Today
- <sup>9</sup> <sup>a</sup> <sup>b</sup> <sup>c</sup> Curtis, H P (1921), "Glossary of Textile Terms", *Arthur Roberts Black Book*. (Manchester: Marsden & Company, Ltd. 1921), [http://www.oneguyfrombarlick.co.uk/forum\\_topic.asp?whichpage=1&TOPIC\\_ID=6424&FORUM\\_ID=99&CAT\\_ID=3&Forum\\_Title=Rare+Text+\(Book+Transcriptions\)&Topic\\_Title=A+Glossary+of+Textile+Terms](http://www.oneguyfrombarlick.co.uk/forum_topic.asp?whichpage=1&TOPIC_ID=6424&FORUM_ID=99&CAT_ID=3&Forum_Title=Rare+Text+(Book+Transcriptions)&Topic_Title=A+Glossary+of+Textile+Terms), retrieved 2009-06-23
- <sup>10</sup> ^ "Pick." *The Oxford English Dictionary*. 2nd ed. 1989.

## Bibliography

- Collier, Ann M (1970), *A Handbook of Textiles*, Pergamon Press, pp. 258, ISBN 0 08 018057 4, 0 08 018056 6
- Curtis, H P (1921), "Glossary of Textile Terms", *Arthur Roberts Black Book*. (Manchester: Marsden & Company, Ltd. 1921), [http://www.oneguyfrombarlick.co.uk/forum\\_topic.asp?whichpage=1&TOPIC\\_ID=6424&FORUM\\_ID=99&CAT\\_ID=3&Forum\\_Title=Rare+Text+\(Book+Transcriptions\)&Topic\\_Title=A+Glossary+of+Textile+Terms](http://www.oneguyfrombarlick.co.uk/forum_topic.asp?whichpage=1&TOPIC_ID=6424&FORUM_ID=99&CAT_ID=3&Forum_Title=Rare+Text+(Book+Transcriptions)&Topic_Title=A+Glossary+of+Textile+Terms), retrieved 2009-01-11

## External links

- Textiles Intelligence Glossary
- Textile Yarn Count Converter, Fabric Measurements & Conversions

Formulas]

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Categories: Units of density | Textiles

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# **EXHIBIT 2**

**YARN CONVERSION TABLE**  
**TABELA DE CONVERSÃO DE FIOS**

Nm - Nº Métrico METRIC	Dtex	Denier	Ne - Algodão COTTON	Ne - Linho LINEN	Ne - Lã Penteada COMBED WOOL	Ne - Lã Cardada CARDED WOOL	Nm - Nº Métrico	Dtex	Denier	Ne - Algodão	Ne - Linho	Ne - Lã Penteada	Ne - Lã Cardada
0,9	11000	10000	0,53	1,49	0,80	1,74	44	226	204	26	72,8	39,0	85,2
1	10000	9000	0,59	1,65	0,89	1,94	45	222	200	26,6	74,4	39,9	87,2
1,1	9000	8000	0,65	1,82	0,97	2,13	46	217	196	27,2	76,1	40,8	89,1
1,2	8300	7500	0,71	1,98	1,06	2,32	48	208	188	28,4	79,4	42,5	93,0
1,3	7800	7000	0,77	2,15	1,15	2,52	50	200	180	29,6	82,7	44,3	96,9
1,5	6700	6000	0,89	2,48	1,33	2,91	52	190	170	(30,7)	86,0	46,1	101
1,8	5600	5000	1,06	2,98	1,59	3,49	56	180	160	31,1	92,6	49,6	108
2	5000	4500	1,18	3,31	1,77	3,87	60	167	150	35,5	99,2	53,2	116
2,3	4400	4000	1,36	3,80	2,04	4,46	64	155	140	37,8	106	56,7	124
2,5	4000	3600	1,48	4,14	2,22	4,84	67	150	134	(39,8)	111	59,4	130
3	3300	3000	1,77	4,96	2,66	5,81	70	145	129	41,4	116	62,0	136
3,5	2850	2570	2,07	5,79	3,10	6,78	72	140	125	42,6	119	63,8	139
4	2500	2250	2,36	6,62	3,54	7,75	72,5	138	124	42,8	120	64,2	140
4,5	2200	2000	2,66	7,44	3,99	8,72	75	133	120	44,3	124	66,5	145
5	2000	1800	2,96	8,27	4,43	9,69	80	125	113	47,3	132	70,9	155
6	1670	1500	3,55	9,92	5,32	11,6	82	122	110	48,5	136	72,7	159
7	1430	1285	4,14	11,6	6,20	13,6	85	118	106	50,2	141	75,3	165
8	1250	1125	4,73	13,2	7,09	15,5	88,5	113	102	52,3	146	78,4	171
9	1100	1000	5,32	14,9	7,97	17,4	90	110	100	53,2	149	79,7	174
10	1000	900	5,91	16,5	8,86	19,4	95	105	95	56,1	157	84,7	184
10,6	940	840	6,26	17,5	9,39	20,5	100	100	90	59,1	165	88,6	194
12	830	750	7,09	19,8	10,6	23,2	105	95	85	62,1	174	93,0	203
13	775	700	7,68	21,5	11,5	25,2	110	91	82	65,0	182	97,5	213
14	710	640	8,27	23,2	12,4	27,1	115	87	78	66,0	190	102	223
15	660	600	8,87	24,8	13,3	29,1	120	84	75	70,9	198	106	232
16	625	560	9,46	26,5	14,2	31,0	125	80	72	73,9	207	111	242
17	590	530	(10,1)	28,1	15,1	32,9	132	76	68	78,0	218	117	256
18	550	500	10,6	29,8	15,9	34,9	135	74	67	79,8	223	120	261
19	525	475	11,2	31,4	16,8	36,8	140	71	64	82,7	232	124	271
20	500	450	11,8	33,1	17,7	38,7	145	69	62	85,7	240	128	281
22	455	408	13,0	36,4	19,5	42,6	150	67	60	88,7	248	133	291
24	416	375	14,2	39,7	21,3	46,5	160	63	56	94,6	265	142	310
25	400	360	14,8	41,4	22,2	48,4	170	59	53	100,5	281	151	329
26	385	350	15,4	43,0	23,0	50,4	180	56	50	106	298	159	349
28	360	320	16,5	46,3	24,8	54,2	190	53	47	112	314	168	368
30	330	300	17,7	49,6	26,6	58,1	200	50	45	118	331	177	387
32	312	280	18,9	52,9	28,4	62,0	250	40	36	148	414	222	481
33,3	300	270	19,7	55,1	29,5	64,5	330	30	27	195	546	292	639
34	295	265	(20,1)	56,2	30,1	65,9	450	(22)	(20)	266	744	399	873
36	280	250	21,3	59,5	31,9	69,7	600	17	15	355	992	532	1143
36,4	275	248	21,5	60,2	32,3	70,5	1000	10	9	591	1654	886	1987
38	263	237	22,5	62,9	33,7	73,6							
40	250	225	23,6	66,2	35,4	77,5							
42	238	214	24,8	69,5	37,2	81,4							

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# **EXHIBIT 3**

**From:** Claudia Villacorta - PTCA [cvillacorta@pettenati.com.sv]  
**Sent:** Friday, September 30, 2011 7:09 PM  
**To:** Keith Jenkins (SS&A)  
**Subject:** RE: Fabric Inquiry

Dear Keith

Thank you for your email  
In order to help with you needs would you be so kind as to let us know a little bit more about your Company  
What brands do you work with?

Thank you

**Claudia Villacorta**  
**Customer Service Coordinator**  
**Pettenati Centro América**  
**Phone: (503) 2526-1309**  
**[cvillacorta@pettenati.com.sv](mailto:cvillacorta@pettenati.com.sv)**

**From:** Keith Jenkins (SS&A) [<mailto:kjenkins@ssa-dc.com>]  
**Sent:** Viernes, 30 de Septiembre de 2011 02:35 p.m.  
**To:** Claudia Villacorta - PTCA  
**Subject:** Fabric Inquiry

Hello Claudia,

A client of mine is looking for a supplier of two circular knit, three-end fleece fabrics, as described in detail below. Can you please let me know if your company can supply the fabrics to the specifications? Please let me know if you have any questions.

Thank you,

Keith

**Keith A. Jenkins**  
**Sorini, Samet & Associates, LLC**  
700 13th Street, NW, Suite 930  
Washington, DC 20005  
Office: 202.393.4481 x201  
Fax: 202.393.4494  
E-mail: [kjenkins@ssa-dc.com](mailto:kjenkins@ssa-dc.com)  
[www.ssa-dc.com](http://www.ssa-dc.com)

**FABRIC #1**

**Fabric Description:**  
**Circular Knit Three End Fleece, 100% Polyester**

All values listed in English measurements			Low parameter	High parameter
Fiber content	Polyester		100%	100%
Yarn size	Face yarn (two intermingled 100% polyester yarns, high-shrinkage)	#1 Denier	166.6	195.7
		#1 Filament	144	144
		#2 Denier	272.7	333.3
		#2 Filament	12	12
	Tie yarn (100% polyester)	Denier	112.5	132.4
		Filament	72	72
Fleece yarn (100% polyester)	Denier	56.3	64.3	
	Filament	144	144	
Weight (ounces per square yard)			6.6	7.8
Width (inches)			55	67
Quantity (yards per month)			273,400	601,500
Machine gauge			28	
Coloration			Piece dye, with brushing	
Performance criteria	<ol style="list-style-type: none"> <li>1. Durable water repellent (C6), AATCC 22 Spray Test, 80% Coverage/20 Washes</li> <li>2. Fleece side: Brushed, Sheared, Tumbled - ASTM D6797 =&gt; 100 PSI</li> <li>3. CPI: 49 ~ 51</li> <li>4. WPI: 47 ~ 49 (include range)</li> <li>5. Spirality: 3 times wash (AATCC-179) = &lt;5%</li> <li>6. Pilling: ASTM D-3512=4</li> <li>7. Snagging Length &amp; Width: 300 cycles = 3 ASTM D3939</li> <li>8. Air Permeability: ASTM D737 = 110 ~120 (initial) CFM</li> <li>9. CIO value (thermal transmittance) = 0.45 ~ 0.60 U2/CIO (ASTM D1518)</li> <li>10. AATCC-135 L &amp; W = +/-5%</li> <li>11. No colorfastness values under 2.5</li> </ol>			

## FABRIC #2

### Fabric Description:

**Circular Knit Three End Fleece, 100% Polyester -- Heather Color**

All values listed in English measurements			Low parameter	High parameter
Fiber content	Polyester		100%	100%
Yarn size	Face yarn (100% polyester – 50% cationic/ 50% disperse)	Denier (cation/disperse)	112.5	128.6
		Filament	132	132
	Tie yarn	Denier	112.5	132.4

	(100% polyester)	Filament	72	72
	Fleece yarn	Denier	56.3	64.3
	(100% polyester)	Filament	144	144
Weight (ounces per square yard)			6.6	7.8
Width (inches)			55	67
Quantity (yards per month)			164,000	273,400
Machine gauge			28	
Coloration			Piece dye by cation dyestuff, with brushing	
Performance criteria	<ol style="list-style-type: none"> <li>1. Durable water repellent (C6), AATCC 22 Spray Test, 80% Coverage/20 Washes</li> <li>2. Fleece side: Brushed, Sheared, Tumbled - ASTM D6797 =&gt; 100 PSI</li> <li>3. CPI: 48 ~ 50</li> <li>4. WPI: 40 ~ 42 (include range)</li> <li>5. Spirality: 3 times wash (AATCC-179) = &lt;5%</li> <li>6. Pilling: ASTM D-3512 = 4</li> <li>7. Snagging Length &amp; Width: 300 cycles = 3 ASTM D3939</li> <li>8. Air Permeability: ASTM D737 = 110 ~120 (initial) CFM</li> <li>9. CIO value (thermal transmittance) = 0.45 ~ 0.60 U2/CIO (ASTM D1518)</li> <li>10. AATCC-135 L &amp; W = +/-5%</li> <li>11. No colorfastness values under 2.5</li> </ol>			

# **EXHIBIT 4**

**From:** Claudia Villacorta - PTCA [cvillacorta@pettenati.com.sv]  
**Sent:** Tuesday, October 04, 2011 1:42 PM  
**To:** Keith Jenkins (SS&A)  
**Cc:** Francesco Pilenga  
**Subject:** RE: Fabric Inquiry

Dear Keith

Hope this finds you well

We do have possibility to produce industrially below fabrics and in commercial quantities , along with the requested performance criteria and with the supposed kind of yarn ; we would need a fabric sample cut , a target price, quantities , lead times, name of the vendor , name of the brand .

Based on those information we will decide if interested in producing the below textiles.

Regards

**Claudia Villacorta**  
**Customer Service Coordinator**  
**Pettenati Centro América**  
**Phone: (503) 2526-1309**  
**cvillacorta@pettenati.com.sv**

**From:** Keith Jenkins (SS&A) [mailto:kjenkins@ssa-dc.com]  
**Sent:** Lunes, 03 de Octubre de 2011 02:59 p.m.  
**To:** Claudia Villacorta - PTCA  
**Subject:** RE: Fabric Inquiry

Hello Claudia,

My firm is a consulting and government affairs practice based in Washington, DC. We work with several clients that have operations in Central America. Often we reach out to the CAFTA-DR market on behalf of our clients to help establish whether companies can produce certain fabrics for apparel production.

Please let me know if your company can produce the fabrics below to the specifications.

Thanks,

Keith

**Keith A. Jenkins**  
**Sorini, Samet & Associates, LLC**  
700 13th Street, NW, Suite 930  
Washington, DC 20005  
Office: 202.393.4481 x201  
Fax: 202.393.4494  
E-mail: [kjenkins@ssa-dc.com](mailto:kjenkins@ssa-dc.com)  
[www.ssa-dc.com](http://www.ssa-dc.com)

# **EXHIBIT 5**

**From:** Claudia Villacorta - PTCA [cvillacorta@pettenati.com.sv]  
**Sent:** Wednesday, October 05, 2011 5:46 PM  
**To:** Keith Jenkins (SS&A)  
**Cc:** Francesco Pilenga  
**Subject:** RE: Fabric Inquiry

Keith

Please send to:  
Pettenatí Centro America  
Km 42 carretera a Santa Ana  
El Salvador

Phone: 503-25261300

Please also send a Invoice with no commercial value

Regards

**Claudia Villacorta**  
**Customer Service Coordinator**  
**Pettenatí Centro América**  
**Phone: (503) 2526-1309**  
**cvillacorta@pettenati.com.sv**

**From:** Keith Jenkins (SS&A) [mailto:kjenkins@ssa-dc.com]  
**Sent:** Miércoles, 05 de Octubre de 2011 03:45 p.m.  
**To:** Claudia Villacorta - PTCA  
**Cc:** Francesco Pilenga  
**Subject:** RE: Fabric Inquiry

Claudia,

Thank you. We will be sending fabric samples to you soon for your analysis, and we will also send lead times. The quantities needed are in the specifications provided below. For reasons of confidentiality, we cannot disclose names of vendors or brands. Please send me the address for sample shipping.

Best,

Keith

**Keith A. Jenkins**  
**Sorini, Samet & Associates, LLC**  
700 13th Street, NW, Suite 930  
Washington, DC 20005  
Office: 202.393.4481 x201  
Fax: 202.393.4494

# **EXHIBIT 6**

**From:** Claudia Villacorta - PTCA [cvillacorta@pettenati.com.sv]  
**Sent:** Thursday, October 13, 2011 9:45 AM  
**To:** Keith Jenkins (SS&A)  
**Cc:** Francesco Pilenga  
**Subject:** Fabric Inquiry

Dear Keith

Hope this finds you well

Just wanted to follow up with you on email below.

Please let us know if you have sent fabric swatches to the address detailed below. I believe that you are aware that for fabric inquiries you can directly contact the Otexta -Cafta office in Washington to make a regional investigation about fabric request or either short supply list .

I will wait for your confirmation

Regards

**Claudia Villacorta**  
**Customer Service Coordinator**  
**Pettenati Centro América**  
**Phone: (503) 2526-1309**  
**[cvillacorta@pettenati.com.sv](mailto:cvillacorta@pettenati.com.sv)**

**From:** Claudia Villacorta  
**Sent:** Martes, 04 de Octubre de 2011 11:42 a.m.  
**To:** 'Keith Jenkins (SS&A)'  
**Cc:** Francesco Pilenga  
**Subject:** RE: Fabric Inquiry

Dear Keith

Hope this finds you well

We do have possibility to produce industrially below fabrics and in commercial quantities , along with the requested performance criteria and with the supposed kind of yarn ; we would need a fabric sample cut , a target price, quantities , lead times, name of the vendor , name of the brand .

Based on those information we will decide if interested in producing the below textiles.

Regards

**Claudia Villacorta**  
**Customer Service Coordinator**  
**Pettenati Centro América**  
**Phone: (503) 2526-1309**  
**[cvillacorta@pettenati.com.sv](mailto:cvillacorta@pettenati.com.sv)**

# **EXHIBIT 7**

**From:** Claudia Villacorta - PTCA [cvillacorta@pettenati.com.sv]  
**Sent:** Friday, December 02, 2011 1:10 PM  
**To:** Francesco Pilenga  
**Subject:** FW: Inquiry

**Claudia Villacorta**  
**Customer Service Coordinator**  
**Pettenati Centro América**  
**Phone: (503) 2526-1309**  
**[cvillacorta@pettenati.com.sv](mailto:cvillacorta@pettenati.com.sv)**

**From:** Huh, Shin-Heng [<mailto:SHHuh@hansoll.com>]  
**Sent:** Martes, 25 de Octubre de 2011 06:45 p.m.  
**To:** Huh, Shin-Heng; Claudia Villacorta - PTCA  
**Cc:** Jung, Kyoung-Tae; Claudia Villacorta - PTCA  
**Subject:** RE: Inquiry

Dear Ms. Villacorta.,

I hope this mail finds you well. Now, I am waiting your reply about my questions. May I get it shortly?

Best regards,

Sean Huh

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**From:** Huh, Shin-Heng  
**Sent:** 2011-10-19 (수) 오후 2:15  
**To:** 'cvillacorta@pettenati.com.sv'  
**Cc:** Jung, Kyoung-Tae  
**Subject:** Inquiry  
Dear Ms. Villacorta:

I am a representative of Hansoll Textile. My company is searching for a CAFTA-DR supplier of two circular knit three-end fleece fabrics of 100% polyester. Hansoll's consultants in Washington, DC informed me that Pettenati is interested in supplying the fabrics to the specifications indicated below. Currently we are unfamiliar with your capability to knit high-performance circular knit fleece fabrics.

Before we continue further, we need to have a better understanding of your capabilities in circular knit three-end fleece fabrics of 100% polyester.

1. Has Pettenati ever produced fabrics to the specifications below? If so, we would like to analyze swatches of the fabrics. Will you please send swatches to my attention at the address below? Exactly how much of the fabrics have you produced in the last two years, and if not confidential, may I ask for which brands?
2. If you have not before produced these fabrics, can you please provide full details of your equipment, capacity, and your proposed process to produce circulate knit three-end fleece fabrics of 100% polyester in the quantities outlined below? Given that this would be an extremely large purchase, Hansoll requires extensive detail about your equipment, processes, and lead-times if you are to attempt to develop a new fabric that is outside of your normal business.

3. I have attached photographs of the front face and back of each fabric. These photographs should give you some idea of the fabrics we need.

We would appreciate a thorough reply that addresses all information requested. Thank you for your time.

Best regards,

Sean Huh

**FABRIC #1**

**Fabric Description:  
Circular Knit Three End Fleece, 100% Polyester**

All values listed in English measurements		Low parameter	High parameter	
Fiber content	Polyester	100%	100%	
Yarn size	Face yarn	#1 Denier	166.6	195.7
	(two intermingled polyester yarns, shrinkage)	100% #1 Filament	144	144
		#2 Denier	272.7	333.3
		#2 Filament	12	12
	Tie yarn	Denier	112.5	132.4
	(100% polyester)	Filament	72	72
	Fleece yarn	Denier	56.3	64.3
	(100% polyester)	Filament	144	144
Weight (ounces per square yard)		6.6	7.8	
Width (inches)		55	67	
Quantity (yards per month)		273,400	601,500	
Machine gauge		28		
Coloration		Piece dye, with brushing		
Performance criteria	<ol style="list-style-type: none"> <li>1. Durable water repellent (C6), AATCC 22 Spray Test, 80% Coverage/20 Washes</li> <li>2. Fleece side: Brushed, Sheared, Tumbled - ASTM D6797 =&gt; 100 PSI</li> <li>3. CPI: 49 ~ 51</li> <li>4. WPI: 47 ~ 49 (include range)</li> <li>5. Spirality: 3 times wash (AATCC-179) = &lt;5%</li> <li>6. Pilling: ASTM D-3512=4</li> <li>7. Snagging Length &amp; Width: 300 cycles = 3 ASTM D3939</li> <li>8. Air Permeability: ASTM D737 = 110 ~120 (initial) CFM</li> <li>9. CIO value (thermal transmittance) = 0.45 ~ 0.60 U2/CIO (ASTM D1518)</li> <li>10. AATCC-135 L &amp; W = +/-5%</li> <li>11. No colorfastness values under 2.5</li> </ol>			

**FABRIC #2**

**Fabric Description:  
Circular Knit Three End Fleece, 100% Polyester – Heather Color**

All values listed in English measurements		Low parameter	High parameter	
Fiber content	Polyester	100%	100%	
Yarn size	Face yarn (100% polyester – cationic/ 50% disperse)	Denier	112.5	128.6
		Filament	132	132
	Tie yarn (100% polyester)	Denier	112.5	132.4
		Filament	72	72
	Fleece yarn (100% polyester)	Denier	56.3	64.3
		Filament	144	144
Weight (ounces per square yard)		6.6	7.8	
Width (inches)		55	67	
Quantity (yards per month)		164,000	273,400	
Machine gauge		28		
Coloration		Piece dye by cation dyestuff, with brushing		
Performance criteria	<ol style="list-style-type: none"> <li>1. Durable water repellent (C6), AATCC 22 Spray Test, 80% Coverage/20 Washes</li> <li>2. Fleece side: Brushed, Sheared, Tumbled - ASTM D6797 =&gt; 100 PSI</li> <li>3. CPI: 48 ~ 50</li> <li>4. WPI: 40 ~ 42 (include range)</li> <li>5. Spirality: 3 times wash (AATCC-179) = &lt;5%</li> <li>6. Pilling: ASTM D-3512 = 4</li> <li>7. Snagging Length &amp; Width: 300 cycles = 3 ASTM D3939</li> <li>8. Air Permeability: ASTM D737 = 110 ~120 (initial) CFM</li> <li>9. CIO value (thermal transmittance) = 0.45 ~ 0.60 U2/CIO (ASTM D1518)</li> <li>10. AATCC-135 L &amp; W = +/-5%</li> <li>11. No colorfastness values under 2.5</li> </ol>			

# **EXHIBIT 8**

PUBLIC VERSION

#1

<b>Fabric: K0292 was sent to [*****] on December 8, 2011. It is an exact replica of Hansoll's solid-color fabric request, including DWR finishing</b>			
Fiber content	Polyester		100%
Yarn size	Face yarn (two intermingled 100% polyester yarns, high-shrinkage)	#1 Denier	50
		#1 Filament	144
		#2 Denier	30
		#2 Filament	12
	Tie yarn (100% polyester)	Denier	70
		Filament	72
Fleece yarn (100% polyester)	Denier	150	
	Filament	144	
Weight (g/sqm)			250
Width (centimeters)			152
Machine gauge			28
Coloration			Piece dye, with brushing

#2

<b>Fabric: 50175 [*****] current solid-color fabric</b>			
Fiber content	Polyester		100%
Yarn size	Face yarn (100% polyester)	Denier	100
		Filament	96
	Tie yarn (100% polyester)	Denier	50
		Filament	36
	Fleece yarn (100% polyester)	Denier	150
		Filament	144
Weight (g/sqm)			250
Width (centimeters)			186
Machine gauge			28
Coloration			Piece dye, with brushing

#3

<b>Fabric: 50185 [*****] current solid-color fabric</b>			
Fiber content	Polyester		100%
Yarn size	Face yarn (100% polyester)	Denier	100
		Filament	96
	Tie yarn (100% polyester)	Denier	50
		Filament	36
	Fleece yarn (100% polyester)	Denier	70
		Filament	72
Weight (g/sqm)			210
Width (centimeters)			181
Machine gauge			28
Coloration			Piece dye, with brushing

## PUBLIC VERSION

#4

<b>Fabric: 50194 [*****] approved solid-color fabric for their ["surgent" Youth Program] for 2012 production</b>			
Fiber content	Polyester		100%
Yarn size	Face yarn (100% polyester)	Denier	100
		Filament	96
	Tie yarn (100% polyester)	Denier	70
		Filament	72
	Fleece yarn (100% polyester)	Denier	70
		Filament	72
Weight (g/sqm)			215
Width (centimeters)			179
Machine gauge			28
Coloration			Piece dye, with brushing

#5

<b>Fabric: K0257 [*****] heather-color fabric still in approval stage</b>			
Fiber content	Polyester		100%
Yarn size	Face yarn (100% polyester - 50%Cationic / 50%Disperse)	Denier	100
		Filament	108
	Tie yarn (100% polyester)	Denier	70
		Filament	72
	Fleece yarn (100% polyester)	Denier	70
		Filament	72
Weight (g/sqm)			210
Width (centimeters)			177
Machine gauge			28
Coloration			Piece dye, with brushing

#6

<b>Fabric: K0105 – MM Solid-color fabric made for [*****] in 2009</b>			
Fiber content	Polyester		100%
Yarn size	Face yarn (two intermingled 100% polyester yarns, high-shrinkage)	#1 Denier	50
		#1 Filament	144
		#2 Denier	30
		#2 Filament	12
	Tie yarn (100% polyester)	Denier	70
		Filament	72
	Fleece yarn (100% polyester)	Denier	150
		Filament	144
Weight (g/sqm)			245
Width (centimeters)			159
Machine gauge			28
Coloration			Piece dye, with brushing

PUBLIC VERSION

#7

<b>Fabric: 50198 [ * * * * * ] heather-color fabric</b>			
Fiber content	Polyester		100%
Yarn size	Face yarn (100% polyester - 50%Cationic / 50%Disperse)	Denier	75
		Filament	72
	Tie yarn (100% polyester)	Denier	50
		Filament	36
	Fleece yarn (100% polyester)	Denier	70
		Filament	72
Weight (g/sqm)			210
Width (centimeters)			181
Machine gauge			28
Coloration			Piece dye, with brushing

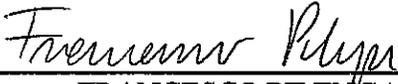
#8

<b>Fabric: 50199 [ * * * * * ] heather-color fabric</b>			
Fiber content	Polyester		100%
Yarn size	Face yarn (100% polyester - 50%Cationic / 50%Disperse)	Denier	75
		Filament	72
	Tie yarn (100% polyester)	Denier	50
		Filament	36
	Fleece yarn (100% polyester)	Denier	70
		Filament	72
Weight (g/sqm)			205
Width (centimeters)			182
Machine gauge			28
Coloration			Piece dye, with brushing

**DUE DILIGENCE CERTIFICATE**

I, Francesco Pilenga, currently employed by Pettenati Centro America, S.A. de C.V., certify that (1) I have read the attached submission, and (2) the information contained in this submission is, to the best of my knowledge, complete and accurate.

Date: 12.12.11

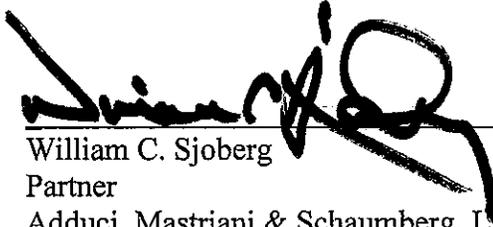
  
\_\_\_\_\_  
FRANCESCO PILENGA

**LEGAL REPRESENTATIVE DUE DILIGENCE CERTIFICATE**

I, William C. Sjoberg, of Adduci, Mastriani & Schaumberg, L.L.C., counsel to Pettenati Centro Centro America, S.A. de C.V., certify that (1) I have read the attached submission, and (2) based on the information made available to me by Francesco Pilenga of Pettenati Centro America, S.A. de C.V., I have no reason to believe that this information contains any material misrepresentation or omission of fact.

Date:

12/12/11



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