

ISBN 978-0-626-29535-6

CKS 676:2005

Edition 1.1

CKS

**Disposable non-woven laminated
surgical fabrics**

Published by
SABS STANDARDS DIVISION

CKS 676:2005
Edition 1.1

Notice

This specification was approved by the Department of Trade and Industry in June 1999.

Except for purposes of tender or contract no person may claim or create the impression that commodities comply with this specification.

Table of changes

Change No.	Date	Scope
1	2005	Amended to change the designation of SABS standards to SANS standards, to update the bursting strength test method, to amend the definition of "acceptable", to correct the equation for the determination of mass loss on tumbling and to replace a reference to the SABS in a footnote.

Foreword

This coordinating specification is a technical agreement developed in accordance with SANS 1-1, and approved by National Committee SABS/TC 1004/SC 1006K, *Textiles – Surgical dressings*.

This edition cancels and replaces the first edition (CKS 676:1999).

A vertical line in the margin shows where the text has been technically modified by amendment No. 1.

**Reaffirmed and reprinted in November 2013.
This document will be reviewed every five years
and be reaffirmed, amended, revised or withdrawn.**

Obtainable from

SABS Standards Division
Private Bag X191
Pretoria
Republic of South Africa
0001

Telephone : (012) 428-7911
Fax : (012) 344-1568
E-mail : sales@sabs.co.za
Website : http://www.sabs.co.za

COPYRIGHT RESERVED

Printed in the Republic of South Africa by
the SABS Standards Division

Disposable non-woven laminated surgical fabrics

1.1 Scope

1.1 This specification covers requirements for five types of disposable non-woven laminated surgical fabric for use in the manufacture of theatre gowns, surgical drapes and sterilization wraps.

1.2 This specification covers fabric requirements only. The relevant requirements for made-up articles, such as theatre gowns, surgical drapes and sterilization wraps, should be agreed upon between the purchaser and the supplier.

NOTE Notes to purchasers are given in annex A.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this specification. All standards are subject to revision and, since any reference to a standard is deemed to be a reference to the latest edition of that standard, parties to agreements based on this specification are encouraged to take steps to ensure the use of the most recent editions of the standards indicated below. Information on currently valid national and international standards can be obtained from the SABS Standards Division.

AATCC method 20, *Fiber analysis – Qualitative.*

ISO 6530, *Protective clothing – Protection against liquid chemicals – Test method for resistance of materials to penetration by liquids.*

SANS 70, *Conditioning of textiles and standard temperate atmosphere for determining their physical and mechanical properties.*

SANS 79, *Textiles – Mass per unit area of conditioned fabrics.*

SANS 171, *Glassware and equipment for microbiological tests.*

~~SANS 234 (SABS SM 234), *Bursting strength of fabrics: Diaphragm pressure test.*~~

Amdt 1 |

SANS 4833/ISO 4833, *Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of microorganisms – Colony count technique at 30 °C.*

SANS 5003, *The determination of the sterility of liquids and solid materials*

SANS 5265, *Air permeability of textile fabrics.*

CKS 676:2005

Edition 1.1

SANS 5266, *Water resistance of textile fabrics: Variable head test.*

SANS 5300, *Water repellency of textile fabrics (Spray test).*

SANS 5553, *Media and reagents for microbiological tests.*

SANS 6116, *Resistance of textile fabrics to pilling and fuzzing (Random tumble method).*

SANS 6163, *Water-vapour transfer through a textile fabric.*

SANS 6940/ISO 6940, *Textile fabrics – Burning behaviour – Determination of ease of ignition of vertically oriented specimens.*

SANS 10004, *Terms and definitions for textiles and textile merchandise.*

SANS 11138-3/ISO 11138-3, *Sterilization of health care products – Biological indicators – Part 3: Biological indicators for moist heat sterilization processes.*

SANS 13938-1/ISO 13938-1, *Textiles – Bursting properties of fabrics – Part 1: Hydraulic method for determination of bursting strength and bursting distension.* **Amdt 1**

3 Definitions

For the purposes of this specification, the definitions given in SANS 10004 and the following definitions apply:

3.1 acceptable

acceptable to the authority administering this specification, or to the parties concluding the purchase contract, as relevant **Amdt 1**

3.2 melt-blown layer

a layer of fibres produced by a process in which a polymer is melt-extruded through a die into a high-velocity stream of hot air, which converts it into fine and relatively short fibres

NOTE After quenching by a cold air stream, the fibres are collected as a sheet on a moving screen.

3.3 microfibre

a fibre or filament of linear density below approximately 1 dtex (1 dg/km)

3.4 spunbond layer

a layer of fibres made by the extrusion of filaments that are laid down in the form of a web and that are subsequently bonded

4 Requirements

4.1 General

Disposable non-woven laminated surgical fabrics shall, when visually and microscopically examined (see 5.2), be shown to have been made from a melt-blown layer of microfibres between two spunbond layers, and the three layers shall have been embossed to form a laminated structure.

In addition, the fabric shall

a) be made in accordance with sound manufacturing practice,

- b) be of the required colour and embossed design, and may have a printed design, as required (see annex A),
- c) be of acceptably uniform make, width, colour and finish, and
- d) be clean and dry when packed.

4.2 Type

Disposable non-woven laminated surgical fabrics shall be of one of the types given in table 1, as required, and shall comply with the appropriate requirements given in table 1 and 4.3, 4.4, 4.5, 4.6 and, when relevant, 4.7 (see annex A).

NOTE Recommended end uses for the different types of disposable non-woven laminated surgical fabric are given in annex B.

Table 1 — Requirements

1	2					3
Property	Requirement					Test method subclause
	Type					
	1	2	3	4	5	
Composition	100 % Polypropylene					5.3
Mass/unit area , g/m ² , min.	35	45	65	55	50	5.4
Bursting strength , kPa, min.						5.5
Single layer	170	360	470	420	250	
Double layer ¹⁾	555	545	730	520	335	
Mass loss on tumbling , %, max.	1,0					5.6
Water resistance						
a) Spray rating, min.	4-5					5.7
b) Variable head, mm, min.	520	650	580	570	690	5.8
c) Index of penetration, %, min.	0,1					5.9
d) Index of repellency, %, min.	92,0					5.9
Air permeability , m ³ /m ² /min, max.	18					5.10
Water vapour transfer , g/m ² /24 h, min.	3 400					5.11
Flammability , ignition time, s	> 20					5.12
¹⁾ In the case of sterilization wraps only.						

4.3 Dry particle bacterial filtration efficiency

When tested in accordance with 5.13, the dry particle bacterial filtration efficiency shall be at least 98 %.