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Tekstilije za zdravstveno in socialno oskrbo

Textiles for healthcare and social services facilities

Textilien im Gesundheitswesen

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Textiles for healthcare and social services facilities

Textiles dans les établissements de santé et de services sociaux

Textilien im Gesundheitswesen

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EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (CEN/TS 14237:2015) has been prepared by Technical Committee CEN/TC 248 "Textiles and textile products", the secretariat of which is held by BSI.

This document supersedes ENV 14237:2002.

In this new edition, the purpose was specified in the Introduction, normative references were updated and requirements were modified following past experiences with the use of ENV 14237.

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Introduction

This Technical Specification provides minimum specifications for the purchase of unused textiles for healthcare and social service facilities. It is intended to assist healthcare and social services organisations select textiles products produced from these textiles and which they intend to be maintained by industrial laundering.

It is recognized that textile materials are currently available which outperform these minimum specifications in this Technical Specification and it is unable to provide information to correlate these minimum specifications with textile life and value in typical industrial processing. Furthermore these minimum specifications are not correlated with textile life as measure by industrial launder-use trials. Consequently it is strongly recommended that purchasers discuss the quality of materials and their expected performance requirement with any prospective laundry company prior to making a purchase. Moreover, there is a need for safety of patients and clients which needs to be ensured by hygienic cleanliness according to EN 14065, which is not reachable by domestic washing.

Production technologies in laundries places a requirement for high performance characteristics on the textile to ensure sufficient durability, and which could increase acquisition costs, It is therefore encouraged to carry out some trial processing in the prospective laundry, to better assess textile life and lifecycle costing.

The properties, references and specifications for textiles shown in Tables 1 to 8 provide guidance as a starting point for products to be industrially laundered. It is possible that National Standards may set a higher level of characteristics for textile products. DARD PREVIEW

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1 Scope

This Technical Specification recommends characteristics, test methods and minimum performance specifications for unused textile for the healthcare and social service facilities (hospitals, residential care homes, etc.) to give guidance on the suitability of products intended to be maintained by industrial laundering.

This Technical Specification is not applicable to surgical textiles under the Medical Devices Directive nor protective clothing under the PPE Directive.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 410, Glass in building — Determination of luminous and solar characteristics of glazing

EN 1103, Textiles — Fabrics for apparel — Detailed procedure to determine the burning behaviour

EN 12590, Textiles — Industrial sewing threads made wholly or partly from synthetic fibres

EN 13773, Textiles and textile products — Burning behaviour — Curtains and drapes — Classification scheme **Teh STANDARD PREVIEW**

EN 14697, Textiles — Terry towels and terry towel fabrics — Specification and methods of test

EN 20105-N01, Textiles — Tests for colour fastness. Part N01: Colour fastness to bleaching: Hypochlorite (ISO 105-N01) dards.iteh.ai/catalog/standards/sist/3480d222-4f09-440d-a448-

817a9cbc67b8/sist-ts-cen-ts-14237-2016 EN 20811, Textiles — Determination of resistance to water penetration — Hydrostatic pressure test

EN ISO 105-B02, Textiles — Tests for colour fastness — Part B02: Colour fastness to artificial light: Xenon arc fading lamp test (ISO 105-B02)

EN ISO 105-C06, Textiles — Tests for colour fastness — Part C06: Colour fastness to domestic and commercial laundering (ISO 105-C06)

EN ISO 105-E04, Textiles — Tests for colour fastness — Part E04: Colour fastness to perspiration (ISO 105-E04)

EN ISO 105-N02, Textiles — Tests for colour fastness — Part N02: Colour fastness to bleaching — Peroxide (ISO 105-N02)

EN ISO 105-P01, Textiles — Tests for colour fastness — Part P01: Colour fastness to dry heat (excluding pressing) (ISO 105-P01)

EN ISO 105-X12, Textiles — Tests for colour fastness — Part X12: Color fastness to rubbing (ISO 105-X12:2001)

EN ISO 5077, Textiles — Determination of dimensional change in washing and drying (ISO 5077)

EN ISO 6330, Textiles — Domestic washing and drying procedures for textile testing (ISO 6330)

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EN ISO 9237:1995, Textiles — Determination of permeability of fabrics to air (ISO 9237:1995)

EN ISO 11092:2014, *Textiles* — *Physiological effects* — *Measurement of thermal and water-vapour resistance under steady-state conditions (sweating guarded-hotplate test) (ISO 11092:2014)*

EN ISO 12945-1:2000, *Textiles* — *Determination of fabric propensity to surface fuzzing and to pilling* — *Part 1: Pilling box method (ISO 12945-1:2000)*

EN ISO 12945-2, Textiles — Determination of fabric propensity to surface fuzzing and to pilling — Part 2: Modified Martindale method (ISO 12945-2)

EN ISO 12952-1, Textiles — Assessment of the ignitability of bedding items — Part 1: Ignition source: smouldering cigarette (ISO 12952-1)

EN ISO 12952-2, Textiles — Assessment of the ignitability of bedding items — Part 2: Ignition source: match-flame equivalent (ISO 12952-2)

EN ISO 13934-1, *Textiles* — *Tensile properties of fabrics* — *Part 1: Determination of maximum force and elongation at maximum force using the strip method (ISO 13934-1)*

EN ISO 13936-1, *Textiles* — *Determination of the slippage resistance of yarns at a seam in woven fabrics* — *Part 1: Fixed seam opening method (ISO 13936-1)*

EN ISO 13936-2, Textiles — Determination of the slippage resistance of yarns at a seam in woven fabrics — Part 2: Fixed load method (ISO 13936-2) (standards.iteh.ai)

EN ISO 13938-1:1999, Textiles — Bursting properties of fabrics — Part 1: Hydraulic method for determination of bursting strength and bursting distension (ISO 13938-1:1999)

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EN ISO 13938-2, Textiles — Bursting properties of fabrics — Part 27 Pneumatic method for determination of bursting strength and bursting distension (ISO 13938-2)

ISO 4915, Textiles — Stitch types — Classification and terminology

ISO 4916, Textiles — Seam types — Classification and terminology

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 Products

NOTE This Technical Specification classifies the requirements for the fabrics according to its use in the following product groups.

3.1.1

accessories

components different from the main materials of the product (e.g. cuffs, buttons, sewing thread, press studs, zippers, etc.)

3.1.2

baby clothing

garment being provided by the hospital that is worn by babies during their stay

3.1.3

bed textiles

two-dimensional textile such as sheets, pillow covers, secondary covers, mattress covers, draw sheets, bed spreads

3.1.4

blanket

covering used on beds to provide thermal comfort

3.1.5

curtain

piece of hanging cloth that can be drawn to cover a window or to provide a screen

3.1.6

encasing

fully fitting article which covers all faces of the mattress

3.1.7

mattress protector against liquids

mattress cover impermeable to liquids

3.1.8

patient's clothing garment being provided by the hospital that is worn by a patient during a stay

3.1.9

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pillow

cloth bag filled with soft material used for patients support16

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3.1.10 quilt

cover made of two layers of cloth with soft insulating material in-between to provide thermal comfort

3.1.11

staff

person charged with (part of) medical treatment of a patient or the performance of a medical duty

3.1.12

staff clothing

over-garment without a specific protective function worn by the staff

3.1.13

towels

piece of cloth used for drying a person

3.2 Properties

3.2.1

air permeability

velocity of an air flow passing perpendicularly through a test specimen under specified conditions of test area, pressure drop and time

[SOURCE: EN ISO 9237:1995, 3.1]

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3.2.2

bursting strength (strength at burst)

pressure obtained by subtracting the diaphragm pressure from the mean bursting pressure

[SOURCE: EN ISO 13938-1:1999, 3.3]

3.2.3

colour fastness

resistance of the colour of textiles to the different agents to which these materials may be exposed during manufacture and their subsequent use

Note 1 to entry: The change in colour and staining of undyed adjacent fabrics are assessed as fastness ratings.

Note 2 to entry: See EN ISO 105-A01.

3.2.4

dimensional change

change in length and/or width of fabrics, garments or other textile articles which may occur when subjected to an appropriate combination of specified washing and drying procedures

Note 1 to entry: See EN ISO 5077.

3.2.5

burning behaviour Teh STANDARD PREVIEW property of fabrics whereby flaming combustion is slowed, terminated or prevented

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See EN ISO 12952-1, EN ISO 12952-2 and EN 13773. Note 1 to entry:

3.2.6

3.2.0 https://standards.iteh.ai/catalog/standards/sist/3480d222-4f09-440d-a448-liquid absorbency time (wettability)_{817a9cbc67b8/sist-ts-cen-ts-14237-2016} time required for a test specimen of fabric to become completely wetted by the test liquid and imbibe test liquid into its interior structure

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[SOURCE: EN 1644-1:1997, B.1]

3.2.7

liquid absorptive capacity (wettability)

mass of liquid absorbed per unit mass of the fabric, expressed as a percentage, after either a standard immersion time or after the time needed to completely wet the fabric and after drainage has occurred

[SOURCE: EN 1644-1:1997, C.1, modified — The term "fabric" is used instead of the term "nonwoven" in the present definition.]

3.2.8

pilling

generation of pills over the surface of the fabric

[SOURCE: EN ISO 12945-1:2000, 3.3]

3.2.9

tensile strength

maximum tensile force recorded in extending a test-piece to breaking point, the tensile force recorded at the moment of rupture

The tensile strength and tensile strength at break may be different if, after yield, the elongation Note 1 to entry: continues and is accompanied by a drop in force resulting in tensile strength at break being lower than tensile strength.

3.2.10

thermal resistance, R_{ct}

ratio of the temperature difference between two faces of a test specimen to the rate of flow of heat per unit area normal to the faces

It is analogous to electrical resistance in the case of current flow through an electrical Note 1 to entry: conductor.

[SOURCE: EN ISO 11092:2014, 2.1, modified — The definition itself had to be redrafted, the original notes to the entry were deleted and the present Note 1 to entry was added.]

3.2.11

water penetration

hydrostatic head supported by a fabric

It is measure of the opposition to the passage of water through the fabric. Note 1 to entry:

Note 2 to entry: See EN 20811.

3.2.12

water vapour resistance, Reth STANDARD PREVIEW

water-vapour pressure difference between the two faces of a material divided by the resultant evaporative heat flux per unit area in the direction of the gradient

The evaporative heat flux may consist of both diffusive and convective components. Note 1 to entry: https://standards.iteh.ai/catalog/standards/sist/3480d222-4f09-440d-a448-

[SOURCE: EN ISO 11092:2014, 2.2, modified. The present Note 1 to entry was shortened and Note 2 to the entry was deleted.]

Properties, references and requirements 4

The following tables for properties, references and requirements of product groups are recommended as the basis for agreements between the supplier and customer.