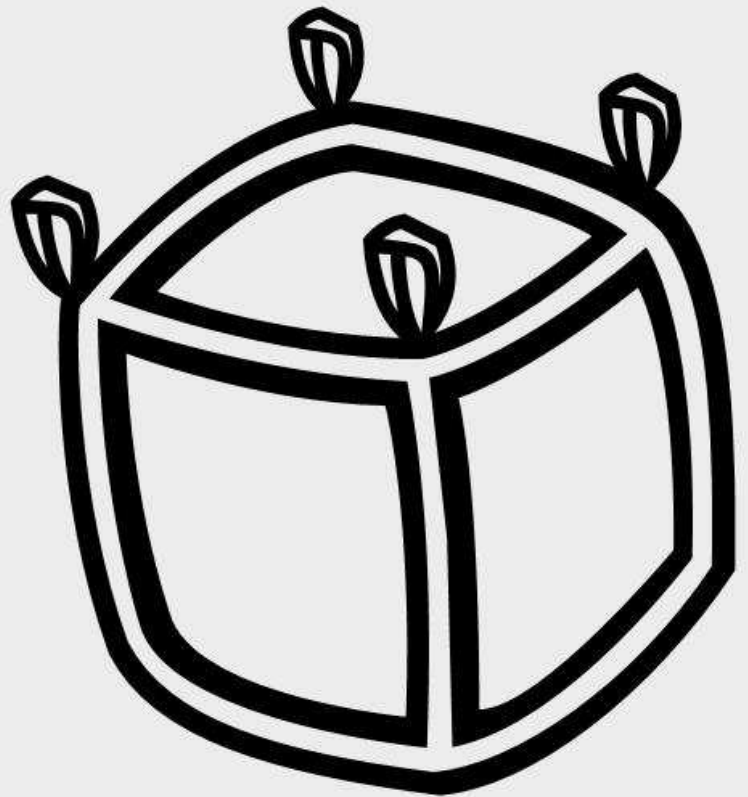


FIBC

Fabric

Identification

Code



Flexible Intermediate Bulk
Container Association

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FABRIC IDENTIFICATION CODE

Developed By The Flexible Intermediate Bulk Container Association Fabric ID Committee

FIBCA, the Flexible Intermediate Bulk Container Association, has determined that there is a need for a global coding system that will identify the strength of the basic material that these containers are made from.





With bulk bag production around the globe, there exists vast differences in age and efficiency of the technology that creates the basic building block, the fabric that is used in bulk bag production.





Internal research has shown that fabrics with the *same weight* can vary by as much as 100% from the bottom strength to the top strength. Buyers who depend on fabric weight alone can no longer be sure that bags with the same weight of fabric will be equal in strength and safety levels.

Therefore, FIBCA is proposing a new code system that identifies the *strength* of the fabric as opposed to the *weight* of the fabric.

The intention is to have each piece of fabric on every bulk bag contain a code that will identify the intended strength of each piece of fabric. The only exception will be for small pieces of fabric such as spouts on the bags. In these cases, at least every fourth spout will contain a code marker yarn.

The code will be made of a progression of three color yarns as shown below;

Marker Yarn / Code	Warp (PTI Minimum)	Weft (PTI Minimum)
<p>One (1) Tan Yarn</p> 	90	90
<p>One (1) Purple Yarn</p> 	190	171
<p>Two (2) Purple Yarns</p> 	205	185
<p>One (1) Red Yarn</p> 	225	203

Marker Yarn / Code	Warp (PTI Minimum)	Weft (PTI Minimum)
Two (2) Red Yarns 	245	221
One (1) Blue Yarn 	275	248
Two (2) Blue Yarns 	300	270
No Marker Yarns 	Are not identifying their strength to the consumer. Buyer cannot assume that these fabrics meet any of the standards identified above	

Details

- **Two Marker Yarn Codes** – When two colored yarns are used they are to be separated by at least one yarn.
- **PTI (Pounds Per Tensile Inch)** – Indicates how many pounds of strength per inch of fabric. This is a MINIMUM strength for fabric with this marker. An average strength meeting this number is NOT acceptable. Therefore, manufacturers should target a number that is two standard deviations above this minimum. Any fabric test that falls below the minimum indicates a failure for the entire lot of fabrics.
- **Warp** – Machine direction. In load bearing fabrics, this is generally the vertical direction of yarns.
- **Weft** – Bobbin direction of yarns. In load bearing fabrics, this is generally the horizontal direction of yarns.
- **Marker Yarn Graphic** – This is only a suggested location for code yarns. Each manufacturer can determine for their own positions to locate the codes.
- **Minimum PTI** – This is the lowest strength to qualify for this code. Again, this is NOT based on AVERAGE strength. It is an absolute minimum that all tests on an individual lot of materials must pass.
- **Testing** – Based on two inch wide strips of fabric. Total break strength is divided by two for data point. The lowest result of 5 tests will determine if fabric meets or exceeds the minimum standard for the code it carries. If a dispute arises about testing standards, then either the ASTM 4632 or the ISO 13934.1 can be used as the definitive test results.

Details (Continued)

- **Failures** – If fabric fails to meet the minimum requirement; it can be substituted for any code for which it meets the minimum standards.
- **Coated Fabrics** – The minimum standard does not change with presence of coating. The fabric must meet the standard as it is intended to be used. To be clear, if the fabric being used to make bulk bags is uncoated, then the uncoated fabric must meet the minimum strength standards. If the fabric being used is coated, then the coated fabric must meet the minimum strength standards.
- **Elongation** - This is also a feature that is critical to the dependability of fabric performance. At this point in time, FIBCA has not completed its evaluation of the elongation range for top performance. We currently recommend that elongation be kept in the range of 18% to 21%. More review will be coming on this subject in the coming months.
- **Average Weight Range** – This is a weight range that fabrics of this strength are generally found in. It is not intended for anything more than just a guide. Fabrics that fall above or below this number are NOT rejected as long as their strength tests are equal or greater than the code minimum strength. For your information, the table below has been provided to show the fabric weight range that has been found to be associated with each code.

Marker Yarn / Code	Warp (PTI Minimum)	Weft (PTI Minimum)	Average Weight Range
One (1) Tan Yarn	90	90	80 – 120 GSM
One (1) Purple Yarn	190	171	140 – 190 GSM
Two (2) Purple Yarns	205	185	150 – 200 GSM
One (1) Red Yarn	225	203	170 – 220 GSM
Two (2) Red Yarns	245	221	190 – 230 GSM
One (1) Blue Yarn	275	248	220 – 250 GSM
Two (2) Blue Yarns	300	270	230 – 270 GSM
No Marker Yarns	Are not identifying their strength to the consumer. Buyer cannot assume that these fabrics meet any of the standards identified above		

Frequently Asked Questions (FAQ's)

1. Why has this standard been created?

- By following this standard, all portions of the FIBC Industry will benefit.
- Bag users will be able to easily compare the strength of the fabrics from one supplier to another.
- Bag Brokers will be able to identify the consistency of their suppliers
- Bag Producers will have visual confirmation that proper fabrics are used throughout each entire order.

2. Does this code determine the safe working capacity of entire bag?

No. The design of the bag and the sewing methods used, combine with the strength of the fabrics to determine the Safe Working Load. This safe working load should be printed on each and every Manufacturer's tag that is sewn to the top of the bag.

3. How is this code being enforced?

This code is entirely voluntary and can only be enforced by agreement between customer and vendor.

Not a member of the Flexible Intermediate Bulk Container Association? Visit www.fibca.com or call 866-600-8880 to learn about the many benefits of FIBCA Membership.