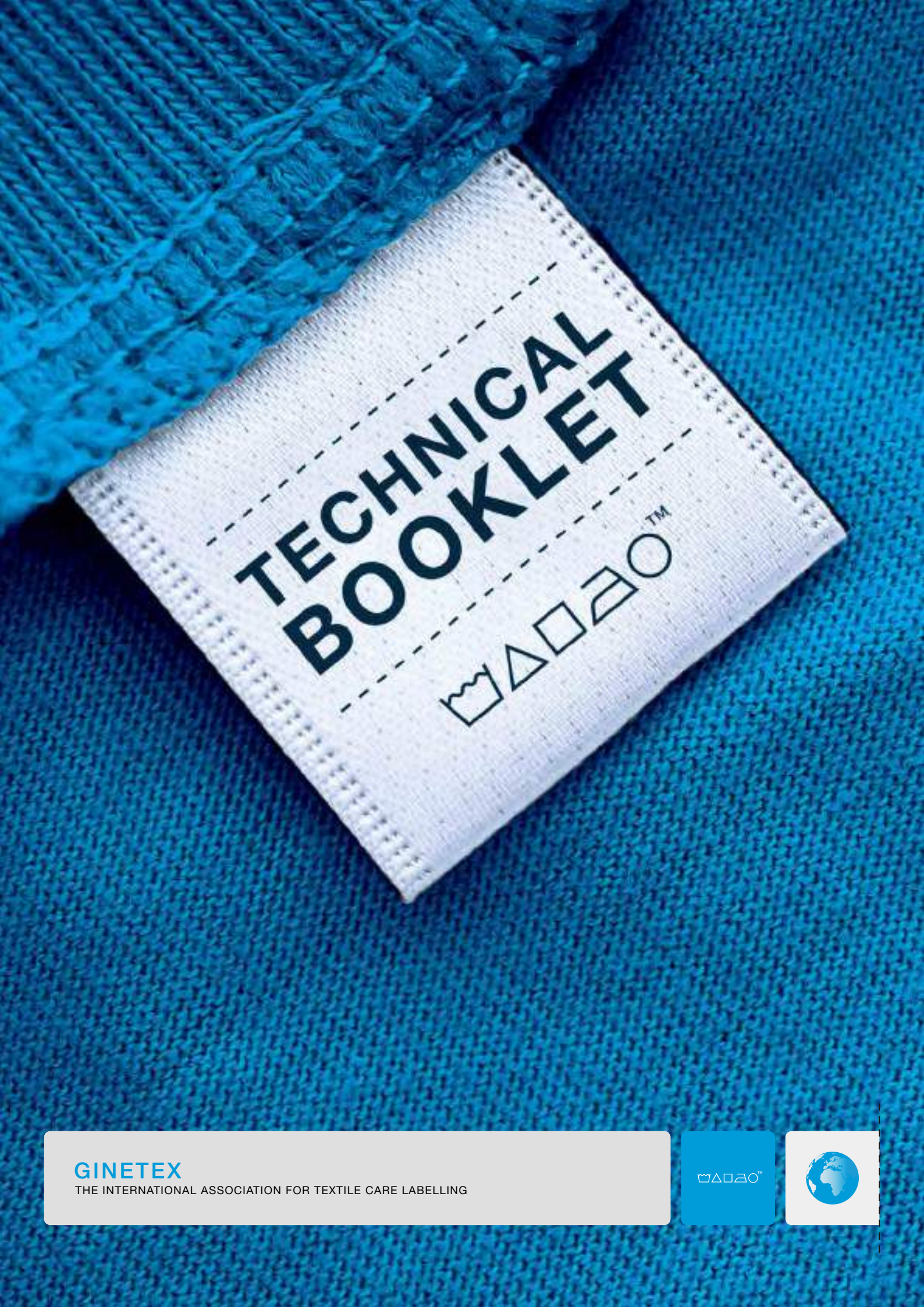

GINETEX
THE INTERNATIONAL ASSOCIATION FOR TEXTILE CARE LABELLING

Technical Booklet, Version 10, March 2024 © by **GINETEX**
THE INTERNATIONAL ASSOCIATION FOR TEXTILE CARE LABELLING

TECHNICAL BOOKLET VERSION 10

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THE INTERNATIONAL ASSOCIATION FOR TEXTILE CARE LABELLING

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.

This document in English, Version 10, March 2024, is the reference for all existing translations.

INDEX SYMBOLS DEFINITONS AND DESCRIPTION

INDEX SYMBOLS DEFINITONS AND DESCRIPTION

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.

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

The GINETEX five main 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 homemade 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 MAIN SYMBOLS

The care labelling system is based on five main symbols with additional distinguishing descriptions, e.g. bars, dots, letters, ciphers, steam 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 main pictograms are given in Figure 3.

03.2 ADDITIONAL DESCRIPTIVES

In combination with these five main basic symbols, additional descriptives 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 are given in Figure 4. Combination of pictograms for symbols and labels are presented in Figure 5.

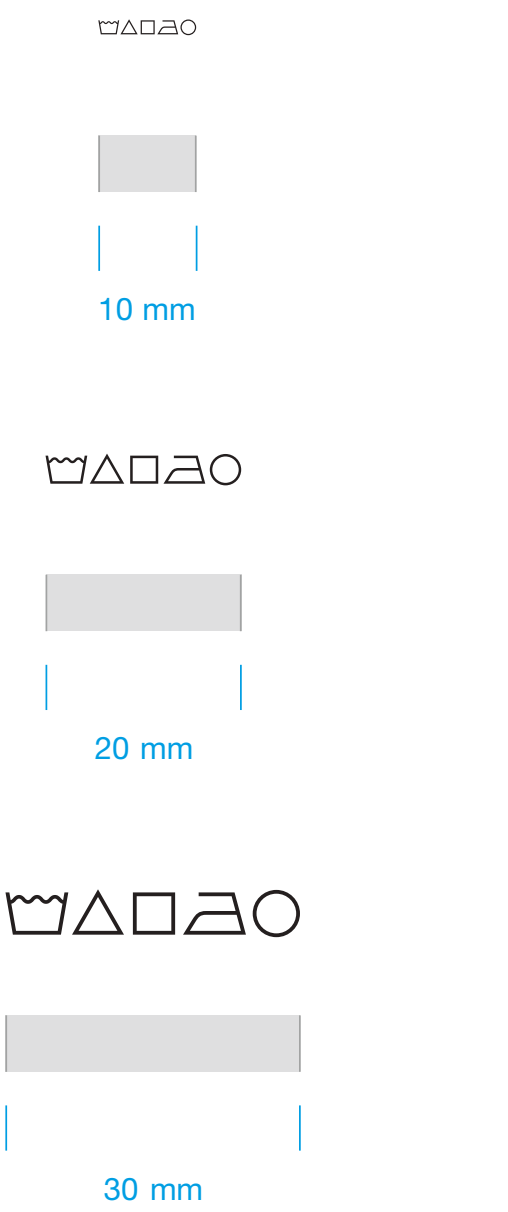
DESCRIPTIVES	DESCRIPTION
	The bar underneath the wash tub characterises a milder treatment which may be achieved by a reduction of mechanical action, of washing time, by higher water levels, smaller loads, a cool down or combinations thereof and reduced spinning. The bar underneath the professional textile 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 main symbols means that the treatment represented by it shall not be used.
	The diagonal cross (St. Andrew's cross) superimposed on the steam, below the ironing main symbol, means that steam should not be used when ironing.

03.3 MINIMAL SIZE OF SYMBOL LINE

The symbol line consists of the five main 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.

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

FIGURE 1
THE SYMBOL LINE AND ITS MINIMAL SIZE

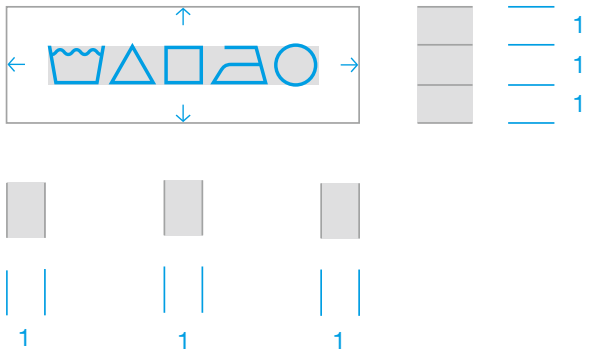


03.4 PROTECTED INTERSPACES

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 defines the minimum interspaces around the symbol row. The height of the symbol defines the interspace above and under the symbol line, while the width defines the interspaces right and left of the symbol line. (Figure 2)

FIGURE 2
THE SYMBOL AND ITS INTERSPACES

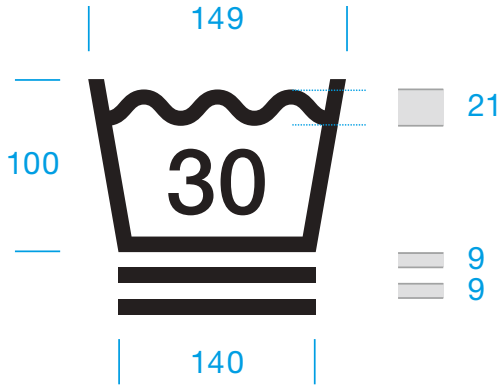


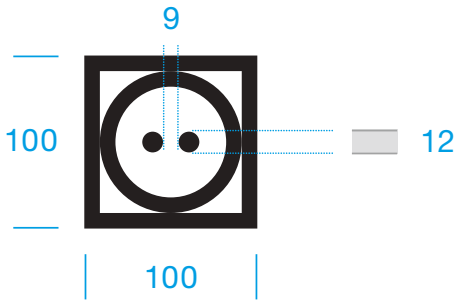
03.5 RELATIVE DIMENSION OF SYMBOLS

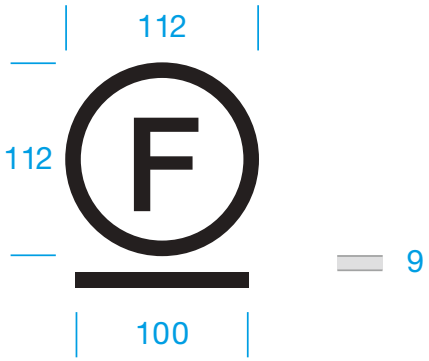
The logical structure of the symbols is based on a systematic and modular system, which simplifies the reconstruction and advancement. The fundamental proportions define themselves through height and width of the equilateral symbol ‘drying’ and correspond to 100 units. They determine the sizes which 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 centrically over the symbols.

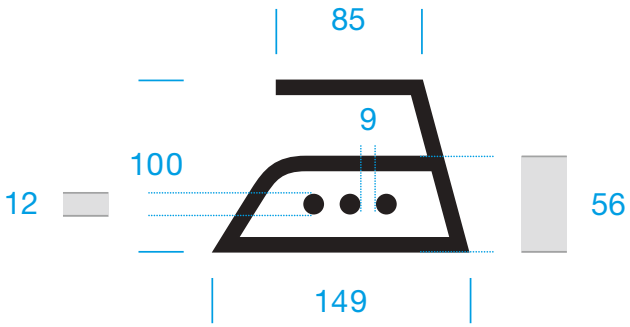
A cloud login for downloading the correct symbols for reproductions can be obtained through the secretariat **ginetex@ginetex.net** or your national member body.

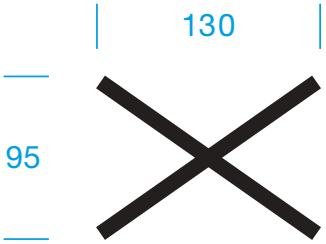
FIGURE 3
RELATIVE DIMENSION OF SYMBOLS




9
100
12
100


112
112
F
9
100


85
9
100
12
56
149

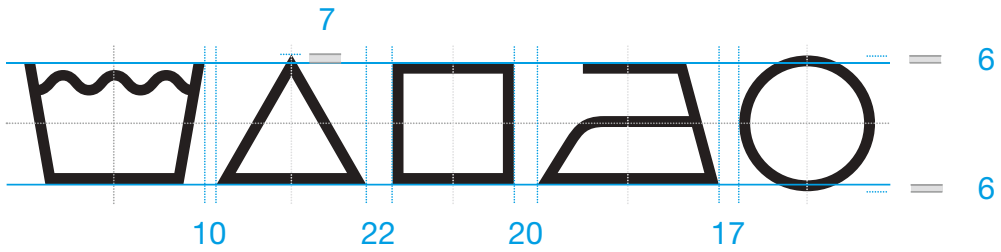

130
95

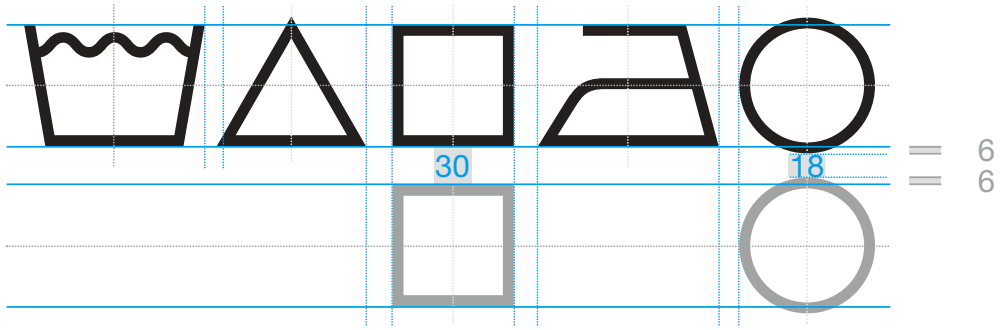
03.6 RELATIVE DISTANCES BETWEEN THE SYMBOLS

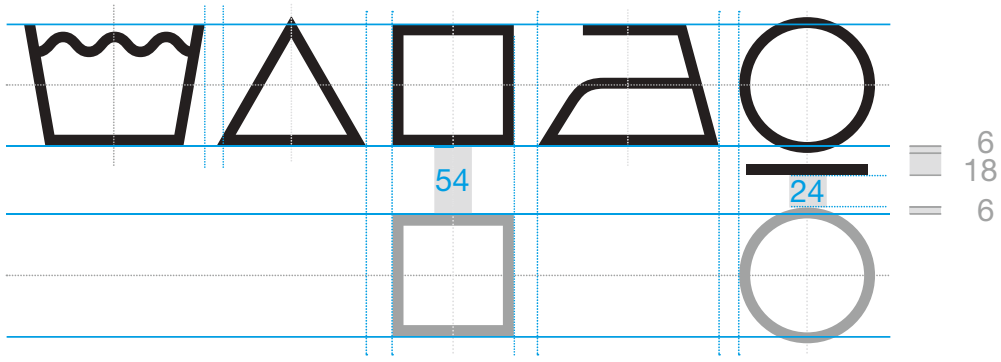
The line of the care symbols consists of the five main symbols in the order of Washing, Bleaching, Drying, Ironing and Professional Cleaning having no specific denomination. To show this line as an entity, the vertical and horizontal distance of the single symbol is derived from the form, size and relation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

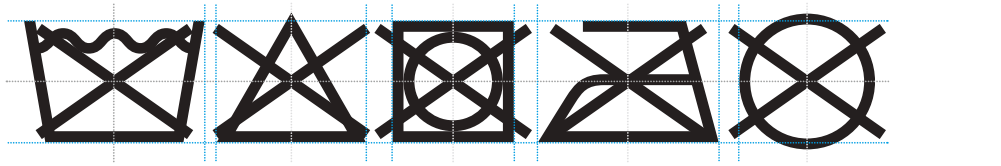
Within the modular system, different combinations of the five main care symbols with specific content are possible. Their position is given through a predefined concept of the dimensions (Figure 4)

FIGURE 4
RELATIVE DISTANCES BETWEEN THE SYMBOLS



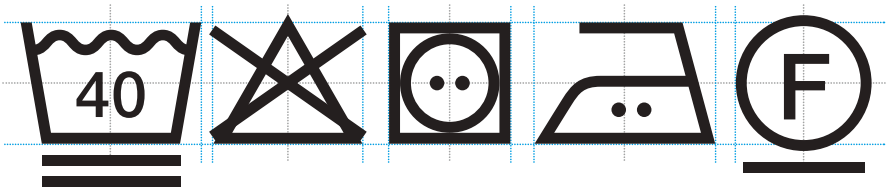






03.7 COMBINATION OF PICTOGRAM FOR SYMBOLS AND LABELS

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



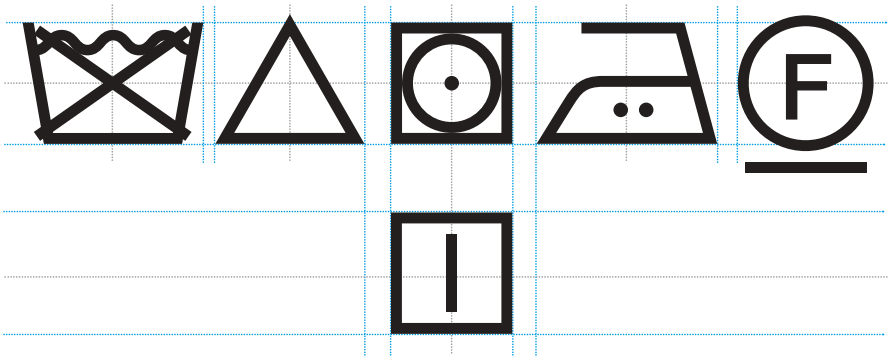
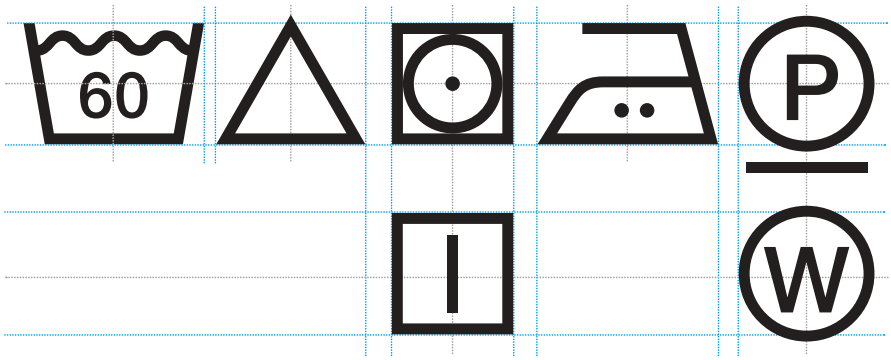
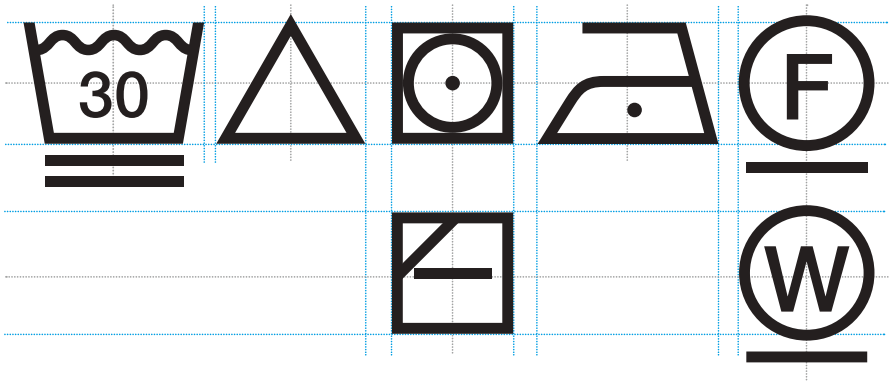
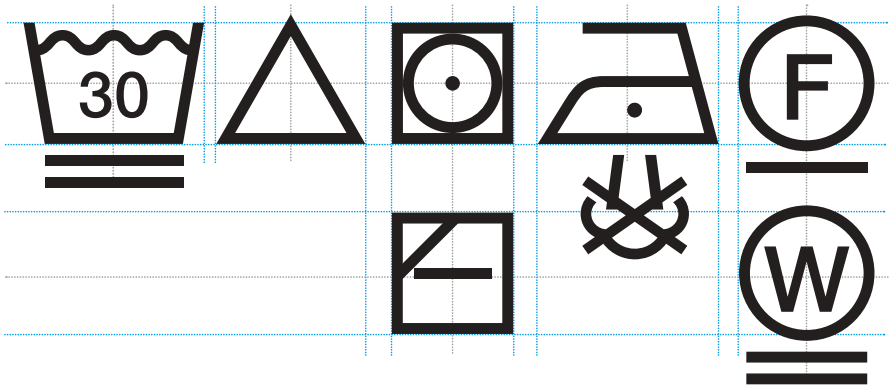


FIGURE 5
COMBINATION OF PICTOGRAM FOR SYMBOLS AND LABELS







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
	hand wash ambient temperature
	do not wash

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

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

04.4 IRONING AND PRESSING

SYMBOLS	DESCRIPTION OF PROCESS
	iron at a maximum sole plate temperature of 210 °C
	iron at a maximum sole plate temperature of 160 °C
	iron at a maximum sole plate temperature of 120 °C, Steam iron may cause irreversible damage
	iron at a maximum sole plate temperature of 120°C without steam
	do not iron

04.5 PROFESSIONAL TEXTILE CARE

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

04.5 PROFESSIONAL TEXTILE CARE

SYMBOLS	DESCRIPTION OF TREATMENT
	PROFESSIONAL DRY CLEANING
	professional dry cleaning in tetrachloro-ethene, dibutoxymethane and all solvents listed for the symbol F, normal process
	professional dry cleaning in tetrachloro-ethene, dibutoxymethane 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) and decamethylpentacyclosiloxane, normal process
	professional dry cleaning in hydrocarbons (distillation temperature between 150 °C and 210 °C, flash point between 38 °C and 70 °C) and decamethylpentacyclosiloxane, 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

LABELS

05.1 PRINCIPLES

THE CARE LABEL

Shall be made of suitable material with resistance to the washing and professional cleaning process indicated on the label.

Shall be of a material which is soft having no scratching edges.

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.

Shall be readable throughout the lifetime of the article.

Shall be easily located by the consumer and no part should be hidden (see also 05.3).

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).

05.2 TESTING AND REQUIREMENTS

05.2.1 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.

05.2.2 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.

05.2.3 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.

05.2.4 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.

05.2.5 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 decamethylpentacyclosiloxane (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.

05.2.6 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 20 cm x 5 cm. 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.

05.2.7 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.

05.3 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 housecoats and robes	top back, middle	left side seam
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
elasticised briefs, panties	top back, middle	left side seam
underwear, undershirts, underpants, briefs, strings, boxer-shorts	top back, middle	left side seam
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
02 floorcloths
03 cleaning cloths
04 edgings and trimmings
05 passementery
06 belts
07 braces
08 suspenders and garters
09 ribbons
10 elastics
11 cordage and ropes intended for use in mountaineering or water sport
12 table mats
13 handkerchiefs
14 bun nets and hair nets
15 ties and bow ties for children
16 bibs, wash gloves and face flannels
17 sewing, mending, and embroidery yarns presented for retail sale in small quantities
18 tape for curtains, blinds and shutters

06

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 line of symbols.

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 main 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

07

TECHNICAL REGULATIONS

07.1 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.

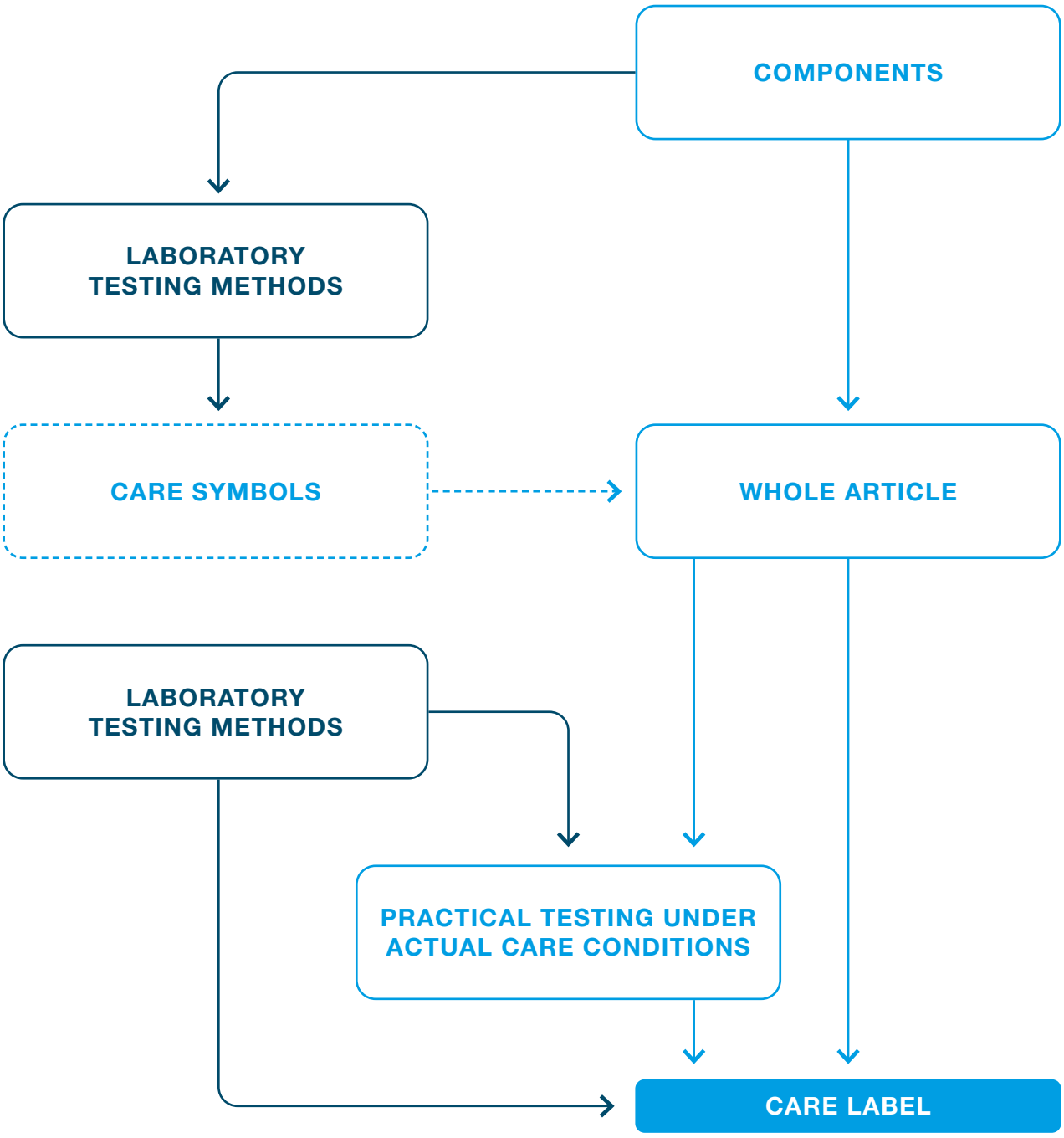
At present, except for fastness rates, no recommended pass / fail limits are quoted. In quite a lot of cases criteria (e.g. appearance) are qualitative and therefore cannot be easily specified numerically.

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



07.2 WASHING

07.2.1 COLOUR FASTNESS
07.2.1.1 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 06) 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 07.2.2. 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.

07.2.1.2 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

		RECOMMENDED MINIMUM/FASTNESS RATES	
SYMBOLS	**DESCRIPTION OF PROCESS**	**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]
	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

07.2.2 APPEARANCE

07.2.2.1 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.

07.2.2.2 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		
SYMBOLS	**REVERENCE**	**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)
	ISO 6330	very mild agitation by hand at 30 °C	ISO 105-C06, A1S or A2S (without steel balls)

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

07.3 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 07.2.1.

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

		RECOMMENDED MINIMUM/ FASTNESS RATES	
SYMBOLS	**ISO TEST METHOD**	**CHANGE OF COLOUR**	**STAINING**
	ISO 105 – N01	4	—
	ISO 105 – C09	4	—

07.4 TUMBLE DRYING

07.4.1 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 (07.4.2) for specific articles for the implementation of the tumble drying symbol to facilitate the selection of the symbol.

07.4.2 GUIDELINES

07.4.2.1 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.

07.4.2.2 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.

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

07.4.2.3 GENERAL RECOMMENDATIONS FOR SYMBOL SELECTION

Articles sensitive to mechanical action should not be tumble dried

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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 07.4.2.2 A

requires usually

07.4.3 NATURAL DRYING

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

TABLE 5 ISO TEST METHOD AND COLOUR FASTNESS LABORATORY METHOD

SYMBOLS	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

07.5 IRONING

07.5.1 COLOUR FASTNESS

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

07.5.2 APPEARANCE

No appreciable loss of strength is allowed. Softening or melting of fabrics or finishing 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				
SYMBOLS	TEMPERATURE °C	EVALUATION TIME	COLOUR	DRY	DAMP	WET
	210	After 4h	4	4	4	4
	160	After 4h	4	4	4	—*
	120	After 4h	4	4	—*	—*
	120	After 4h	4	4	—*	—*

* no test needed

07.6 PROFESSIONAL TEXTILE CARE

07.6.1 COLOUR FASTNESS

07.6.1.1 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 07.6.2. 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.

07.6.1.2 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.

07.6.2 APPEARANCE

07.6.2.1 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.

07.6.2.2 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
ISO 3175-5	Professional care, dry cleaning and wet cleaning of fabrics and garments. **Part 5**: Procedure for testing performance when cleaning and finishing using dibutoxymethane
ISO 3175-6	Professional care, dry cleaning and wet cleaning of fabrics and garments. **Part 6:** Procedure for testing performance when cleaning and finishing using decamethylpentacyclosiloxane

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

07.6.2.3 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

SYMBOLS	FULL SCALE METHOD	COLOUR FASTNESS LABORATORY METHOD*
	Process for normal materials paragraph 9.2 of ISO 3175-2 and ISO 3175-5	ISO 105-D01 and additionally another test using dibutoxymethane as the solvent
	Process for sensitive materials paragraph 9.3 of ISO 3175-2 and ISO 3175-5	ISO 105-D01 and additionally another test using dibutoxymethane as the solvent
	Process for very sensitive materials paragraph 9.3 of ISO 3175-2	ISO 105-D01 and additionally another test using dibutoxymethane as the solvent
	Process for normal materials paragraph 9.2 of ISO 3175-3 and ISO 3175-6	ISO 105-D01 Method to be modified to use both solvents in two separate tests
	Process for sensitive materials paragraph 9.3 of ISO 3175-3 and ISO 3175-6	ISO 105-D01 Method to be modified to use both solvents in two separate tests

TABLE 7.2 TEST METHODS FOR PROFESSIONAL CARE: WET CLEANING PROCESS

SYMBOLS	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 SOLVENT TEMPERATURE	LOAD	ADDITION OF DETERGENT CHARGE
			°C	KG / M³	G / L
	normal	Tetrachloroethene (Per), dibutoxymethane (DBM) and all solvents listed under F	30 ± 3	normal 50 ± 2	1(+2)[1]
	mild	Tetrachloroethene (Per), dibutoxymethane (DBM) and all solvents listed under F	30 ± 3	2 / 3 load 33 ± 2	1
	very mild	Tetrachloroethene (Per), dibutoxymethane (DBM) and all solvents listed under F	30 ± 3	2 / 3 load 33 ± 2	1
	normal	Hydrocarbons (HC, distillation temperature 150 °C to 210 °C, flash point 38 °C to 70 °C) and decamethylpentacyclosiloxane (D10)	30 ± 3	normal 50 ± 2	1(+2)[1]
	mild	Hydrocarbons (HC, distillation temperature 150 °C to 210 °C, flash point 38 °C to 70 °C) and decamethylpentacyclosiloxane (D10)	30 ± 3	2 / 3 load 33 ± 2	1

[1] added together with water / solvent emulsion

	CLEANING PROCESS					
ADDITION OF WATER	CLEANING	INTERMEDIATE SPINDRYING	RINSING	FINAL SPINDRYING	MAXIMUM DRYING TEMP. INLET AND OUTLET CONTROLLED	COOLING TIME
%	MIN	MIN	MIN	MIN	°C	MIN
allowed 2	15	2	5	3	Per: Inlet 80 ± 3 Outlet 60 ± 3 DBM: Inlet 80 ± 3 Outlet 70 ± 3	5
not allowed 0	10	2	3	2	Per: Inlet 60 ± 3 Outlet 50 ± 3 DBM: Inlet 70 ± 3 Outlet 60 ± 3	5
not allowed 0	5	2	3	2	Per: Inlet 50 ± 3 Outlet 40 ± 3 DBM: Inlet 60 ± 3 Outlet 50 ± 3	5
not allowed 2	15	2	5	5	HC, D10: Inlet 80 ± 3 Outlet 70 ± 3 (60 ± 3 for HC with flame point < 55 °C)	5
not allowed 0	10	2	3	5	HC, D10: Inlet 70 ± 3 Outlet 60 ± 3 (50 ± 3 for HC with flame point < 55 °C)	5

08

LIST OF STANDARDS MENTIONED WITHIN THIS TECHNICAL BOOKLET

08.1 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 vicose 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

08.2 TESTS FOR OTHER CRITERIA THAN COLOUR FASTNESS

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 3175-5	Textiles - Professional care, dry cleaning and wet cleaning of fabrics and garments **Part 5** Procedure for testing performance when cleaning and finishing using dibutoxymethane
ISO 3175-6	Textiles - Professional care, dry cleaning and wet cleaning of fabrics and garments **Part 6** Procedure for testing performance when cleaning and finishing using decamethylpentacyclosiloxane

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)

09

LIST OF MENTIONED CHEMICALS WITH CORRESPONDING CAS NUMBERS

CHEMICAL	CAS NUMBER
TETRACHLOROETHENE (Per)	[127-18-4]
HYDROCARBONS (HC)	[VARIOUS]
DIBUTOXYMETHANE (DBM)	[2568-90-3]
DECAMETHYLPENTACYCLOSILOXANE (D10)	[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]

10

CLEVERCARE.INFO USE OF THE SUSTAINABLE LOGO

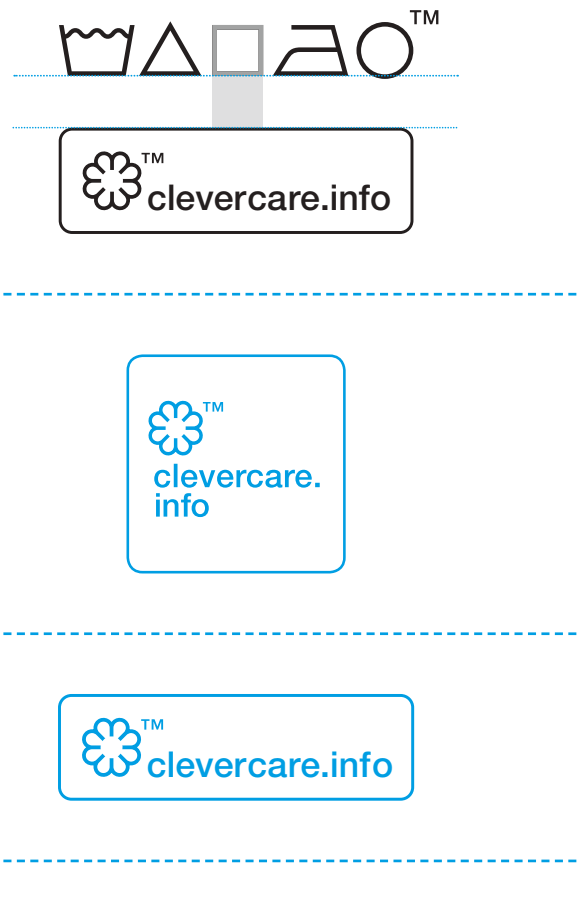
GINETEX has developed an internationally applicable logo for sustainable textile care. This logo enables the industry to reach the consumer with the message about good garment and textile care and its benefit. Clevercare.info educates consumers in reducing environmental impact and extends the life of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

The clevercare.info logo is a registered trademark in many countries. The trademark registrations are co-owned by GINETEX and its French national committee (COFREET). We grant our licensees the right to use it in accordance with our licensing agreement.

Together with the use of the 5care labelling symbols, the licensee has the right to use the logo for sustainable textile care “clevercare.info” without additional charge.

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

FIGURE 7
MINIMUM DISTANCE TO THE CARE SYMBOL ROW



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ISO ACCREDITED TESTING LABORATORIES SUPPORTING GINETEX

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

AT	OETI, Institut für Ökologie, Technik und Innovation GmbH (Member of the OEKO-TEX® Association) Siebenhirtenstrasse 12A, Objekt 8, 1230 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
CN / HK	INTERTEK TESTING SERVICES Hong Kong Limited 2/F, Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong China slhl@intertek.com, www.intertek.com
CN / HK	SGS Hong Kong Limited 6 / F Metropole Square, 2 On Yiu Street, Siu Lek Yuen, Shatin, N.T., Hong Kong China 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
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
DE	TÜV SÜD SERVICES GmbH Ridlerstrasse 65, 80339 München Tel +49 69 408 96 81 87 Susanne.Struck@tuvsud.com, Prüfungen von Textilien und Bekleidung | TÜV SÜD (tuvsud.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	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	MIRTEC (Member of the OEKO-TEX® Association) Eleftheriou Venizelou 4, 17676 Kallithea, Athens Tel +30 210 923 49 32, Fax +30 210 923 56 03 oeko-tex@mirtec.gr, www.mirtec.gr
HU	INNOVATEXT (Member of the OEKO-TEX® Association) Gyömrõi 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	SIEĆ BADAWCZA ŁUKASIEWICZ - ŁÓDZKI INSTYTUT TECHNOLOGICZNY (Member of the OEKO-TEX® Association) ul. Gdańska118, 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	RISE (Member of the OEKO-TEX® Association) Argongatan 30, Box 104, 43153 Mölndal Tel +46 10 516 50 00, Fax +46 31 706 63 63 oeko-tex@ri.se, www.ri.se
SK	VUTCH Ltd. (Member of the OEKO-TEX® Association) Rybníky 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
UK	Bureau Veritas Unit 4B – Olympic Park Birchwood – WA2 OYL – Warrington Tel + 44 7 968 933 242 helen.colebourn@bureauveritas.com, www.cps.bureauveritas.com
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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