

Some Practical Aspects of Care Label Recommendation of Apparel



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Abstract: Care label recommendation of apparel involves various testing on washing, bleaching, drying, ironing and drycleaning by following standard procedure. Evaluation methods differ depending on whether the apparel is earmarked for United States or Europe. During determination of care label, there are certain options followed depending on the performance of the apparel. If a garment fails in normal washing, drycleaning needs to be followed. Sometimes, for specialty garments, additional care instructions are also advocated.

Key words: Care label, dimensional stability, tumble drying, drycleaning, spirality

1. Introduction

During normal use apparel products become soiled and looks dirty over a period of time. One can not reject a garment due to this reason, which otherwise, could have proved to be uneconomical. Thus, for repetitive use refurbishing is necessary, but of course, not at the mercy of the aesthetic, tactile and fit properties. However, one should not take the liberty to clean the clothing as per his/her own perception. Rather, a set of guideline needs to be followed in the form of a care label attached with the garment depending upon the type of fibre, yarn quality, fabric construction and nature of finish. Recommendation of the care label in apparel is important which describes best practice to refurbish the product without adverse effects and warn against any part of the directions, which is expected to harm the product.

Consumers often do harm the apparel product, which they wear on daily basis while trying to clean for the purpose of reuse. This may be due to incorrect follow through in washing, bleaching, drying, and ironing condition. For instance, used apparels if kept in the washing machine to get itself free from dirt and dusts without following the right duration, colour bleeding and subsequent cross-staining may be the end result. Similarly, keeping synthetic clothing to a tumble dryer for prolonged duration towards fast evaporation of moisture may lead to severe melting phenomenon.

For all the above reasons, it is felt necessary to investigate the scientific way to determine various aspects of cleaning apparel products. This paper deals with various operations involved to derive the safe and effective combination to refurbish apparel for protecting its useful life.

2. Test Methods to Develop Care Label

Sample is subjected to different tests i.e. washing, bleaching, drying after washing, ironing or drycleaning for different set of conditions and evaluated for appearance as per different standards:

- ISO 3758:1991 [1]
- ASTM D3136:2000 [2]
- ASTM D5489-01a [3]
- FTC Care labelling guide [4]
- 16 CFR Part 423 [5]

Symbols should be recommended in following order:

ASTM/CFR	ISO
Washing	Washing
Bleaching	Bleaching
Drying	Ironing
Ironing	Drycleaning
Drycleaning	Drying

2.1 Washing

In case of washing, drying and ironing symbol dots may be used to define the temperature, which is specified as follows:

Washing

ASTM/ CFR Dots			ISO
.	30 °c	Cold	30 °c
..	40 °c	Warm	40 °c
...	50 °c	Hot	50 °c
....	60 °c	Very hot	60 °c
.....	70 °c	Very hot	70 °c
.....	95 °c	Very hot	95 °c

In addition to the basic symbols, a bar under the symbol means that the treatment is gentler which is shown in Figure 1.




Symbol	ISO	AATCC
	Normal cycle	Normal cycle
	Gentle Cycle	Permanent Press
	Very gentle	Delicate/Gentle cycle or wash as wool

Figure 1: Basic symbols and their meaning

2.2 Drying

Tumble Dry

Dots	ISO	AATCC
.	Low	Low
..	Normal	Medium
...	-	High

Other Drying instructions:

- Line Dry
- Flat Dry
- Drip Dry

Other Drying symbols to be recommended for US are shown in Figure 2.





	Line dry/hang to dry
	Drip dry
	Dray flat
	Do not dry (used with do not wash)

Figure 2: Drying symbols for US

Drying symbol, which is to be recommended for Europe, is indicated in Figure 3.



Sample is to be line dried/ flat dried/ drip dried

Figure 3: Drying symbols for Europe

2.3 Ironing

Dots	ISO	AATCC
.	110 °c	110 °c
..	150 °c	150 °c
...	200 °c	200 °c

3. Recommended Tests

3.1 Care Label Recommendation for USA Market

- Either washing or drycleaning instructions can be recommended.
- If a sample passes the washing instructions there is no need to proceed for the drycleaning tests.
- Any symbol, which is not reported, indicates sample is safe for that particular instruction.
- The most common cleaning method for American customer is machine wash and tumble dry. So one should not recommend the method, which is more difficult unless this basic cleaning method would harm the product.

Tests to be performed:

- Colour fastness to washing
- Dimensional stability to washing
- [Note: before & after ironing results in case of rayon fabrics (moss crepes, georgettes, chiffons etc.) need to be reviewed]
- Appearance after washing and ironing
- Colour fastness to chlorine bleach
- (Exception on animal fibres, silk, spandex/elastic and their blends because in these cases Chlorine Bleach test is not applicable due to inherent properties of the fibres)
- Colour fastness to non chlorine Bleach

If sample fails the wash tests one should proceed for following drycleaning tests:

- Colour fastness to dryclean with perchloroethylene.
- For embellished/delicate styles only, appearance (with shrinkage) after drycleaning is to be performed.
- Assess spirality in knitted fabrics & side seam spirality in garments (woven & knits)

3.2 Tests to Be Performed For Care Label Recommendation For UK And European Market

(I) General tests:

- Colour fastness to washing
- Dimensional stability to washing (Follow ISO 6330:1984)
- Appearance to washing and ironing
- Colour fastness to drycleaning
- For embellished/delicate styles only, appearance (with shrinkage) after drycleaning is to be performed.
- Assessment of spirality in knitted fabrics & side seam spirality in garments (woven & Knits)

(II) For white color samples only:

Test items are same as those listed in (I) with additional test on “Color Fastness to Bleaching with Hypochlorite”. For coloured goods “Do not bleach” should be recommended.

3.3 Assessment Criteria

Generally, where specific performance standard of buyer is available, requirement can be consulted from the buyer’s manual. Otherwise, below requirement standards may be followed.

3.3.1 Dimensional Stability to Washing

Apparels:

Woven	$\pm 3.0\%$
Knitted/Net	$\pm 5.0\%$

3.3.2 Dimensional stability to dry clean

Apparels:

Woven	$\pm 2.0\%$
Knitted	$\pm 3.0\%$

3.3.3 Colour fastness to Washing:

- Colour change ≥ 4
- Staining on M/F USA $\geq 3.5^*$

other countries $\geq 3-4^*$

Self staining ≥ 4.5 or 4-5

*If the staining is less than the specified grade, then “wash with like colours” or “wash separately” in the washcare label can be mentioned.

3.3.4 Appearance after wash/dry-clean:

- No noticeable skewing (side seam skew; woven $\leq 3\%$ & knitted $\leq 5\%$)
- Slight colour change (colour change ≥ 4)
- No self staining (self staining ≥ 4.5)
- Slight pilling or fuzziness (pilling rating ≥ 4)
- No noticeable distortion in terms of shape or handle
- No noticeable fraying of threads at seams, buttons, button holes, decorations (embroidery etc)
- No peeling off of coating from beads or decorations. The numerical rating for non textile materials shall not be considered
- No noticeable puckering at seams and other portions
- Label assessment
- Dimensional change is not to be assessed in appearance test.

Colourfastness to bleach

- Colour change ≥ 4

Colourfastness to drycleaning

- Colour change ≥ 4
- Self Staining ≥ 4.5

3.3.5 Ironing

- The appearance of sample after ironing should be satisfactory.
- If ironing is applied for improving the appearance then same should be mentioned in the report as follows:

"Cool iron if necessary" or "warm iron if necessary" or "warm steam iron if necessary" or "hot iron if necessary"

- If the sample does not meet the requirement of shrinkage after wash but meets the same after ironing then it can be mentioned as follows:
"Cool iron" or "Warm iron" or "hot iron" or "Warm steam iron".

4. Procedure

4.1 Washing and Drying

The colour fastness to washing test is to be conducted at m/c wash warm and at cold.

Sample shall be washed at appropriate wash and dry conditions depending on fibre composition and product type (Table 1).

Table 1- General guideline of washcare for different fabric types

	Fabric Type with regard to fibre content	Cleaning Procedure	Temp ° C	Cycle	Drying Procedure		Ironing
					Woven	Knitted	
1	Cotton and cotton rich blends	Machine Wash	40	Normal	Tumble dry/ Line dry	Heavy knits or Rib: Flat dry Light weight knits Single jersey: Tumble dry low Interlock : Line dry	Warm Iron
2	Polyester and Polyester rich blends	Machine Wash	40	Normal	Tumble Dry low/ Line dry	Tumble dry low	Cool Iron
3	Viscose and viscose rich blends	Machine Wash	40	Gentle	Line dry	Flat dry	Warm Iron
4	Washable wool and wool rich blends	Machine Wash	40	Gentle	line dry	Line dry/flat dry	Warm Iron
5	All Elastane blends	Machine Wash	40	Gentle	line dry	Flat dry	Cool Iron
6	Hand wash wool Hand wash silk Chenille	Hand Wash			Flat dry	Flat dry	Cool Iron

If sample fails for m/c wash warm and tumble dry conditions then one should proceed for either m/c wash warm, line dry or less severe conditions i.e. m/c wash cold and line dry/flat dry. Drying method should be selected keeping in mind the style of merchandise.

If sample fails for m/c wash then it is suggested to proceed for hand wash.

The colourfastness to drycleaning test can be performed only in normal styles. In embellished/delicate styles appearance after drycleaning test needs to be conducted.

4.2 Bleaching

4.2.1 US market

- If sample passes for both chlorine and nonchlorine bleach then no need to mention any instruction for bleach.
- If sample passes for non chlorine bleach only then
- "Only Non chlorine bleach when needed" is to be mentioned.
- If sample fails for both bleaches then mention
- "Do not bleach" or "No bleach"

4.2.2 UK and European market

- The color fastness to chlorine bleach is to be performed for whites only. If sample passes then recommendation can be given as "Only chlorine bleach when needed" otherwise "Do not bleach" is to be suggested.
- For coloured goods always "Do not bleach" should be recommended.

4.3 Ironing

Select the ironing temperature depending upon fabric type (Table 1). The appearance of sample is to be assessed after ironing.

4.4 Drycleaning

If sample passes for colourfastness to drycleaning using perchloroethylene then recommendation can be given as shown in Figure 4:

'Dryclean' and Symbol



Figure 4: Drycleaning symbol

If sample fails for drycleaning then recommendation shall be different and is shown in Figure 5.



Figure 5: Drycleaning symbol

5. Additional Care Instructions

- Wash inside out: Where garment having heavy/ delicate embellishments.
- Iron on reverse: It is to be recommended for garments having ornamentation like beads & sequins or prints (eg plastisol, flock etc) or other non-textile material where ironing on such parts can deteriorate the appearance.

- Dry away from direct sunlight / dry in shade: It should be generally recommended in case of silk fabrics and pastel colour fabrics.
- Steam iron recommended: Where puckered appearance occurs mostly in double stitching or around cut work/applique.
- Steam iron also improves appearance in case of cellulosic materials by removal of crinkles.
- Iron whilst damp: Where dimensional stability improves on iron whilst damp (s.a. moss crepes, georgettes etc)
- Reshape whilst damp: It can be recommended for moss crepes, chiffon, knits depending on product style.

Note:

- ✓ Washcare after three washes for USA and after one wash for UK and Europe is to be recommended.
- ✓ Dryclean is to be recommended after one wash
- ✓ Always dryclean is to be used as one word and not as ~~Dry Clean~~.

6. Concluding Remarks

Care label is an important criteria and it gives consumers sufficient information about the procedure by which one can enhance the useful life of the apparel product. Prior to the printing of care label, the relevant test report instruction can be reviewed:

- Results of all test parameters and requirement should be given on the report.
- If sample fails for both washing and drycleaning then conclusion to be given as “Care label can not be recommended unless the failed parameters are improved”.
- If any of the instruction with regard to temperature in washing, ironing and drying is not given, it indicates the product is suitable for severest condition.
- In case of UK/Europe buyers where manual specify washcare on composition basis and when sample fails that specified instructions, one can recommend the instructions with a comment as given below:

“Recommended washcare deviates from the manual specified instructions.”

In case the care label is recommended at fabric stage, the following comment should also appear below the recommended care instructions:

“However, further tests on a garment made of submitted sample for confirmation is recommended”.

Special Cases:

1. Crinkled styles with twist, wring or crush effect:
2. Dimensional stability is to be checked on plain fabric. Drying instructions are to be taken from client.
3. It is advisable to not to recommend ‘Dryclean only’ care instructions for cotton fabrics & inner wears if the sample fails all the washing criteria.

Below comment can be given:

“Washing instructions cannot be recommended however the submitted sample meets the drycleaning instructions”.

References

1. ISO 3758 Textiles - Care labelling code using symbols
2. ASTM D3136 Standard Terminology Relating to Care Labeling for Apparel, Textile, Home Furnishing, and Leather Products
3. ASTM D5489-01a Standard Guide for Care Symbols for Care Instructions on Textile Products
4. FTC Care labelling guide, Clothes Captioning: Complying with the Care Labelling Rule, <http://www.ftc.gov/bcp/edu/pubs/business/textile/bus50.pdf>.
5. 16 CFR Part 423 Trade Regulation Rule on Care Labeling of Textile Wearing Apparel and Certain Piece Goods
6. <http://www.ftc.gov/os/2000/07/carelabelingrule.htm>

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