

GINETEX



**THE INTERNATIONAL
ASSOCIATION FOR TEXTILE
CARE LABELLING**

TECHNICAL BOOKLET



TECHNICAL BOOKLET

VERSION 9



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The following national organisations are currently members of GINETEX:

Austria, Belgium/Luxemburg, Brazil, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Greece, Italy, Japan, Lithuania, Norway, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland/Liechtenstein, The Netherlands, Tunisia.

GINETEX

GROUPEMENT INTERNATIONAL D'ETIQUETAGE POUR L'ENTRETIEN DES TEXTILES

FOREWORD

The International Association for Textile Care Labelling, GINETEX (Groupement International d'Etiquetage pour l'Entretien des Textiles), which represents the textile producing and retailing industries and other interested organisations concerned in textile care in different countries has devised an internationally applicable care labelling system for textiles based on symbols or pictograms. The essential technical elements for its implementation are contained in these technical regulations.

The combination of the five basic pictograms used is covered by a number of international trademarks which are registered with the WIPO (World Intellectual Property Organisation) among them No. 211.247, No. 492.423 and No. 849.319. The right to use these trademarks has been given to the national member bodies of GINETEX. These national organisations are independent as regards their structure and me-

thod of operation, but they should adhere in all respects to these internationally agreed symbols and technical regulations and to decisions taken at the GINETEX level. The GINETEX symbols are also the origin of the international standard EN ISO 3758 "Textiles – Care Labelling Code using Symbols". These standards are the result of an agreement between GINETEX as the owner of the trademarks and ISO (International Standardization Organization).

This document in English, Version 8, is the reference for all existing translations.



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01 SCOPE AND PURPOSE

The care labelling system is intended to supply consumers and textile companies with correct information of the care treatment of textile products, so that the processes indicated on the label will avoid any irreversible damage of the product.

The purpose of the technical regulations is to facilitate the selection of the correct care labels by the textile and garments industries, or by retailers. The regulations also will help garment manufacturers in choosing the combination of components of a made-up article.

The following care treatments are covered by the GINETEX system: washing, bleaching, drying, ironing and professional textile care.

The application of care labels is voluntary unless compulsory by national law or regulation. If however care labels are applied GINETEX decisions and technical regulations should be strictly observed. To minimise misunderstandings, care labelling should be applied uniformly throughout GINETEX member countries and beyond to other countries. By this is meant the number of symbols, the shape, the sequence and the places where labels are attached to made-up textiles. Furthermore the interpretation of the technical rules, the care treatment levels and the way these are indicated in the care symbols must also be regarded.

Since the GINETEX care symbols are a registered trademark, the row of the 5 symbols should be shown with either the “®” or “™” at the end.

All indications given refer to maximum severity of treatments the consumer can use without damaging the article. Underlabelling should be avoided.

The GINETEX symbols should be mentioned on the care label in the following order:

- washing
- bleaching
- drying
- ironing
- professional textile care

Care instructions should be permanently and visibly indicated on textile articles, except in the case of very small articles, where the use of a label would be detrimental to the product, yarns, fabrics, etc. or for home-made goods.

01.1 IMPLEMENTATION AND TRANSITION PERIODS

Each new version of the Technical Booklet is implemented by the GINETEX Governing Body. For adaptations and principal changes a transition period of two years applies starting from the date of the implementation by the GINETEX Governing Body given in the footer of each page. Exporters are asked to check the special requirements in the respective countries and label accordingly.

02 DEFINITIONS

Within the scope of these technical regulations the following definitions apply:

TEXTILE ARTICLES

- Yarn, piece goods and made-up articles containing at least 80% by mass, textile materials, including any non-textile material present such as buttons, trims, fasteners, fixed leather and small fur parts.

SYMBOL

- Design symbolising care treatments

TREATMENTS

- **Washing:** A process designed to clean textile articles in an aqueous bath. Washing includes some or all of the following operations in relevant combinations: Soaking, pre-washing and main washing (carried out usually with heating, mechanical action and in the presence of detergents), rinsing and water extraction by spinning or wringing performed during and/or after the end of the previous processes. These operations may be totally or partially carried out by machine or by hand.
- **Bleaching:** A process carried out in an aqueous medium before, during or after the washing process, requiring the use of an oxidising agent including either chlorine or oxygen/non chlorine products for the purpose of improving soil and stain removal and/or improving whiteness.
- **Chlorine Bleach:** An agent that releases hypochlorite ions in solution, e.g. sodium hypochlorite.
- **Oxygen/non-chlorine Bleach:** An agent that releases a peroxygen species in solution. Oxygen bleach products encompass a wide range of different activated and non-activated bleaching species which vary in their activity. A bleach activator is an agent that initiates bleaching to occur in lower water temperatures.

- **Drying:** A process carried out on textiles articles after washing to remove residual water (or moisture).
- **Tumble Drying after Washing:** A process carried out on textile articles after washing and hydro-extracting, with the intention of removing residual water by treatment with hot air in rotating drum.
- **Natural Drying after Washing:** A process carried out on textile articles after washing, with the intention of removing residual water by line drying or drip drying or flat drying and if appropriate combined with drying in the shade.
- **Ironing and Pressing:** A process carried out on the article to restore its shape and appearance by means of an appropriate appliance using heat, pressure and possibly steam.
- **Professional Textile Care:** Professional dry cleaning and professional wet cleaning, excluding commercial laundering.
- **Professional Dry Cleaning:** A process for cleaning textile articles by means of treatment in any solvents (excluding a treatment in water) normally used for dry cleaning by professionals. This process consists of cleaning, rinsing, spinning. It is followed by appropriate drying and restorative finishing procedures.
- **Professional Wet Cleaning:** A process for cleaning textile articles in water by professionals using special technology (cleaning, rinsing and spinning), detergents and additives to minimise adverse effects. It is followed by appropriate drying and restorative finishing procedures.








03 DESCRIPTION OF THE SYMBOLS

03.1 BASIC SYMBOLS

The care labelling system is based on five basic symbols with additional distinguishing descriptions, e.g. bars, dots, letters, ciphers or the St. Andrew's cross to express recommendations for correct care treatments without the use of language.







| SYMBOL | DESCRIPTION |
|---|--|
|  | This symbol gives information about the possibility and the kind of a domestic washing process by machine or by hand. The ciphers in the washing tub specify the maximum temperature in °C which must not be exceeded. A hand in the tub means that only a mild wash treatment by hand is possible. Note: be aware that the test method is a simulated hand wash program. |
|  | The triangle is an indication for a bleaching process. |
|  | This symbol specifies information on the possibility of domestic drying. The circle inside the square specifies the drying in a domestic tumble dryer. It is not meant for drying in commercial laundries or dry cleaning units. The dots within the circle in the square specify the temperature setting during drying. The line(s) inside the square symbolize natural drying after a washing process. |
|  | This symbol specifies ironing or pressing. The dots within it give the maximum ironing or pressing temperatures. |
|  | The circle gives information on the possibility of professional dry or wet cleaning. The letters within the circle specify the solvents that can be used. |

The relative dimensions of the basic pictograms are given in figure 3.

03.2 ADDITIONAL DESCRIPTIVES

In combination with these five basic symbols additional descriptive are used for a further description of the care treatment.

Relative dimensions of symbols and the additional descriptives are laid down in Figure 3. Relative distances between the symbols is given in Figure 4. Combination of pictograms for symbols and labels are presented in Figure 5.

| SYMBOL | DESCRIPTION |
|---|--|
|  | The bar underneath the wash tub characterises a milder treatment which may be achieved by a reduction of mechanical action, of washing time, by higher water levels, smaller loads, a cool down or combinations thereof and reduced spinning. The bar underneath the professional textile care symbol (professional dry and wet cleaning) indicates a milder care treatment with reduced mechanical action, lower moisture content of the solvent bath or a reduced cleaning and/or drying temperature or combinations thereof and spinning. |
|  | The double bar describes a very mild washing or cleaning cycle |
|  | The number of dots indicates the severity as regards to temperature of the ironing and tumble drying treatment. They also give information about the possibility of steaming during ironing and pressing. |
|  | The diagonal cross (St. Andrew's cross) superimposed on any of the basic symbols means that the treatment represented by it shall not be used. |



03.3 MINIMAL SIZE OF SYMBOL ROW

The symbol row consists of the five basic symbols in the given order of washing, bleaching, drying, ironing and professional textile care without specific contents. To ensure an appropriate recognition and legibility, the symbols should if possible not fall below the minimum width of 10 Millimeters, the “registered trademark symbol” not included.

Whenever possible, the symbols have to be used in a larger version. (Figure 1)



FIGURE 1 THE SYMBOL ROW AND ITS MINIMAL SIZE

03.4 PROTECTED INTERSPACES

For placements in connection with additional graphical elements, fonts, edges or pictures minimum protected interspaces are to be kept. Special attention is to be given to these interspaces as well as to a meaningful integration of the symbols in view of the respective media.

The height/width of the drying symbol define the minimum interspaces around the symbol row. The height of the symbol defines the interspace above and under the symbol row. The width of the symbol defines the interspaces right and left of the symbol row. (Figure 2)

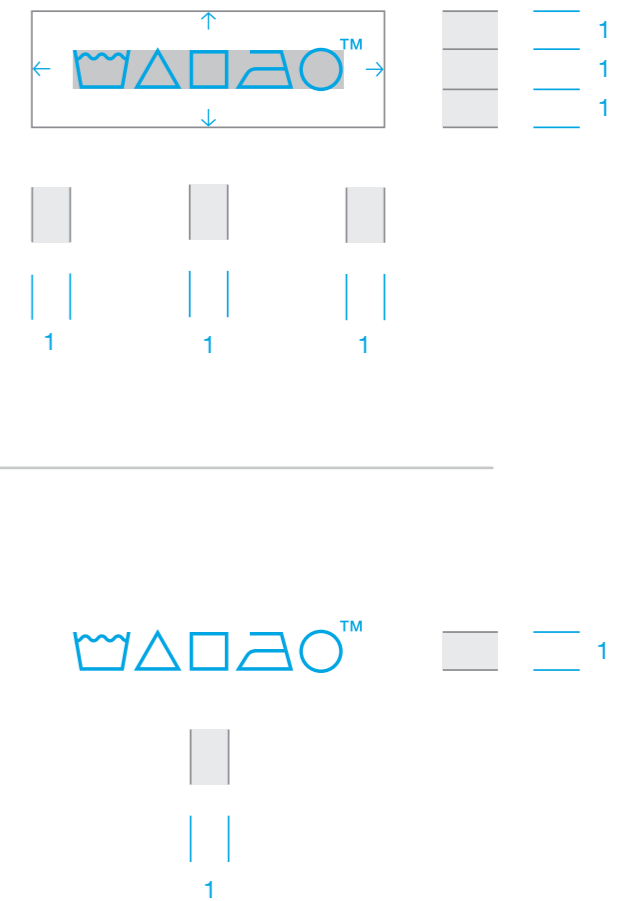


FIGURE 2 THE SYMBOL AND ITS INTERSPACES

03.5 RELATIVE DIMENSION OF SYMBOLS

The logical structure of the symbols is based on a systematic and modular system, which simplifies the reconstruction and advancement. The fundamental proportions define itself through height and width of the equilateral symbol 'drying' and correspond to 100 units. They determine the sizes which can be derived from it. Line strengths and interspaces as well as font sizes and their position are always subject to the same values. The St. Andrew's cross is placed vertical and horizontal centrally over the symbols.

A cloud login for downloading the correct symbols for reproductions can be obtained through the GINETEX secretariat; ginetex@ginetex.net

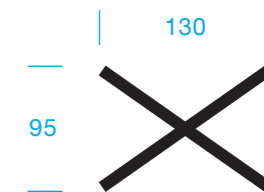
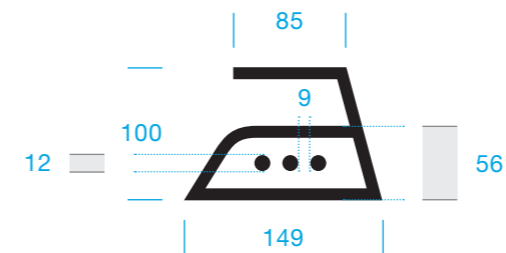
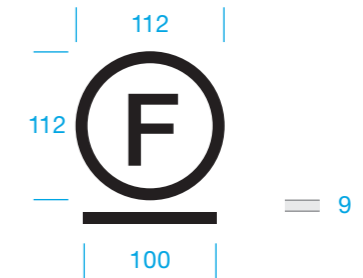
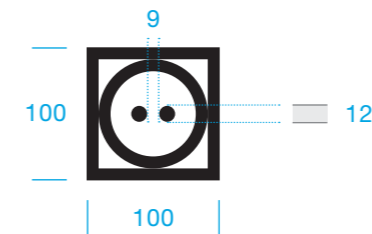
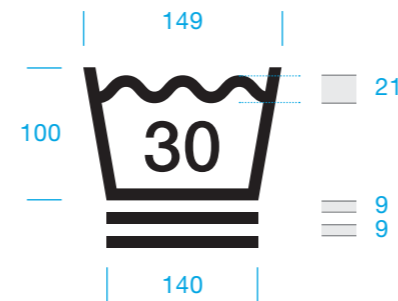


FIGURE 3 RELATIVE DIMENSION OF SYMBOLS

03.6 RELATIVE DISTANCES BETWEEN THE SYMBOLS

The row of the care symbols consists of the five basic symbols in the order of Washing, Bleaching, Drying, Ironing and Professional Cleaning having no specific denomination. To show this row as a entity, the vertical and horizontal distance of the single symbol is derived from the form, size and relation to the next symbol. Subsequently individual values result. Within the symbol categories, these values remain unchanged and are fixed sizes.

Within the modular system, different combinations of the five basic care symbols with specific content are possible. Their position is given through a predefined concept of the dimensions (s. figure 4)

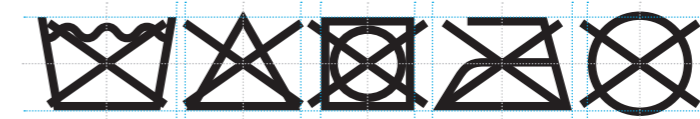
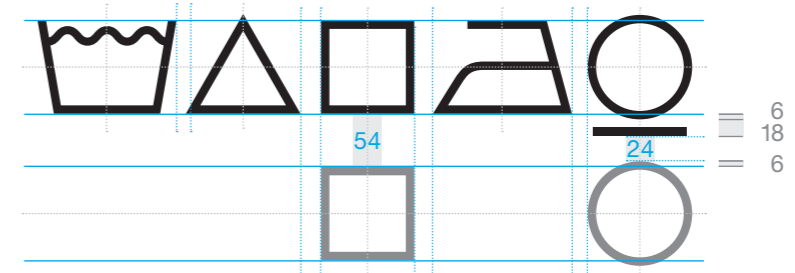
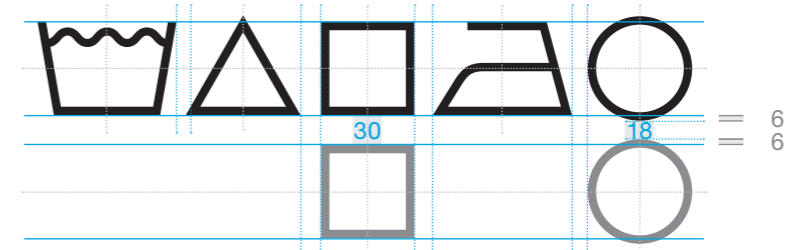
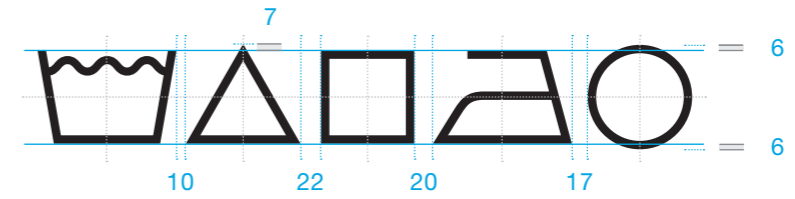


FIGURE 4 RELATIVE DISTANCES BETWEEN THE SYMBOLS

03.7 COMBINATION OF PICTOGRAM FOR SYMBOLS AND LABELS

The registered GINETEX care symbol trademark shows as a rule 5 symbols in one row. Please make sure it corresponds with the national law of certain countries requiring a single row of six or seven symbols.

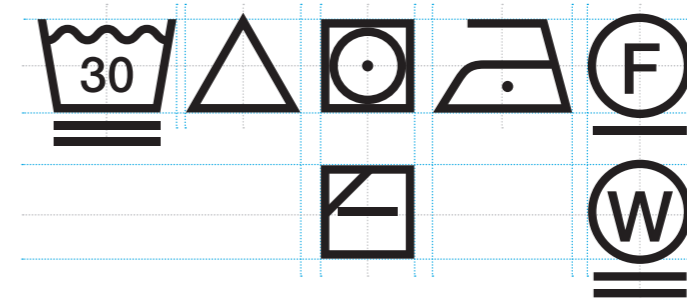
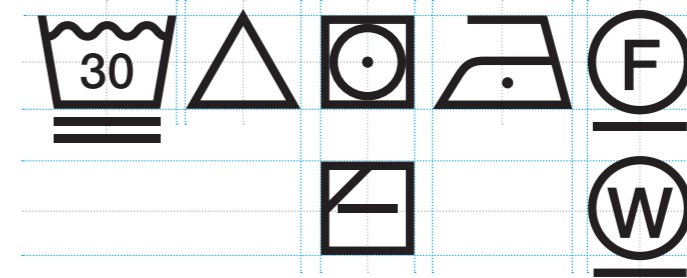
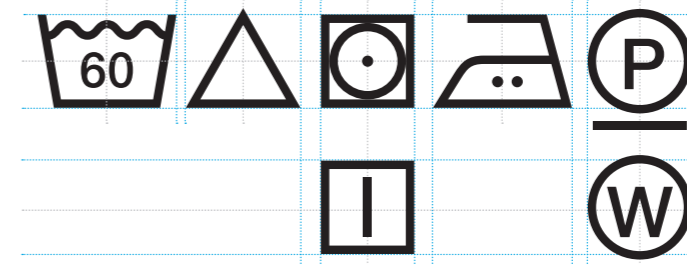
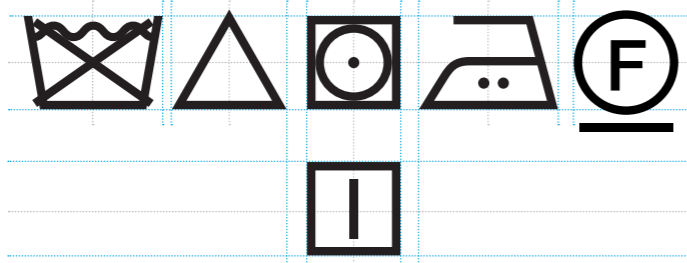
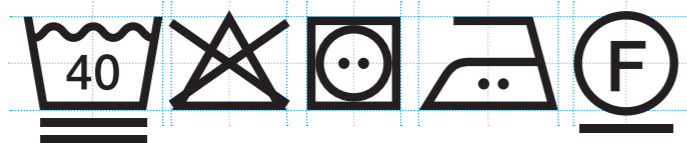


FIGURE 5 COMBINATION OF PICTOGRAM FOR SYMBOLS AND LABELS

04 SYMBOLS

04.1 WASHING

| SYMBOLS | DESCRIPTION OF PROCESS |
|----------------------|--|
| | maximum temperature 95 °C normal process |
| | maximum temperature 60 °C normal process |
| | maximum temperature 60 °C mild process |
| | maximum temperature 40 °C normal process |
| | maximum temperature 40 °C mild process |
| | maximum temperature 40 °C very mild process |
| | maximum temperature 30 °C normal process |
| | maximum temperature 30 °C mild process |
| | maximum temperature 30 °C very mild process |
| | hand wash* maximum temperature 40 °C |
| | do not wash |
| PLEASE NOTE * | |
| | The use of the hand wash symbol shown in the ISO standard 3758 is also accepted. |

| ADDITIONAL SYMBOLS IN ISO 3758 | |
|--------------------------------|---|
| | maximum temperature 70 °C normal process |
| | maximum temperature 50 °C normal process |
| | maximum temperature 50 °C mild process |

04.2 BLEACHING

| SYMBOLS | DESCRIPTION OF TREATMENT |
|--------------------------|--|
| | any bleaching agent allowed |
| | only oxygen non-chlorine bleach allowed |
| | do not bleach |
| SYMBOLS NO LONGER IN USE | |
| | |
| | |





04.3 DRYING

| SYMBOLS | DESCRIPTION OF TREATMENT |
|--------------------------------|--|
| TUMBLE DRYING | |
| | tumble drying possible normal temperature exhaust temperature max. 80 °C |
| | tumble drying possible low temperature exhaust temperature max. 60 °C |
| | do not tumble dry |
| SYMBOLS DESCRIPTION OF PROCESS | |
| NATURAL DRYING * | |
| | line drying |
| | drip line drying |
| | flat drying |
| | drip flat drying |







* With the exception of the sun (colour fastness rates), these treatments cause no irreversible damage. If tumble drying is forbidden, it might be possible to recommend natural drying.

| SYMBOLS | DESCRIPTION OF PROCESS |
|---------------------------------|----------------------------------|
| NATURAL DRYING IN THE SHADE | |
| | line drying in the shade |
| | drip line drying in the shade |
| | flat drying in the shade |
| | drip flat drying in the shade |
| SYMBOLS SYMBOLS USED IN THE USA | |
| | |
| | |
| | |
| | |
| | |
| | |

04.4 IRONING AND PRESSING







| SYMBOLS | DESCRIPTION OF PROCESS |
|---|--|
|  | iron at a maximum sole plate temperature of 200 °C |
|  | iron at a maximum sole plate temperature of 150 °C |
|  | iron at a maximum sole plate temperature of 110 °C, Steam iron may cause irreversible damage |
|  | do not iron |

04.5 PROFESSIONAL TEXTILE CARE

| SYMBOLS | DESCRIPTION OF TREATMENT |
|---|--|
| PROFESSIONAL DRY CLEANING | |
|  | professional dry cleaning in tetrachloroethene and all solvents listed for the symbol F, normal process* |
|  | professional dry cleaning in tetrachloroethene and all solvents listed for the symbol F, mild process* |
|  | professional dry cleaning in hydrocarbons (distillation temperature between 150 °C and 210 °C, flash point between 38 °C and 70 °C), normal process* |
|  | professional dry cleaning in hydrocarbons (distillation temperature between 150 °C and 210 °C, flash point between 38 °C and 70 °C), mild process* |
|  | do not dry clean |
| ADDITIONAL SYMBOL NOT COVERED IN ISO 3758 | |
|  | professional dry cleaning in tetrachloroethene and all solvents listed for the symbol F, very mild process |

05 CARE LABELLING CODE



| SYMBOLS | DESCRIPTION OF TREATMENT |
|---|---|
| PROFESSIONAL WET CLEANING | |
|  | professional wet cleaning normal process |
|  | professional wet cleaning mild process |
|  | professional wet cleaning very mild process |
|  | do not wet clean |
| NO LONGER IN USE | |
|  | |
|  | |

To facilitate goods exchanges between the textile chain and trade, an alphanumeric code known as the GINCODE was often used before or at the beginning of the electronic age.

Because of the changed technological possibilities for the reproduction of symbols and the extension of care labelling (natural drying and wet cleaning) as part of the symbolisation process, the coding system is no longer in use.

* There is experimental evidence that the testing results of the solvent dibutoxymethane (DBM) correspond closely to the one with tetrachloroethene and cyclosiloxanes (D5) show similar results like the hydrocarbon solvents. However there is not yet an international testing standard published which is supporting these facts.

06 LABELS

06.1 PRINCIPLES

THE CARE LABEL

- shall be made of suitable material with resistance to the washing and professional cleaning process indicated on the label
- shall show symbols large enough to be easy to read
- shall be permanently affixed to the textile article in such a way not to irritate the skin (see also 6.3)
- shall be readable throughout the lifetime of the article
- shall be easily located by the consumer and no part should be hidden
- shall not show through the article and spoil its appearance.

Other forms of information may be combined on the same label but clearly separated from each other. Garments consisting of easily separable parts shall be labelled on each of the parts. There shall be one single care label on an article even if the different components have to carry further information (for example fibre content).

06.2 TESTING AND REQUIREMENTS

06.2.1 INTRODUCTION

The label shall remain legible throughout the normal lifetime of the article. It thus must be able to withstand at least the various washing, bleaching, tumble drying, ironing and dry- and/or wet cleaning processes as indicated on the label, and in addition present a sufficient fastness to rubbing, daylight and other agents which may act upon it during normal use of the article on which it is applied.

The following tests and criteria are suggested as a guide for manufacturers to label, being understood that they represent minimum requirements and that resistance to the most severe conditions, regardless of actual symbols appearing on the label, is desirable whenever the material of the label should permit it.

06.2.2 WASHABILITY REQUIREMENTS

The colour fastness test to washing is made according to ISO 105 – C06 and ISO 105 – C08, except that the test is carried out on one label stitched with its back to an undyed cotton backing cloth, size 10 cm x 4 cm. Should the label exceed 10 cm x 4 cm, it will be cut into appropriate size segments to be individually tested.

The method to be used for each symbol is laid down in table 2 of this GINETEX Technical Booklet. Change of colour of labels tested to the above tests should not be lower than grey scale number 4.

06.2.3 BLEACHING TREATMENT

The colour fastness test to bleaching is made according to ISO 105 - N01, the oxygen/non-chlorine bleach according to ISO 105 - C09. Change of colour of labels tested to the above tests should not be lower than grey scale number 4.

06.2.4 IRONING REQUIREMENTS

The colour fastness test to ironing is made according to ISO 105 - X11 at the temperature corresponding to the ironing symbol used on the label.

Change of colour of labels tested to the above tests should not be lower than grey scale number 4 for any of the three test conditions (dry, damp and wet) except in the case of a crossed washing symbol, when the wet procedure may be omitted.

06.2.5 PROFESSIONAL TEXTILE CARE

The colour fastness test to dry cleaning is made according to ISO 105 - D01, using the solvents corresponding to the symbol appearing on the label, except that the test is carried out on one label stitched with its back to an undyed cotton backing cloth, size 10 cm x 4 cm. Should the label exceed 10 cm x 4 cm, it will be cut into appropriate size segments to be individually tested.

Please note the classification and tests of the new solvents: Dibutoxymethane (DBM) seems to correspond to the P-solvent and cyclosiloxanes (D5) seems to correspond to the F-solvent. However, there is not yet published an international standard supporting these experimental results.

Change of colour of labels tested to the above tests should not be lower than grey scale number 4. Wet Cleaning: Tests are made according to ISO 105 – C06, A1S.

06.2.6 FASTNESS TO RUBBING

The colour fastness test to rubbing is made according to ISO 105 – D02 and ISO 105 – X12, except that the test is carried out on one label stitched to an undyed cotton backing cloth, size 20cm x 5cm. The dry and

wet rubbing fastness should not be lower than grey scale number 4. These tests are only required when rubbing on the label may be expected.

06.2.7 FASTNESS TO PERSPIRATION

Colour fastness to perspiration is tested according to ISO 105 – E04. Change of colour of labels tested to the above tests should not be lower than grey scale number 4 both in the alkaline and in the acid solution. These tests are only required when the action of perspiration on the label may be expected.

06.3 POSITION OF LABELS ON CLOTHES AND TEXTILE ARTICLES

The objective of labelling is to inform the consumer on matters connected to the care of the article when buying and the commercial textile care industries when cleaning it. The labels shall be easily detectable and carefully and permanently affixed. The positioning of labels laid down in the table below is recommended for use whenever possible. Because of differences in production methods, materials and demands of fashion also an alternative place of positioning is given.

The label and its way of affixing shall be such that it does not weaken the qualities of the article nor cause the consumer any inconvenience when wearing the article.

To achieve a maximum of conformity, recommended positions – according to the EURATEX Directive - are laid down in table 1.



TABLE 1 RECOMMENDED POSITIONS OF LABELS IN TEXTILE ARTICLES

| ARTICLE | POSITIONING | ALTERNATIVE |
|--|--|---|
| coats, jackets, ladies' suit jackets | left side, at bust height | left front facing, left side seam, left breast pocket (inside) |
| men's jackets and suit jackets | left side, at bust height | left breast pocket (inside) |
| waistcoats, vests | front left side | top back middle |
| dresses, blouses | left side seam, above the hem | top back, middle |
| jumper-blouses, smocks | top back, middle | left side seam, above the hem |
| jeans, trousers | right back pocket or top back at waist level | jeans: in the fastening, top back middle |
| aprons | top back, middle | attachment point for right belt ribbon |
| overalls, professional wear | top back, middle | left side seam |
| skirts | top back (belt) | left side seam, above the hem |
| shirts | top back, middle (collar) | left side seam, above the hem |
| pullovers, sweaters, jumpers, T-shirts | left side seam, above the hem | top back, middle |
| baby linen, baby's wear | left side seam | left shoulder seam, baby's vest: top, outside the seam |
| children's wear | left side seam | top back, middle |
| sportswear and gym wear | top back, middle | left side seam |
| ski clothes, anoraks | top back, middle | reversible articles: in the left pocket |
| dressing gowns, bathrobes | top back, middle | left side seam |
| housecoats and robes | | |
| pyjamas, night-dresses | top back, middle | left side seam, above the hem (except for trousers) |
| swimwear | left side seam, top | left side seam, above the hem |

| ARTICLE | POSITIONING | ALTERNATIVE |
|-------------------------------------|--------------------------------|------------------|
| corsets, brassieres, bikini tops | back, left, bottom edge | left side seam |
| elastised briefs, panties | top back, middle | left side seam |
| underwear, undershirts, underpants, | top back, middle | left side seam |
| briefs, strings, boxer-shorts | | |
| waist slips | left side seam | top back, middle |
| tights, garters | left side seam | top back, middle |
| stockings, socks | printed on the package | thermoprint |
| ties | back | |
| stoles and scarves | in a corner | |
| gloves | in the left glove | |
| hats, caps | inside | |
| table-cloth, bed linen and linen | in a corner | |
| towels | hanging loop | |
| ready sewn curtains | pleating tape, top seam | |
| crocheting and knitting yarns | hang tag, package | |
| metric articles | separate label, on the package | |

For the following articles labels can be printed on the package or tie-on labels can be used:

- | | | | |
|----|---|----|---|
| 01 | stockings, socks, sheers | 12 | table mats |
| 02 | floorcloths | 13 | handkerchiefs |
| 03 | cleaning cloths | 14 | bun nets and hair nets |
| 04 | edgings and trimmings | 15 | ties and bow ties for children |
| 05 | passemmentery | 16 | bibs, wash gloves and face flannels |
| 06 | belts | 17 | sewing, mending, and embroidery yarns presented for retail sale in small quantities |
| 07 | braces | 18 | tape for curtains, blinds and shutters |
| 08 | suspenders and garters | | |
| 09 | ribbons | | |
| 10 | elastics | | |
| 11 | cordage and ropes intended for use in mountaineering or water sport | | |

07 USE OF SYMBOLS

For any given article the care information expressed by the symbols shall refer to all treatments laid down in the following order

- washing
- bleaching
- drying
- ironing
- professional textile care

showing the row of symbols with either the “®” for registered or the “™” for Trademark at the end.



Whenever possible the symbols should appear in a horizontal line. If more than one drying symbol or more than one professional textile care symbol is needed they shall be set in the order washing, bleaching, tumble drying, natural drying, ironing, professional dry cleaning and professional wet cleaning. The additional drying or professional cleaning symbol may be presented next to the respective basic symbol or in a second line under it.

The treatments represented by the symbols apply to the whole of the textile article, unless otherwise specified.

Additional wordings* may, as an exception, be used to prevent irreversible damage. List of additional wording: see informative Annex C of ISO 3758 or use the examples below.

* EXAMPLES OF ADDITIONAL WORDINGS:

- wash separately
- wash inside out
- wash before use
- wash with like colours
- no optical brighteners
- do not add fabric conditioner
- remove ... before washing
- do not soak
- do not wring or twist
- iron wrong side only
- do not use steam
- steam only
- dry away from direct heat

08 TECHNICAL REGULATIONS

08.1 PRELIMINARY NOTE

Correct classifications of care labelling for an article depends on different characteristics which are assigned by the type of the article e.g. dye fastness, dimensional stability, restorability etc.

This Technical Booklet gives information on testing methods to facilitate a correct choice of care labels. figure 6 gives a guideline how testing can be organised if there is any uncertainty concerning the correct label.

At present, except for fastness rates, no recommended pass/fail limits are quoted. In quite a lot of cases criteria (e.g. appearance) are qualitative and therefore cannot be easily specified numerically.

There are further characteristics that might be important, for instance:

- dimensional stability
- appearance of seams
- unravelling
- separation of bonded and laminated fabrics
- pilling
- fuzziness of velvets and synthetic furs
- retention of permanent creases
- loss of shape
- resistance of trimmings and accessories
- permanence of finishes

In any case restorability in processes following the procedure evaluated and/or normal consumer practice have to be taken into consideration.



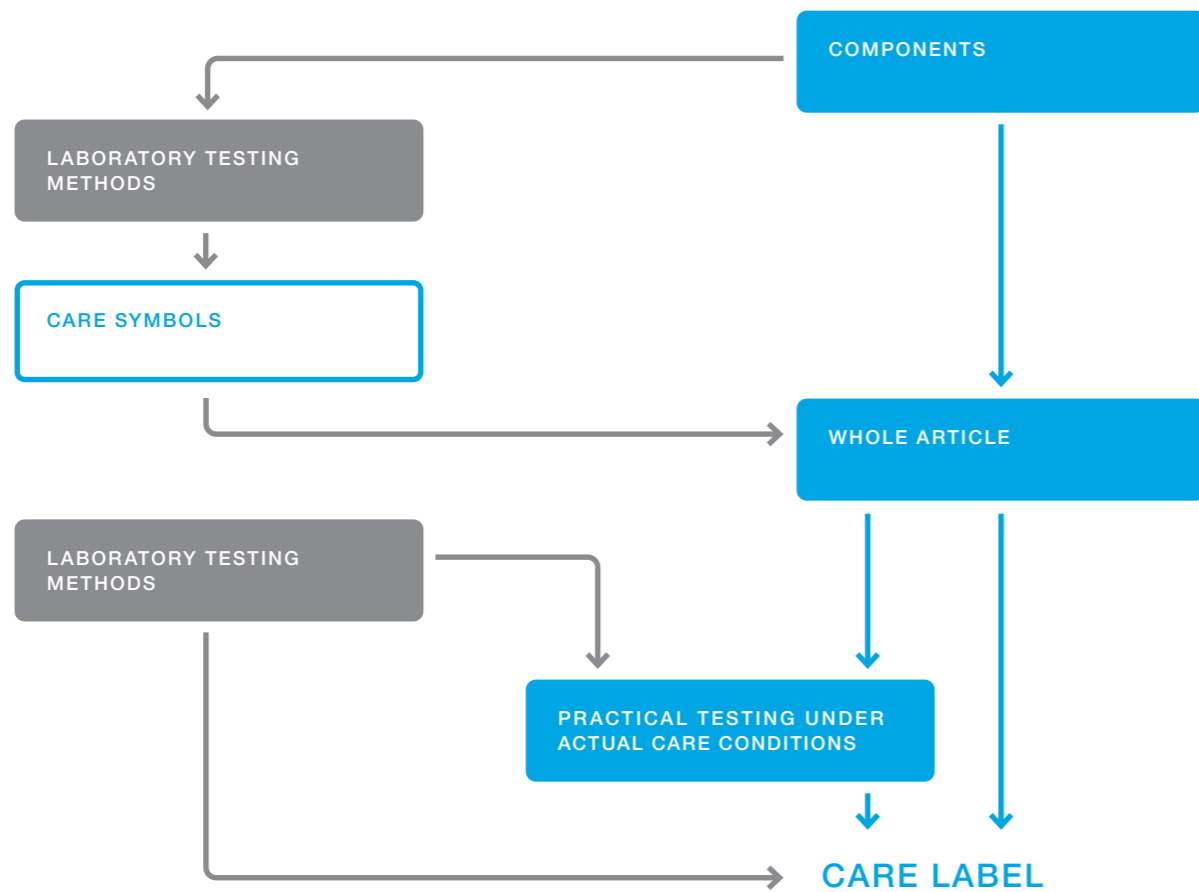


FIGURE 6 EXAMPLE FOR A TESTING PROCEDURE

08.2 **WASHING**
 08.2.1 **COLOUR FASTNESS**
 08.2.1.1 **INTRODUCTION**

For testing colour fastness to washing ISO standards are to be used. GINETEX has laid down recommended minimum fastness rates for change of colour and for staining. These ratings should be considered as guidelines: when producing textiles consisting of different parts the interaction of said parts must be taken into account as well as any additional information given, such as 'wash separately'.

Where traditionally general acceptance for lower levels exists for certain articles (jeans, certain workwear, etc.), lower fastness rates may be accepted. In those cases it should be ensured by an additional wording (see point 7) that the article should be washed separately or washed with like colours only. In other cases, such as for articles bearing contrasting dyes or prints, especially when deep shades are adjacent to whites, fastness rates may have to be higher in order to prevent damage by staining.

In cases of doubt or in order to settle disputes, the article should also be tested for appearance according to 8.2.2. This test can give final and conclusive information as to the fastness ratings of components which have to be specified in order to prevent unacceptable and irreversible changes in the appearance of an article.

08.2.1.2 **TEST METHODS AND RECOMMENDED MINIMUM FASTNESS RATES**

General information on colour fastness testing is given in the following ISO standards:

| | |
|----------------------|--|
| ISO 105 – A01 | General principle of testing |
| ISO 105 – A02 | Grey scale for assessing the change in colour |
| ISO 105 – A03 | Grey scale for assessing staining |
| ISO 105 – F01 to F07 | Specification for standard single fibre adjacent |

The actual ISO test methods for colour fastness and the GINETEX recommended minimum requirements are given in Table 2. Other tests that might be useful to evaluate possible dye transfer or fastness problems are:

| | |
|---------------|--|
| ISO 105 – E01 | Colour fastness to water especially in the case of acid dyes on wool, polyamides or silk |
| ISO 105 – X12 | Colour fastness to rubbing especially in the case of pigment dyes and prints, and also in the case of insufficient penetration of dyes into the fabrics which might give washing problems. |

The test fabrics to be used for testing dye transfer are: Multifiber fabric (US), Type DW for 40 °C, 50 °C and 60 °C using a realistic interpretation of the staining results according to normal practice in households and single fibre fabrics (cotton and polyester) for 95 °C.

TABLE 2 ISO TEST METHODS AND RECOMMENDED MINIMUM FASTNESS RATES FOR WASHING

| SYMBOL | ISO TEST METHOD | RECOMMENDED MINIMUM/FASTNESS RATES | |
|--------|---|------------------------------------|--------------------|
| | | CHANGE OF COLOUR | STAINING |
| | ISO 105 – C06, E2S and/or ISO 105 – C08 at 92 °C* | 3 – 4 | 3 – 4 ^a |
| | ISO 105 – C06, D2S and/or ISO 105 – C08 at 70 °C | 3 – 4 | 3 – 4 ^a |
| | ISO 105 – C06, C2S and/or ISO 105 – C08 at 60 °C | 3 – 4 | 3 – 4 ^a |
| | ISO 105 – C06, C2S and/or ISO 105 – C08 at 60 °C | 3 – 4 | 3 – 4 ^a |
| | ISO 105 – C06, B2S and/or ISO 105 – C08 at 50 °C | 3 – 4 | 3 – 4 ^a |
| | ISO 105 – C06, B2S and/or ISO 105 – C08 at 50 °C | 3 – 4 | 3 – 4 ^a |
| | ISO 105 – C06, A2S and/or ISO 105 – C08 at 40 °C | 3 – 4 | 3 – 4 ^a |
| | ISO 105 – C06, A2S and/or ISO 105 – C08 at 40 °C | 3 – 4 | 3 – 4 ^a |
| | ISO 105 – C06, A2S and/or ISO 105 – C08 at 40 °C | 3 – 4 | 3 – 4 ^a |
| | ISO 105 – C06, A1S or A2S at 30 °C | 3 – 4 | 3 – 4 ^a |
| | ISO 105 – C06, A1S or A2S (without steel balls) | 3 – 4 | 3 – 4 ^a |
| | ISO 105 – C06, A1S or A2S (without steel balls) | 3 | 3 – 4 ^a |
| | ISO 105 – C06, A1S or A2S (without steel balls) | 3 – 4 | 3 – 4 ^a |

* for safety reasons the reference method is not referring to 95 °C

^a for garments with contrasting colours: staining rate 4

08.2.2 APPEARANCE
08.2.2.1 INTRODUCTION

Appearance includes all properties that must be taken into account to evaluate damage by washing, such as:

- dimensional stability
- pilling
- appearance of seams
- adhesion of fusible interlinings and bonded fabrics
- dyestuff migration etc.

No specific requirements have been laid down by GINETEX, neither for dimensional change nor for other properties. Normal commercial practice should be taken into account and good judgement used in order to determine if an article is fit for normal use after the test or if it has suffered irreparable damage.

08.2.2.2 TEST METHODS

Information about preparation, marking, measuring and test methods for the evaluation of appearance are given in the following ISO standards:

| | |
|----------|--|
| ISO 3759 | Textiles – Preparation, marking and measuring of fabric, specimens and garments in tests for determination of dimensional change |
| ISO 5077 | Textiles – Determination of dimensional change in washing and drying |
| ISO 6330 | Textiles – Domestic washing and drying procedures for textile testing |
| ISO 7768 | Textiles – Method for assessing the smoothness appearance of fabrics after cleansing |
| ISO 7769 | Textiles – Method for assessing the appearance of creases in fabrics after cleansing |
| ISO 7770 | Textiles – Method for assessing the appearance of seams in fabrics after cleansing |

The domestic washing procedures to be used for each wash symbol are given in table 3.

TABLE 3 DOMESTIC WASHING PROCEDURES ACCORDING TO ISO 6330

| FULL-SCALE METHOD | | | |
|-------------------|-----------|--------------------------------------|---|
| SYMBOL | REFERENCE | WASHING CONDITIONS | COLOUR FASTNESS LABORATORY METHOD |
| | ISO 6330 | normal agitation at 92 °C* | ISO 105-C06 and/or ISO 105-C08 |
| | ISO 6330 | normal agitation at 70 °C | ISO 105-C06 and/or ISO 105-C08 |
| | ISO 6330 | normal agitation at 60 °C | ISO 105-C06 and/or ISO 105-C08 |
| | ISO 6330 | mild agitation at 60 °C | ISO 105-C06 and/or ISO 105-C08 |
| | ISO 6330 | normal agitation at 50 °C | ISO 105-C06 and/or ISO 105-C08 |
| | ISO 6330 | mild agitation at 50 °C | ISO 105-C06 and/or ISO 105-C08 |
| | ISO 6330 | normal agitation at 40 °C | ISO 105-C06 and/or ISO 105-C08 |
| | ISO 6330 | mild agitation at 40 °C | ISO 105-C06 and/or ISO 105-C08 |
| | ISO 6330 | very mild agitation at 40 °C | ISO 105-C06 and/or ISO 105-C08 |
| | ISO 6330 | normal agitation at 30 °C | ISO 105-C06, A1S or A2S |
| | ISO 6330 | mild agitation at 30 °C | ISO 105-C06, A1S or A2S (without steel balls) |
| | ISO 6330 | very mild agitation at 30 °C | ISO 105-C06, A1S or A2S (without steel balls) |
| | ISO 6330 | very mild agitation by hand at 40 °C | ISO 105-C06, A1S or A2S (without steel balls) |

* for safety reasons the reference method is not referring to 95 °C

08.3 BLEACHING

Colour fastness against bleaching is tested according to a test method established by ISO 105 - N01. This test is to be carried out after the material to be tested has been washed under the conditions indicated by the label (table 4).

Sufficient stability according to this test method does not guarantee a stability against disinfecting treatments by chlorine-based disinfectants during washing.

AATCC 92 (scorch test) is an additional test for resin-treated fabrics (cellulosics). No appreciable yellowing should occur and the loss in tensile strength should be less than 25%. General methods: see 8.2.1.

TABLE 4 ISO TEST METHOD AND RECOMMENDED MINIMUM FASTNESS RATES FOR BLEACHING

| SYMBOL | ISO TEST METHOD | RECOMMENDED MINIMUM/FASTNESS RATES | |
|--------|-----------------|------------------------------------|----------|
| | | CHANGE OF COLOUR | STAINING |
| | ISO 105 - N01 | 4 | — |
| | ISO 105 - C09 | 4 | — |

08.4 **TUMBLE DRYING**
08.4.1 **GENERAL REMARKS**

While general drying methods such as line drying or flat drying are common experience of the consumer and can be easily chosen according to visible properties of the made-up textile article, this labelling is not regulated by the GINETEX care labelling system. Information on natural drying can be found in the ISO Standard 3758. However tumble drying might give rise to irreversible damage that cannot be ascertained by common experience of the consumer. Information on preparation, marking, measuring and test methods in connection with tumble drying is given in the following ISO standards:

| | |
|----------|--|
| ISO 3759 | Textiles – Preparation, marking and measuring of fabric, specimens and garments in tests for determination of dimensional change |
| ISO 5077 | Textiles – Determination of dimensional change in washing and drying |
| ISO 6330 | Textiles – Domestic washing and drying procedures for textile testing |
| ISO 7768 | Textiles – Method for assessing the smoothness appearance of fabrics after cleansing |
| ISO 7769 | Textiles – Method for assessing the appearance of creases in fabrics after cleansing |
| ISO 7770 | Textiles – Method for assessing the appearance of seams in fabrics after cleansing |

Internationally agreed standardised drying procedures and limits concerning property changes do not exist at the moment. GINETEX Technical Committee, therefore, has prepared guidelines (8.4.2) for specific articles for the implementation of the tumble drying symbol to facilitate the selection of the symbol.

08.4.2 **GUIDELINES**
08.4.2.1 **PRINCIPALS, BASIC RULES**

The tumble drying symbol is designed to indicate the conditions of household tumble drying. No implications as regards to drying procedures in commercial laundries or dry cleaning operations are intended. GINETEX will advocate the use of an international test method for assessing performance of textiles when tumble dried when it becomes available. The GINETEX tumble drying symbol is not intended to indicate intermediate drying conditions such as 'iron dry'. Such intermediate levels of drying are designed for the convenience of the consumer, not for the prevention of damage, and constitute rather milder than the more severe versions of the cycle indicated by the tumble drying symbol.

08.4.2.2 **POTENTIAL CAUSES OF DAMAGE PRODUCED BY TUMBLE DRYING**

Damage is defined as an irreversible change of properties of the material treated, which seriously, irreversibly affects

- the visual appearance
- durability
- wearing comfort

In any case restorability in processes following the procedure evaluated and/or normal consumer practice have to be taken into consideration.

A EFFECT OF TEMPERATURE

Heat-sensitive articles, coatings, fusible interlinings, trimmings, finishes, etc. may be damaged if they are exposed to high temperatures. Examples of sensitive materials are:

- acrylics
- chlorofibres
- elastanes
- acetate
- modacrylics
- polypropylene
- PVC coatings
- some acrylic coatings
- fusible coatings (interlinings)

The effect of heat on such material should be checked with the supplier and/or tested according to standardised testing methods when available.

B DIMENSIONAL CHANGE

Practically all damage claims related to excessive or differential shrinkage are either caused by excessively high temperatures to which heat sensitive fibres are exposed in the tumble drier, or by the considerably higher shrinkage undergone by some knitted cotton articles if they are tumble dried instead of using drying methods not involving mechanical action.

C OTHER DAMAGE

Other form of damage to the surface appearance of articles can occur in tumble drying, but such damage at present occurs only rarely.

D CONSUMERS ACCEPTANCE LEVELS OF SHRINKAGE EFFECT

As mentioned before, tumble drying may cause substantially higher shrinkage in the case of some cotton knits, particularly those of non-resinated material.

Such shrinkage may cause lower consumer-acceptance and therefore may be considered to lower the value of the article if the dimensional change irreversibly changes the shape of the garment making it uncomfortable to wear or has other deleterious effects. If, however, the change of dimension is easily restored on wearing and if no undesirable after-effects remain, then irreversible damage is out of the question and the acceptance level is unchanged. The shrinkage may then be tolerated even when it is higher with tumble drying.

Examples of the first category of cotton knitted articles (lower acceptance) are fully fashioned articles, i.e. dresses, pants, etc. and those articles in close contact with the body which cause discomfort after drying because too much effort is needed to restore the original dimensions.

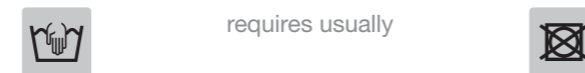
The main representatives of the second category (same acceptance) are T-shirts, underwear, etc. Shrinkage is mainly in the circumference* and not in the length of the article, and comfortable dimensions are easily restored simply by wearing.

In this latter category dimensional change is not per se critical. What counts is what in the U.S. is called the restorability, i.e. the force necessary to restore the original dimensions (AATCC Standard 96, ASTM D1905 withdrawn).

Shrinkage levels of articles of this category should be determined only after a restorative procedure has been applied to the article.

08.4.2.3 GENERAL RECOMMENDATION FOR SYMBOL SELECTION

- Articles sensitive to mechanical action should not be tumble dried
- Articles sensitive to shape changes should preferably not be tumble dried
- It is advisable to cross out the tumble drying symbol for those articles made of or containing acryl fibres, silk or wool if these articles do not carry a machine-wash symbol
- For Articles sensitive to heat, see 8.4.2.2 a



08.4.3 NATURAL DRYING

Colour fastness test method, evaluation and requirements are listed in table 5.

* differential shrinkage is caused by components of a garment changing dimensions to different degrees.

TABLE 5 ISO TEST METHOD AND COLOUR FASTNESS LABORATORY METHOD

| SYMBOL | FULL SCALE METHOD | COLOUR FASTNESS LABORATORY METHOD |
|--------|-------------------|-----------------------------------|
| | ISO 6330 | ISO 105-B02 |
| | ISO 6330 | ISO 105-B02 |
| | ISO 6330 | ISO 105-B02 |
| | ISO 6330 | ISO 105-B02 |
| | ISO 6330 | ISO 105-B02 |
| | ISO 6330 | ISO 105-B02 |
| | ISO 6330 | ISO 105-B02 |
| | ISO 6330 | ISO 105-B02 |
| | ISO 6330 | ISO 105-B02 |

08.5 **IRONING**
08.5.1 **COLOUR FASTNESS**

Colour fastness test method, evaluation and requirements are listed in table 6.

08.5.2 **APPEARANCE**

No appreciable loss of strength is allowed. Softening or melting of fabrics or finishing's must not occur. Maximum allowable change in dimensions and appearance has yet to be defined. ISO test methods connected with ironing are as follows:

| | |
|----------|--|
| ISO 3005 | Textiles – Determination of dimensional change of fabric induced by free steam |
|----------|--|

No specific requirements have been laid down by GINETEX, neither for dimensional change nor for other properties. Normal commercial practice should be taken into account and good judgement used in order to determine if an article is fit for normal use after the test or if it has suffered irreparable damage. Maximum allowable change in dimensions and appearance depends on the article.

TABLE 6 ISO TEST METHOD AND RECOMMENDED MINIMUM FASTNESS RATES FOR IRONING

| TEST METHOD | | | RECOMMENDED MINIMUM FASTNESS RATES | | | |
|-------------|----------------|-----------------|------------------------------------|-----|------|-----|
| ISO 105-X11 | | | STAINING/CHANGE IN COLOUR | | | |
| SYMBOL | TEMPERATURE °C | EVALUATION TIME | COLOUR | DRY | DAMP | WET |
| | 200 | After 4h | 4 | 4 | 4 | 4 |
| | 150 | After 4h | 4 | 4 | 4 | —* |
| | 110 | After 4h | 4 | 4 | —* | —* |

* no test needed

08.6 **PROFESSIONAL TEXTILE CARE**
08.6.1 **COLOUR FASTNESS**
08.6.1.1 **INTRODUCTION**

For testing colour fastness to professional dry cleaning ISO standards are to be used. GINETEX has laid down recommended minimum fastness rates for the change of colour.

These ratings should be considered as guidelines: when producing made-up textiles the interaction of different parts must be taken into account.

In cases of doubt or in order to settle disputes, the article should also be tested for appearance according to 8.6.2. This test can give final and conclusive information as to the fastness ratings of components which have to be specified in order to prevent unacceptable and irreversible changes in the appearance of an article.

08.6.1.2 **TEST METHODS AND RECOMMENDED MINIMUM FASTNESS RATES**

General information on colour fastness testing are given in the following ISO standards

| | |
|---------------|---|
| ISO 105 – A01 | General principle of testing |
| ISO 105 – A02 | Grey scale for assessing the change in colour |
| ISO 105 – A03 | Grey scale for assessing staining |

For testing colour fastness towards dry cleaning

| | |
|---------------|--|
| ISO 105 – D01 | should be used, but with the respective solvent. |
|---------------|--|

The GINETEX recommended minimum fastness rate for the change of colour is 4. Staining of the solvent must not be taken into account. If ratings of less than 4 are obtained fastness properties are insufficient, it might be useful to carry out further tests according to ISO 3175.

Another test that might be useful to evaluate possible dye transfer or colour fastness problems is

| | |
|---------------|---|
| ISO 105 – D02 | Textiles – Fastness to rubbing: Organic solvents. |
|---------------|---|

For testing colour fastness towards wet cleaning

| | |
|---------------|--------------------|
| ISO 105 – C06 | A1S should be used |
|---------------|--------------------|

The GINETEX recommended minimum fastness rate for change of colour is 4.

08.6.2 **APPEARANCE**
08.6.2.1 **INTRODUCTION**

Appearance includes all properties that can be taken into account to evaluate damage by dry cleaning, such as:

- dimensional stability
- pilling
- appearance of seams
- adhesion of fusible interlinings and bonded fabrics
- dyestuff migration etc.

No specific requirements have been laid down by GINETEX, neither for dimensional change nor for other properties. Normal commercial practice should be taken into account and good judgement used in order to determine if an article is fit for normal use after the test or if it has suffered irreversible damage.

08.6.2.2 TEST METHODS

Information on preparation, marking, measuring of fabric specimens and garments in test for determination of dimensional change is given in ISO 3759. The Standard series ISO 3175 describes the assessing and test methods for professional care, dry cleaning and wet cleaning and finishing.

ISO 3175-1 Professional care, dry cleaning and wet cleaning of fabrics and garments. Part 1 Assessment of performance after cleaning and finishing

ISO 3175-2 Professional care, dry cleaning and wet cleaning of fabrics and garments. Part 2 Procedure for testing performance when cleaning and finishing using tetrachloroethene

ISO 3175-3 Professional care, dry cleaning and wet cleaning of fabrics and garments. Part 3 Procedure for testing performance when cleaning and finishing using hydrocarbon solvents

ISO 3175-4 Professional care, dry cleaning and wet cleaning of fabrics and garments. Part 4 Procedure for testing performance when cleaning and finishing using simulated wet cleaning

Colour fastness test method, evaluation and requirements are listed table 7.1 and 7.2.

08.6.2.3 PROCESS CONDITIONS

For the information of professional cleaners the International Technical Committee for Textile Care (ICTC), the former Dry Cleaning Research Committee (IDRC), has issued a summary of process conditions in use in most countries and how to treat articles bearing dry cleaning symbols (table 8). These guidelines have been endorsed by the International Committee of Textile Care (CINET) and are laid down in ISO 3175-2 and ISO 3175-3.

TABLE 7.1 TEST METHODS FOR PROFESSIONAL CARE: DRY CLEANING PROCESS

| SYMBOL | FULL SCALE METHOD | COLOUR FASTNESS LABORATORY METHOD* |
|--------|--|--|
| | Process for normal materials paragraph 8.1 of ISO 3175-2 | ISO 105-D01 |
| | Process for sensitive materials paragraph 8.2 of ISO 3175-2 | ISO 105-D01 |
| | Process for very sensitive materials paragraph 8.2 of ISO 3175-2 | |
| | Process for normal materials paragraph 9.1 of ISO 3175-3 | ISO 105-D01 Method to be modified to use appropriate solvent |
| | Process for sensitive materials paragraph 9.2 of ISO 3175-3 | ISO 105-D01 Method to be modified to use appropriate solvent |

TABLE 7.2 TEST METHODS FOR PROFESSIONAL CARE: WET CLEANING PROCESS

| SYMBOL | FULL SCALE METHOD | COLOUR FASTNESS LABORATORY METHOD* |
|--------|--|------------------------------------|
| | Process for normal materials paragraph 9.1 of ISO 3175-4 | ISO 105-C06, A1S |
| | Process for sensitive materials paragraph 9.2 of ISO 3175-4 | ISO 105-C06, A1S |
| | Process for very sensitive materials paragraph 9.3 of ISO 3175-4 | ISO 105-C06, A1S |

* Other tests that might be useful to evaluate possible dye transfer or fastness problems are ISO 105-D02 (fastness to rubbing – organic solvents) for dry cleaning and ISO 106-X12 (fastness to rubbing – wet) for wet cleaning

TABLE 8 PROCESS CONDITIONS OF DRY CLEANING PROCESSES ACCORDING TO GINETEX CARE LABELLING SYMBOLS

| SYMBOL | PROCESS | SOLVENT | MAXIMUM | LOAD | ADDITION OF |
|--------|-----------|--|---------|--------------------|----------------------|
| | | | SOLVENT | TEMPERATURE | DETERGENT |
| | | | °C | KG/M ³ | G/L |
| | normal | Tetrachloroethene and all solvents listed under F | 30 ± 3 | normal 50 ± 2 | 1(+2) ¹ |
| | mild | Tetrachloroethene and all solvents listed under F | 30 ± 3 | 2/3 load 33 ± 2 | 1 |
| | very mild | Tetrachloroethene and all solvents listed under F | 30 ± 3 | 2/3 load 33 ± 2 | 1 |
| | normal | Hydrocarbons (distillation temperature 150 °C to 210 °C, flash point 38 °C to 70 °C) | 30 ± 3 | normal 50 ± 2 | 1(+2) ¹ |
| | mild | Hydrocarbons (distillation temperature 150 °C to 210 °C, flash point 38 °C to 70 °C) | 30 ± 3 | 2/3 load 33 ± 2 | 1 |

¹ added together with water/solvent emulsion

| CLEANING PROCESS | | | | | | |
|---------------------|------------|--------------|------------|-------|-------------------------------|---------|
| ADDITION | CLEANING | INTERMEDIATE | RINSING | FINAL | MAXIMUM DRYING | COOLING |
| OF WATER | SPINDRYING | | SPINDRYING | | TEMP. INLET AND | TIME |
| | | | | | OUTLET CONTROLLED | |
| % | MIN | MIN | MIN | MIN | °C | MIN |
| allowed 2 | 15 | 2 | 5 | 3 | Inlet 80 ± 3 Outlet 60 ± 3 | 5 |
| not allowed 0 | 10 | 2 | 3 | 2 | Inlet 60 ± 3 Outlet 50 ± 3 | 5 |
| not allowed 0 | 5 | 2 | 3 | 2 | Inlet 50 ± 3 Outlet 40 ± 3 | 5 |
| allowed 2 | 15 | 2 | 5 | 5 | Inlet 80 ± 3 Outlet 60 ± 3 | 5 |
| not allowed 0 | 10 | 2 | 3 | 5 | Inlet 60 ± 3 Outlet 50 ± 3 | 5 |

09 LIST OF STANDARDS MENTIONED WITHIN THIS TECHNICAL BOOKLET

09.1 COLOUR FASTNESS

| | |
|---------------|--|
| ISO 105 – A01 | General principles of testing |
| ISO 105 – A02 | Grey scale for assessing the change in colour |
| ISO 105 – A03 | Grey scale for assessing staining |
| ISO 105 – B02 | Colour fastness to artificial light: Xenon arc lamp test |
| ISO 105 – C06 | Colour fastness to domestic and commercial laundering |
| ISO 105 – C08 | Colour fastness to domestic and commercial laundering using a non-phosphate reference detergent incorporating a low temperature bleach activator |
| ISO 105 – C09 | Colour fastness to domestic and commercial laundering – Oxidative bleach response using a non-phosphate reference detergent incorporating a low temperature bleach activator |
| ISO 105 – D01 | Colour fastness to dry cleaning using perchloroethylene solvent |
| ISO 105 – D02 | Colour fastness to rubbing: Organic solvents |
| ISO 105 – E01 | Colour fastness to water |
| ISO 105 – E04 | Colour fastness to perspiration |
| ISO 105 – F01 | Specification for wool adjacent fabric |
| ISO 105 – F02 | Specification for cotton and viscose adjacent fabric |
| ISO 105 – F03 | Specification for polyamide adjacent fabric |
| ISO 105 – F04 | Specification for polyester adjacent fabric |
| ISO 105 – F05 | Specification for acrylic adjacent fabric |
| ISO 105 – F06 | Specification for silk adjacent fabric |
| ISO 105 – F07 | Specification for secondary acetate adjacent fabric |
| ISO 105 – N01 | Colour fastness to bleaching: Hypochlorite |
| ISO 105 – X11 | Colour fastness to hot pressing |
| ISO 105 – X12 | Colour fastness to rubbing |

09.2 TESTS FOR OTHER CRITERIA THAN COLOUR FASTNESS

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| ISO 3005 | Textiles – Determination of dimensional change of fabrics induced by free-steam |
| ISO 3175-1 | Textiles – Professional care, dry cleaning and wet cleaning of fabrics and garments Part 1 Assessment of performance after cleaning and finishing |
| ISO 3175-2 | Textiles – Professional care, dry cleaning and wet cleaning of fabrics and garments Part 2 Procedure for testing performance when cleaning and finishing using tetrachloroethene |
| ISO 3175-3 | Textiles – Professional care, dry cleaning and wet cleaning of fabrics and garments Part 3 Procedure for testing performance when cleaning and finishing using hydrocarbon solvents |
| ISO 3175-4 | Textiles – Professional care, dry cleaning and wet cleaning of fabrics and garments Part 4 Procedure for testing performance when cleaning and finishing using simulated wet cleaning |
| ISO 3758 | Textiles – Care labelling code using symbols |
| ISO 3759 | Textiles – Preparation, marking and measuring of fabric specimens and garments in test for determination of dimensional change |
| ISO 5077 | Textiles – Determination of dimensional change in washing and drying |
| ISO 6330 | Textiles – Domestic washing and drying procedures for textile testing |
| ISO 7768 | Textiles – Test Method for assessing the smoothness appearance of fabrics after cleansing |
| ISO 7769 | Textiles – Test Method for assessing the appearance of creases in fabrics after cleansing |
| ISO 7770 | Textiles – Test Method for assessing the smoothness appearance of seams in fabrics after cleansing |
| AATCC – 92 | Chlorine, Retained, Tensile Loss: Single Sample Method (Scorch test) |
| AATCC – 96 | Dimensional Changes in Commercial Laundering of Woven and Knitted Fabrics except Wool |
| D1905 – 73 | Method of Test for Dimensional Changes in Laundering of Woven or Knitted Textiles (Withdrawn 1977) |



10 LIST OF MENTIONED CHEMICALS WITH CORRESPONDING CAS NUMBERS

| CHEMICAL | CAS NUMBER |
|-------------------|---|
| TETRACHLOROETHENE | [127-18-4] |
| HYDROCARBONS | [VARIOUS] |
| DIBUTOXYMETHANE | [2568-90-3] |
| CYCLOSILOXANES | [FOR EXAMPLE 541-02-6] |
| CHLORINE | [BASED ON 7681-52-9, 7778-54-3] |
| OXYGEN | [BASED ON 7722-84-1, 15630-89-4, 7632-04-4, 10332-33-9, 10486-00-7] |

11 CLEVERCARE.INFO USE OF THE SUSTAINABLE LOGO



GINETEX has developed an internationally applicable logo for sustainable textile care. This logo enables the industry to reach the consumer with the message about good garment and textile care and its benefit. Clevercare.info educates consumers in reducing environment impact and extends the life of textile products.

The clevercare.info logo is being deposited by GINETEX and COFREET, co-owners of the trademark, for our licensees to use the logo with all the necessary legal protections.

Together with the use of the 5 care labelling symbols, the licensee has the right to use the GINETEX logo for sustainable textile care “clevercare.info” free of charge.

This logo should be used always in combination with the care symbol row on labels. For other uses of the logo – websites, communication tools – check with the clevercare.info style guide.



FIGURE 7 MINIMUM DISTANCE TO THE CARE SYMBOL ROW

ISO ACCREDITED TESTING LABORATORIES SUPPORTING GINETEX



THE FOLLOWING TESTING INSTITUTES PROVIDE THE RESPECTIVE TESTS MENTIONED IN THIS TECHNICAL BOOKLET.

AT ÖTI, Institut für Ökologie, Technik und Innovation GmbH (Member of the Oeko-Tex® Association)
Spengergasse 20, 1050 Wien
Tel +43 1 544 25 43-0, Fax +43 1 544 25 43-10
office@oeti.biz, www.oeti.biz

BE CENTEXBEL (Member of the Oeko-Tex® Association)
Technologiepark 7, 9052 Zwijnaarde
Tel +32 92 20 41 51, Fax +32 92 20 49 55
oekotex@centexbel.be, www.centexbel.be

CH TESTEX AG, Schweizer Textilprüfinstitut (Member of the Oeko-Tex® Association)
Gotthardstrasse 61, Postfach 2156, 8027 Zürich
Tel +41 44 206 42 42, Fax +41 44 206 42 30
zuerich@testex.com, www.testex.com

CH OEKO-TEX® Association
Genferstrasse 23, P.O. Box 2006, 8027 Zürich
Tel +41 44 501 26 00
info@oeko-tex.com, www.oeko-tex.com

CN/HK SGS Hong Kong Limited 6/F
Metropole Square, 2 On Yiu Street, Siu Lek Yuen, Shatin, N.T., Hong Kong
Tel +852 27 74 71 48, Fax +852 21 44 70 01
ruth.hon@sgs.com, www.sgs.com

CZ TZU Textile Testing Institute
Vaclavska 6, 658 41 Brno
Tel +42 05 43 42 67 12, Fax +42 05 43 42 67 42
info@tzu.cz, www.tzu.cz

DE Application Lab Weber & Leucht GmbH
Am Röhlingsberg 20, 36043 Fulda
+49 661 380 56 72, Fax +49 661 380 56 73
lab@weber-leucht.com, www.weber-leucht.com

DE DTNW ÖP GmbH, Deutsches Textilforschungszentrum Nord-West Öffentliche Prüfstelle GmbH
Adlerstraße 1, 47798 Krefeld
+49 2151 8 43 20 60, Fax +49 2151 8 43 20 99
monika.frische@dtnw.de, www.dtnw.de

DE FILK, Forschungsinstitut für Leder und Kunststoffbahnen (Member of the Oeko-Tex® Association)
Meissner Ring 1-5, 09599 Freiberg
Tel +49 3731 36 60, Fax +49 3731 36 61 30
mailbox@filkfreiberg.de, www.filkfreiberg.de

DE Hohenstein Textile Testing Institute GmbH & Co. KG (Member of the Oeko-Tex® Association)
Schloss Hohenstein, 74357 Bönnigheim
Tel +49 7143 27 10, Fax +49 7143 27 18 77 4
info@hohenstein.de, www.hohenstein.de

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Marie-Curie Strasse 19, 66953 Pirmasens
Tel +49 6331 24 90 0, Fax +49 6331 24 90 60
info@pfi-germany.de, www.pfi-germany.de

DE UL International GmbH
Sachsenring 69, 50677 Köln
Tel +49 221 9 95 38 03, Fax +49 221 9 95 38 34
kol.Kundenservice@ul.com, www.ul.com

DK DTI Tekstil, Teknologisk Institut (Member of the Oeko-Tex® Association)
Gregersensvej, 2630 Taastrup
Tel +45 72 20 20 00, Fax +45 72 20 21 91
textile@teknologisk.dk, www.teknologisk.dk

ES AITEX, Instituto Tecnológico Textil (Member of the Oeko-Tex® Association)
Plaza Emilio Sala 1, 03801 Alcoy
Tel +34 96 554 22 00, Fax +34 96 554 34 94
info@aitex.es, www.aitex.es

FR Bureau Veritas Consumer Products Services France
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Tel +33 3 20 46 34 56, Fax +33 3 20 46 99 06
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| FR | CTTN, Centre Technique de la Teinture et du Nettoyage Avenue Guy de Collongue - Chemin des Mouilles, 69131 Ecully Tel +33 4 78 33 08 61, Fax +33 4 78 43 34 12 f.rimbault@cttn-iren.fr, www.cttn-iren.com |
| FR | IFTH, Institut Français Textile Habillement (Member of the Oeko-Tex® Association) 14 rue des Reculettes, 75013 Paris Tel +33 1 44 08 19 00, Fax +33 1 44 08 19 39 international@ifth.org, www.ifth.org |
| GR | CLOTEFI S.A, Etakai (Member of the Oeko-Tex® Association) 4, El Venizelou str., 17676 Athens Tel +30 21 09 23 49 32, Fax +30 21 09 23 56 03 clotefi@etakei.gr, www.etakei.gr |
| HU | INNOVATEXT (Member of the Oeko-Tex® Association) Gyömrői út 86, 1103 Budapest Tel +36 12 62 20 00, Fax +36 12 61 52 60 textile@innovatext.hu, www.innovatext.hu |
| IT | CENTRO TESSILE COTONIERO E ABBIGLIAMENTO S.p.A. (Member of the Oeko-Tex® Association) Piazza Sant' Anna 2, 21052 Busto Arsizio VA Tel +39 03 31 69 67 11, Fax +39 03 31 68 00 56 oeko-tex@centrocot.it, www.centrocot.it |
| JP | KAKEN TEST CENTER 4-4-20, Nihonbashi Hongokucho, Chuo-ku, Tokyo Tel +81 3 32 41 25 45, Fax +81 3 32 45 07 73 nakayama.norihiko@kaken.or.jp, sugihara.hideki@kaken.or.jp, www.kaken.or.jp |
| JP | NISSENKEN, Japan Dyer's Inspection Institute Foundation (Member of the Oeko-Tex® Association) 2-16-11 Kuramae, Taito-ku, 111-0051 Tokyo Tel +81 3 58 09 28 10, Fax +81 3 58 09 28 20 oeko-tex@nissenken.or.jp, www.nissenken.or.jp |
| PL | Instytut Włókiennictwa (Member of the Oeko-Tex® Association) ul. Gdańska 118, 90-520 Łódź Tel +48 42 2 53 44 00, Fax +48 42 |

| | |
|----|--|
| PT | CITEVE, Centro Tecnológico das Indústrias Têxtil e do Vestuário de Portugal (Member of the Oeko-Tex® Association) Quinta da Maia, Rua Fernando Mesquita, 2785, 4760-034 Vila Nova de Famalicão Tel +351 252-30 03 00, Fax +351 252-30 03 33 oeko-tex@citeve.pt, www.citeve.pt |
| SE | Swerea IVF AB (Member of the Oeko-Tex® Association) Argongatan 30, Box 104, 43122, 43122 Mölndal Tel +46 31 706 60 00, Fax +46 31 706 63 63 oeko-tex@swerea.se, www.swerea.se |
| SK | VÚTCH-CHEMITEK Ltd., Research Institute for Textile Chemistry (Member of the Oeko-Tex® Association) Rybničky 954, P.O. Box B-78, 01168 Žilina Tel +420 41 500 17 54, Fax +420 41 723 39 57 vutch@vutch.sk, chemitex@vutch.sk, www.vutch.sk |
| TR | INTERTEK TEST HIZMETLERI AS Merkez Mahallesi Sanayi Cd. No: 23, 34197 Yenibosna B. Evler/Istanbul Tel +90 212 368 43 50, Fax +90 212 296 47 82-83 ozlem.cavumirza@intertek.com, www.intertek-cg-tur.com |
| UK | Shirley Technologies Ltd (Member of the Oeko-Tex® Association) Unit 12, Westpoint Enterprise Park, Clarence Avenue, Trafford Park, M17 1QS Manchester Tel +90 212 496 46 46, Fax +90 212 452 80 55 info@shirleytech.co.uk, www.shirleytech.co.uk |
| US | SGS Consumer Testing Services, SGS-North America, Inc. 291 Fairfield Ave, Fairfield, NJ 07004 Tel +1 973 461 79 19, Fax +1 973 244 18 23 louann.spirito@sgs.com, www.sgs.com |



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