

As mentioned in the Process Inspection section, NPG believes that anticipation, identification and correction of issues as early in the manufacturing process as possible are fundamental to the successful execution of a quality product. This is certainly true when it comes to the raw materials that go into that product. Determining the acceptability of the fabric to be used up front, allows the manufacturer to minimize loss of material and time during the garment manufacturing process.

NPG's preferred method for inspecting production fabric is the 4-Point System. This industry standard method allows comparison of results between mills and garment manufacturers when used by all parties. As part of our Supplier Quality Certification Program, however, we do recognize alternative methods as long as they support minimal wastage and fabric issues in the finished product. Information regarding the NPG Fabric Inspection Process is outlined below.

FABRIC SAMPLING PLAN

The following sampling plan lists the minimum quantity of fabric to be inspected for each pattern, color way, or print. All rolls to be inspected must be randomly selected by the inspector. Once a roll has been selected, no adjustments should be made.

SAMPLE PLAN				
Lot Size Yards	Inspection Yards	Lot Size Meters	Inspection Meters	Percent of Total Lot
0 - 2,500	not less than 500	0 - 2,300	not less than 460	20%
2,501 - 5,000	251 - 500	2,301 - 4500	230 - 450	10%
5,001 - 20,000	400 - 1,600	4,501 – 18,300	360 - 1465	8%
20,001 - 30,000	1,200 - 1,800	18,301 – 27,400	1,100 – 1,645	6%

All inspected rolls must be identified with an inspection tag which must remain on the roll until it is spread.

4-POINT INSPECTION SYSTEM

The 4-Point System assigns 1, 2, 3 and 4 penalty points according to the size and significance of the defect.

- Each roll in the sample should be inspected with points assigned according to the following criteria:

4-POINT SYSTEM DEFECT EVALUATION		
Points Assigned	Size of Defects	
	(Inches)	(CM)
1	≤3"	< 8 cm
2	>3" ≤6"	> 8 cm < 15 cm
3	>6" ≤9"	> 15 cm < 23 cm
4	>9"	> 23 cm

- No more than 4 penalty points can be assigned for any single defect.

- No linear yard or meter can contain more than 4 points, regardless of the number of defects within that yard or meter.
- Assign a maximum of 4 points to each:
 - Consecutive linear yard or meter in which a continuous running defect exceeds 9 inches (23 cm)
 - Full width defect
 - Yard or meter within a shipment which has any continuous defect (i.e., roll to roll shading, narrow or irregular width, creasing, uneven finish, barre', skew, etc.)
- Defects must be documented by type and point count on the inspection report
- All defects must be marked with sticker at the location of defect or with a marker (sticker, swift tack, etc.) at selvedge edge
- Fabric width must be checked a minimum of 3 times during inspection and documented on the inspection report
- Actual roll length should be checked and documented on the inspection report

POINT CALCULATION

Once the rolls are inspected, the Points per 100 Square Yards or Meter must be calculated to determine acceptability of the roll and / or shipment. The formulas for the calculations are shown below:

For Individual Roll:

$$\text{Points per 100 Square Yards} = \frac{\text{Total Points for the roll} \times 3600}{\text{Inspected Yards} \times \text{Cuttable Fabric Width (inch)}}$$

$$\text{Points per 100 Square Meters} = \frac{\text{Total Points for the roll} \times 100,000}{\text{Inspected Meters} \times \text{Cuttable Fabric Width (MM)}}$$

For Shipment:

$$\text{Total Shipment Points per 100 Sq. Yards} = \frac{\text{Total Average Points per Linear Yard} \times 3600}{\text{Shipment Inspected Yards} \times \text{Cuttable Fabric Width (inch)}}$$

$$\text{Total Shipment Points per 100 Sq. Meters} = \frac{\text{Total Average Points per Linear Meter} \times 10,000}{\text{Shipment Inspected Meters} \times \text{Cuttable Fabric Width (MM)}}$$

NPG ACCEPTABLE POINTS PER CLASSIFICATION

The calculated Point Count for individual rolls and shipment must be evaluated against the NPG Acceptable Point Count Standard. The following chart indicates the maximum allowed points per roll and shipment by fabric classification. Individual rolls exceeding the points allowed must be removed from the shipment and a shipment with a total point count exceeding the allowable limit must be rejected. Please note, in the event of a rejected shipment, the NPG Production Planner should be notified immediately.

GROUP NO.	DESCRIPTION	POINTS ALLOWED PER INDIVIDUAL ROLL	POINTS ALLOWED PER SHIPMENT
I	Dress Shirting's - >50/1 Worsted/Woolens All Tailored Suiting Fabrics Open End Denim 12-16 oz./ yd ² All Synthetics Filament Rayon Twills Poplin/Oxford/Gingham Shirting Light weight Denim 4-8oz./yd ² Mid weight Denim 9-12oz./yd ²	20 points/100 yard ² 24 points/100 meter ²	15 points/100 yard ² 18 point/100 meter ²
II	Ring spun Denim 12-16oz./yd. ² Canvas Corduroy/Velvet Flannel Woven's with Spandex/Elastane Seersucker, Dobby, Jacquard Chambray/Indigo Yarn Dyes All Silk Basic Knits	25 points/100 yard ² 30 points/100 meter ²	20 points/100 yard ² 24 points/100 meter ²
III	All Specialty Knits	30 points/100 yard ² 36 points/100 meter ²	25 points/100 yard ² 30 points/100 meter ²
IV	Linen Linen Blends Rayon Blends	40 points/100 yard ² 48 points/100 meter ²	32 points/100 yard ² 38 points/100 meter ²
V	Madras Muslin	60 points/100 yard ² 72 points/100 meter ²	50 points/100 yard ² 60 points/100 meter ²

INSPECTION DOCUMENTATION

The Fabric Inspection Report is the primary document used to record the quality characteristics of the individual rolls inspected as well as identifying acceptance or rejection of the entire shipment. The information contained in the report may be used for communication with the mill or other production areas within the factory. As a result, it is important that the following information be complete and recorded accurately.

- Factory Name
- Mill Name
- Fabric Name / Article Number
- Fabric P.O. Number
- Mill / Supplier roll number
- Roll length
 - Ticketed

- Actual
- Cuttable width
 - 1st Measurement – At the start of the roll at least 2 meters or yards into the roll
 - 2nd Measurement – At the middle of the roll
 - 3rd Measurement – At the end of the roll at least 2 meters or yards before the end
- Number of defect points per roll by defect category
- Defect result calculated by roll in points/ 100 Sq Yards/Meters
- Inspector comments per roll, if applicable
- Accept / Reject decision per roll and
- Note: Nordstrom reserves the right to request copies of documentation at any time

COLOR / SHADE INSPECTION

In addition to the inspection for fabric defects, each fabric order must be checked for shade issues. If multiple lots are involved, it is critical to ensure that all rolls within a lot match for shade following the process outlined below.

- Cut a swatch from every roll in the order
- In a lightbox, compare each piece to the others within the lot
 - Create a shade blanket where applicable
 - Note: Ensure the light box is placed in a dark place and shielded from ambient light
- Confirm or adjust lot breakdown and separate rolls by shade group
 - Ensure each roll is marked with the proper shade group identification