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Latest Date for Receipt of Comments
} 2025-04-13

SLSI SRI LANKA STANDARDS INSTITUTION
GUARDIAN OF QUALITY

Draft Sri Lanka Standard
SPECIFICATION FOR REUSABLE SANITARY PAD
(DSLS :)

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This draft should not be regarded or used as a Sri Lanka Standard.

අදහස් එවිය යුත්තේ : ශ්‍රී ලංකා ප්‍රමිති ආයතනය, 17, වික්ටෝරියා පෙදෙස, ඇල්විටිගල මාවත, කොළඹ 08.

Comments to be sent to: SRI LANKA STANDARDS INSTITUTION, 17, VICTORIA PLACE, ELVITIGALA MAWATHA, COLOMBO 08.

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Introduction

This Draft Sri Lanka Standard has been prepared by the Sri Lanka Standards Institution and is now being circulated for technical comments to all interested parties.

All comments received will be considered by the SLSI and the draft if necessary, before submission to the Council of the Institution through the relevant Divisional Committee for final approval.

The Institution would appreciate any views on this draft which should be sent before the specified date. It would also be helpful if those who find the draft generally acceptable could kindly notify us accordingly.

All Communications should be addressed to:

The Director General
Sri Lanka Standards Institution,
17, Victoria Place,
Elvitigala Mawatha,
Colombo 08.

Draft Sri Lanka Standard
SPECIFICATION FOR REUSABLE SANITARY PAD

DSLS -----: -------

Gr. 9

SRI LANKA STANDARDS INSTITUTION
17, Victoria Place
Elvitigala Mawatha
Colombo 08
Sri Lanka

Draft Sri Lanka Standard
SPECIFICATION FOR REUSABLE SANITARY PAD

FOREWORD

This Standard was approved by the Sectoral Committee on Textiles & Garments, and was authorized for publication as a Sri Lanka Standard by the Council of the Sri Lanka Standards Institution on ……

The industry of women's hygiene products has significantly expanded over the past decade, introducing numerous new product categories. In response to growing global concerns about hygiene, sustainability and eco-friendly practices, reusable menstrual products are now gaining popularity. Reusable pads offer a cost effective solution to overcome the period poverty.

This Standard is subject to the restrictions imposed under the National Medicines Regulatory Authority, Act No. 5 of 2015 and the regulation thereunder.

For the purpose of deciding whether a particular requirement of this Standard is complied with, the final value, observed or calculated, expressing the result of a test or an analysis shall be rounded off in accordance with **SLS 102**. The number of significant places retained in the rounded off value shall be the same as that of the specified value in this specification.

In the preparation of this Standard, valuable assistance derived from the following publications is gratefully acknowledged.

IS 17514: 2021	Reusable Sanitary pad/ napkin and period panties - Specification
SABS 1812: 2019	Manufacture of washable, reusable sanitary towels
SLS 1732: 2022	Specification for single-use sanitary towels
UNFPA/ UNHCR	Technical Specifications for Reusable Menstrual Pads

1 SCOPE

This Standard prescribes the requirements and methods of sampling and test for reusable sanitary pads.

2 REFERENCES

The following referenced documents are indispensable for the application of the document. For undated references, the latest version of the referenced document (including any amendments) shall apply.

SLS ASTM	D 1777	Standard test method for thickness of textile materials
SLS	16	Standard atmospheres for conditioning and testing of textiles
SLS	63	Method for the determination of colour fastness to the rubbing of

		textile material
SLS	86	Determination of pH value of aqueous extracts of textile materials
SLS	102	Rules for rounding of numerical values
SLS	428	Random sampling methods
SLS	516	Part 16 – Section 1 - Methods of tests for microbiology of food and animal feeding stuffs - microbiology of the food chain — horizontal method for the detection and enumeration of enterobacteriaceae Section 1: Detection of enterobacteriaceae
SLS	1350	Method of test for the detection of *Pseudomonas aeruginosa* in cosmetics
SLS	1351	Method of test for the detection of *Staphylococcus aureus* in cosmetics
SLS	1387	Methods of test for colour fastness of textiles Part 14 - Determination of colour fastness to domestic & *commercial laundering* Part 48 – Determination of Colour fastness to perspiration
SLS	1488	Method of test for the detection of *Candida albicans* in cosmetics
SLS ISO	11737	Sterilization of health care products — Microbiological methods Part 1 - Determination of a population of microorganisms on products
SLS ISO	22716	Guidelines on good manufacturing practices for cosmetics

3 DEFINITIONS

3.1 absorbent core: The filler material of the reusable sanitary pad, which absorbs and retain the menstrual blood, vaginal discharge and urine

3.2 bottom layer: The protective barrier which prevents leakages

3.3 menstruation: The regular discharge of blood and mucosal tissue (known as menses) from the inner lining of the uterus through the vagina

3.4 reusable sanitary pad: Washable hygienic cloth with a sufficiently porous upper layer, absorbent layer and a protective barrier which is designed to be worn during menstruation, bleeding and any other similar situation where it is necessary to absorb a flow of fluid from the vagina, and recommended to be reused by the same person after washing and drying as instructed.

3.5 upper layer: The surface covering material of the reusable sanitary pad with sufficient porosity, which is in direct contact with the skin

4 CLASSIFICATION/ TYPES

Reusable Sanitary pad shall be of the following types:

4.1 Regular menstrual flow;

4.1.1 Small

4.1.2 Medium

4.1.3 Large

4.1.4 Extra-large

4.2 This product is not recommended for heavy flow

NOTE: *Reusable sanitary pads may be manufactured of different designs according to the undergarment type*

5 REQUIREMENTS

5.1 General requirements

5.1.1 Reusable sanitary pads shall be manufactured by a process adhering to Good Manufacturing Practices (GMP) complying with the requirements imposed by the relevant regulatory authorities in Sri Lanka.

5.1.2 Reusable sanitary pads shall not contain any toxic, irritant or carcinogenic material.

5.1.3 Any therapeutic or prophylactic functions claimed shall be clinically proven.

5.1.4 Reusable sanitary pads shall be free from defects which affect the appearance and utility.

5.1.5 Reusable sanitary pads shall be free from any unpleasant odour and shall be unscented.

5.2 Raw materials

Reusable sanitary pads shall not contain any toxic, irritant or carcinogenic material and shall be free from other contaminants. Self-declaration regarding this matter shall be submitted by the manufacturer when requested by regulators.

5.3 Performance requirements

5.3.1 Reusable sanitary pads shall comply with the requirements specified in Table **1** when tested according to the relevant methods given in Column **(4)** of the table.

Table 1 – Requirements for Reusable menstrual pad

Sl No (1)	Characteristic (2)	Requirement (3)	Test method (4)
i)	pH	5.5 - 7.5	**SLS 86**
ii)	Absorbency, ml, min	20	**Appendix B**
iii)	Microbiological limits		
	a) Aerobic plate count, per g, max	100	**SLS ISO 11737 - 1**
	b) Yeasts or Moulds count, per g, max	100	
	c) *Pseudomonas aeruginosa*, per pad	Absent	**SLS 1350**
	d) *Staphylococcus aureus*, per pad	Absent	**SLS 1351**
	e) *Candida albicans*, per ad	Absent	**SLS1488**
	f) Enterobacteriaceae	Absent	**SLS 516 – 16 - 1**
iv)	Colour fastness to washing	4 or better	**SLS 1387 - 14**
v)	Colour fastness to perspiration	4 or better	**SLS 1387 - 48**
vi)	Colour fastness to rubbing		
	Dry	4 or better	**SLS 63**
	Wet	3 or better	
vii)	Phthalate, ppm, max	1000	**ISO 14389: 2022**
vii)	Azo dyes	Absent	**ISO 14362** Part **1** and **3** (see Clause **5.3.2**)
viii)	Formaldehyde, ppm, max	16	**ISO 14184-1**
ix)	Soluble heavy metals, ppm, max.		**EN 71 Part 3**
	Antimony	30	
	Arsenic	1.0	
	Barium	1000	
	Cadmium	0.1	
	Chromium	2.0	
	Cobalt	4.0	
	Copper	50.0	
	Lead	< 1.0	
	Mercury	0.00	
	Nickel	4.0	
	Selenium	500	

5.3.2 A test report for the presence of azoic dyes shall be submitted by the manufacturer when requested by the regulators.

5.4 Workmanship and finish

5.4.1 Top layer

5.4.1.1 The top layer shall be of good quality cotton, polyester, polyester/cotton blended fabric, viscose, polyester/viscose blended fabric, rayon knitted sleeve or gauze, non-woven fabric, or any other suitable materials and shall be sealed or secured in such a manner that it prevents unwrapping during usage and completely cover the upper side of the absorbent core.

5.4.1.2 It shall transfer the menstrual blood or vaginal discharge immediately (as per Appendix B) to the absorbent core.

5.4.2 Absorbent core

5.4.2.1 The absorbent core shall be made of good quality cotton, polyester, polyester/cotton blended fabric, viscose, polyester/viscose blended fabric, rayon knitted sleeve or gauze, non-woven fabric, or any other suitable material and it shall be free from lumps, oil spots, dirt or foreign matter.

5.4.2.2 It shall be arranged and neatly cut to the required size and shall not cause lump formation when subject to a sudden pressure.

5.4.3 Bottom layer

5.4.3.1 The bottom layer shall be of any suitable leak-proof material which delay or prevents potential leakages from the absorbent core and it shall cover the lower side of the absorbent core completely.

5.4.4 Fastening mechanism (Fasteners/ wings)

5.4.4.1 There shall be a suitable mechanism for fastening the reusable sanitary pad to the undergarment. It may be of buttons, clasps, elastic, string, velcro or any other suitable material.

5.4.4.2 The material used for the fastening mechanisms shall not cause harm to skin and shall not be abrasive when the product is used and it shall be durable and free from rusting until the life cycle of the product as declared by the manufacturer.

5.4.5 Sewing threads, adhesives or other joining material shall comply with the requirements of this product and shall not compromise its performance.

5.5 Dimensional requirements

5.5.1 The effective length and effective width of the product should be such that it covers the vulva in a manner that will ensure that the performance requirements in **5.3** are met.

5.5.2 Reusable sanitary pad shall comply with the dimensional requirements specified in Table 2 when tested according to the relevant methods given in Column (4) of the table.

Table 2 – Dimensional requirements of reusable sanitary pad

SI No (1)	Characteristic (2)	Requirement (3)	Test method (4)
i)	Effective length, mm		**Appendix C**
	a) Small	180 - 200	
	b) Medium	201 - 240	
	c) Large	241 – 280	
	d) Extra- large	> 280	
ii)	Effective width, mm	Minimum 60	
iii)	Thickness, mm, max	6	**SLS ASTM D1777**

5.5.3 Dimensions of the reusable menstrual pad shall be clearly labelled on the retail pack in accordance with Appendix **C**.

6 PACKAGING

6.1 Each reusable menstrual pad shall be packed individually or in multiples (retail pack)

6.2 The number of retail packs in a master pack shall be as agreed between the purchaser and the supplier.

6.3 The packaging materials shall be sufficiently robust material to withstand transportation, handling and storage.

6.4 The packaging materials shall be in accordance with regulations promulgated in terms of the National Environmental Act. 47 of 1980, as amended.

7 MARKING AND/ OR LABELLING

The following information shall be legibly and indelibly marked and/ or labelled on each retail pack: (see note 1)

a) Name of the product as “REUSABLE sanitary PADS”;
b) Type; (as per Clause **4**)
c) Country of origin;(see note 2)
d) Name, address and contact details of the manufacturer and importer/ distributor if any;
e) Registered trade mark, if any;
f) Brand name if any;
g) Number of reusable sanitary pads per pack;
h) Dimensions of the reusable menstrual pad;
j) Instructions as follows: (see note 2 and 4)
    i) Method of use;
    ii) Indication of the absorbent side;

iii) Care instructions;
iv) Recommended maximum number of hours/ cycles;
v) Recommendation for disposal;

k) Batch or code number;
m) Date of manufacture;
n) Date of expiry/ shelf life; (see note 3)
p) List of raw materials; and
q) Bar code and/ or QR code.

NOTES

1. *Minimum letter size used in the label shall be* 1.5 *mm.*
2. *Shall indicate country of origin legibly, permanently, and in comparable size and close proximity to any mention of country other than country in which the article was manufactured or produced. Must be visible at point of purchase.*
3. *Claims regarding shelf life should be accompanied by scientific evidence.*
4. *Instructions shall conform to the National Language Policy*

8 METHODS OF TEST

8.1 Tests shall be carried out as specified in **SLS ASTM D1777**, **SLS 63**, **SLS 86**, **SLS 1350, SLS 1351, SLS 1488, SLS ISO 11737 – 1, SLS 516 – 16 - 1,** Part **14,** and **48** of **SLS 1387, ISO 14389, Part 1** and **3** of **ISO 14362,** Part **1** of **14184,** Part **3** of **EN 71** and Appendices **B** to **C** of this Standard.

8.2 The conditioning and testing atmosphere shall be the standard atmosphere for conditioning and testing of textiles as defined in **SLS 16**.

8.3 During analysis, unless otherwise stated, use only reagents of recognized analytical grade and only distilled water or water of equivalent purity.

APPENDIX A
COMPLIANCE OF A LOT

The sampling scheme given in Appendix **A** should be applied where compliance of a lot to the requirements of this Standard is to be assessed based on statistical sampling and inspection.

Where compliance with this Standard is to be assured, appropriate schemes of sampling and inspection shall be adopted based on manufacturer's control systems coupled with type tests and testing procedures.

A.1 LOT

A.1.1 In any consignment, all retail packs of reusable sanitary pads of the same size and type belonging to one batch of manufacture or supply shall constitute a lot.

A.2 SCALE OF SAMPLING

A.2.1 The samples shall be inspected and tested from each lot for ascertaining conformity of the lot to the requirements of this specification.

A.2.2 The number of retail packs to be selected as the primary sample shall be in accordance with Column **(1)** and Column **(2)** of Table **3**.

A.2.3 If number of pads in the selected retail packs are not sufficient for testing, at least 2 per cent of the packs subject to a minimum of 3 packs shall be selected and from each pack so selected, an equal number of pads shall be drawn to give the required sample size.

TABLE 3 – Scale of sampling

No. of retail packs in the lot **(1)**	No. of retail packs to be selected for primary sample **(2)**	No. of sanitary pads to be selected for sub sample **(3)**
Up to 90	5	3
91 to 150	8	3
151 to 500	13	5
501 to 1 200	20	5
1 201 to 10 000	32	8
10 001 and above	50	8

A.2.4 Unopened retail pack/s (comprising minimum of ten reusable sanitary pads) shall be selected at random from a lot for the microbiological test requirements.

A.2.5 The number of sanitary pads to be selected as the sub sample from the primary sample selected as in **A.2.2** or **A.2.3** shall be in accordance with Column **(1)** and Column **(3)** of Table **3**.

A.2.6 The retail packs shall be selected at random. In order to ensure randomness of selection, random number tables as given in **ISO 24153** shall be used.

A.3 NUMBER OF TESTS

A.3.1 Each retail pack selected as in **A.2.2** or **A.2.3** shall be inspected for packaging and marking requirements specified in Clauses **6**, and **7**.

A.3.2 Each sanitary pad selected as in **A.2.5** shall be tested for the requirements specified in Clause **5.4** (workmanship and finish).

A.3.3 Five sanitary pads selected as in **A.2.2** or **A.2.3** shall be tested for the requirements specified in Clause **5.5** (dimensional requirements).

A.3.4 Five sanitary pads selected as in **A.2.2** or **A.2.3** shall be tested for the requirements of SI no. ii (absorbency) specified in Table **1** of Clause **5.3.1** (absorbency).

A.3.5 Composite specimens extracted from the retail packs in primary sample selected as in **A.2.2** or **A.2.3** shall be tested for the requirements of Sl. no. **i** (pH) and Sl. no. **iv** (moisture content) specified in Table **1** of Clause **5.3.1**.

A.3.6 One sanitary pad selected as in **A.2.2** or **A.2.3** shall be tested for the requirements of SI no. **v**, SI no. **vi** & SI no. **vii** (colour fastness properties) specified in Table 1 of Clause **5.3.1**.

A.3.7 One sanitary pad selected as in **A.2.2** or **A.2.3** shall be tested for the requirements of SI no. **viii** (phthalate) specified in Table **1** of Clause **5.3.1**.

A.3.8 Two sanitary pads selected as in **A.2.2** or **A.2.3** shall be tested for the requirements of SI no. **ix** (azo dyes) specified in Table **1** of Clause **5.3.1**.

A.3.9 One sanitary pad selected as in **A.2.2** or **A.2.3** shall be tested for the requirements of SI no. **x** (formaldehyde) specified in Table **1** of Clause **5.3.1**.

A.3.10 One sanitary pad selected as in **A.2.2** or **A.2.3** shall be tested for the requirements of SI no. **x** (soluble heavy metals) specified in Table **1** of Clause **5.3.1**.

A.3.11 Specimens chosen from the retail packs selected as in **A.2.4** shall be tested for the microbiological requirements of Sl. no. **iii** specified in Table **1** of Clause **5.3.1**.

A.4 CRITERIA FOR CONFORMITY

A lot shall be declared as conforming to the requirements of this specification if the following conditions are satisfied.

A.4.1 Each retail pack examined as in **A.3.1** shall satisfy the relevant requirements.

A.4.2 Each sanitary pad examined as in **A.3.2**, **A.3.3** and **A.3.4** shall satisfy the relevant requirements.

A.4.4 Composite specimens examined as in **A.3.5** shall satisfy the relevant requirements.

A.4.5 Sanitary pads examined as in in **A.3.6**, **A.3.7**, **A.3.8**, **A.3.9** and **A.3.10** shall satisfy the relevant requirements.

A.4.6 Specimens tested as in **A.3.11** shall satisfy the relevant and applicable requirements.

APPENDIX B
DETERMINATION OF ABSORBENCY

B.1 APPARATUS AND REAGENTS

B.1.1 *Beaker, capacity* 1- *litre*

B.1.2 *Burette, capacity* 10.00- *ml*

B.1.3 *Glass or any other transparent sheet*

B.1.4 W*eight piece with template –Mass of weight piece with template to be* 1 *kg*.
Size of the template - 175 *mm* x 60 *mm*

B.1.5 *Stop watch*

B.1.6 *Sieve,* 45 *microns (mesh no* 200*)*

B.1.7 *Viscometer*

B.1.8 *Methyl paraben*

B.1.9 *Gum arabic or gum acacia*

B.1.10 *Methylene blue*

B.1.11 *Glycerin*

B.2 PREPARATION OF TEST FLUID

B.2.1 Add about 650 ml of boiling water and 0.4 g of methyl paraben into a 1-liter capacity beaker and stir until dissolved. Add 80 g of the gum arabic or gum acacia and stir until it is dissolved completely. Make up to about 870 ml with water and allow the solution to stand for at least 24 hours. Filter through a sieve of 45 microns (mesh no 200). To the filtrate, add 1.0 g of methylene blue, 160 ml of glycerin and 90 ml of water and mix. The final volume shall be approximately 1 litre.

B.2.2 Mix thoroughly and allow to stand for at least 24 hours again. Viscosity of the test fluid shall be 5 - 6 millipascal second (5 - 6 centipoise). Shake before use.

NOTE
Viscosity of the final solution may be adjusted by adding water, glycerin or gum arabic as required

B.3 SAMPLE PREPARATION

B.3.1 Randomly select five reusable sanitary pads from the retail packs selected according to the scale of sampling.

B.3.2 Condition the selected samples at the standard atmospheres for testing textiles as specified in **SLS 16.**

B.4 PROCEDURE

B.4.1 Lay the reusable sanitary pad on a flat, levelled, transparent surface, so that the underside of it can be observed. Drip 20 ml of the test fluid at the rate of 10 ml per minute on to the centre of the reusable sanitary pad at a height of 2 mm to 3 mm. Allow two minutes to absorb the fluid, or for the fluid to disappear from the surface. Then keep the weight piece with the appropriate template on the reusable sanitary pad for one minute. Remove the template and the weight piece.

B.4.2 Observe the underside and sides of the reusable sanitary pad for any leakage of test fluid. If there is any leakage of test fluid, the sample is considered unsatisfactory.

B.4.3 If the pad has not absorbed the test fluid within two minutes, the sample is considered as unsatisfactory.

APPENDIX C
MEASUREMENTS OF REUSABLE MENSTRUAL PADS
(Effective length and effective width)

C.1 APPARATUS

C.1.1 *A flexible non-stretchable calibrated measurement tape or a calibrated steel ruler graduated in millimeters shall be used.*

C.2 SAMPLE PREPARATION

C.2.1 Randomly select five reusable sanitary pads from the retail packs selected according to the scale of sampling.

C.2.2 Condition the selected samples at the standard atmospheres for testing textiles as specified in **SLS 16.**

C.3 PROCEDURE

C.3.1 Lay down the reusable sanitary pad on a clean, flat and even surface with any fasteners closed by placing it as flat and relaxed as possible. Care should be taken to avoid the movements of the pad during measuring. Identify the measuring points shown in the Figure **1** and measure in a straight line between two points without causing a pressure on the specimen.

C.3.2 Repeat **C.3.1** to all the other reusable sanitary pads as selected in **C.2.1**.

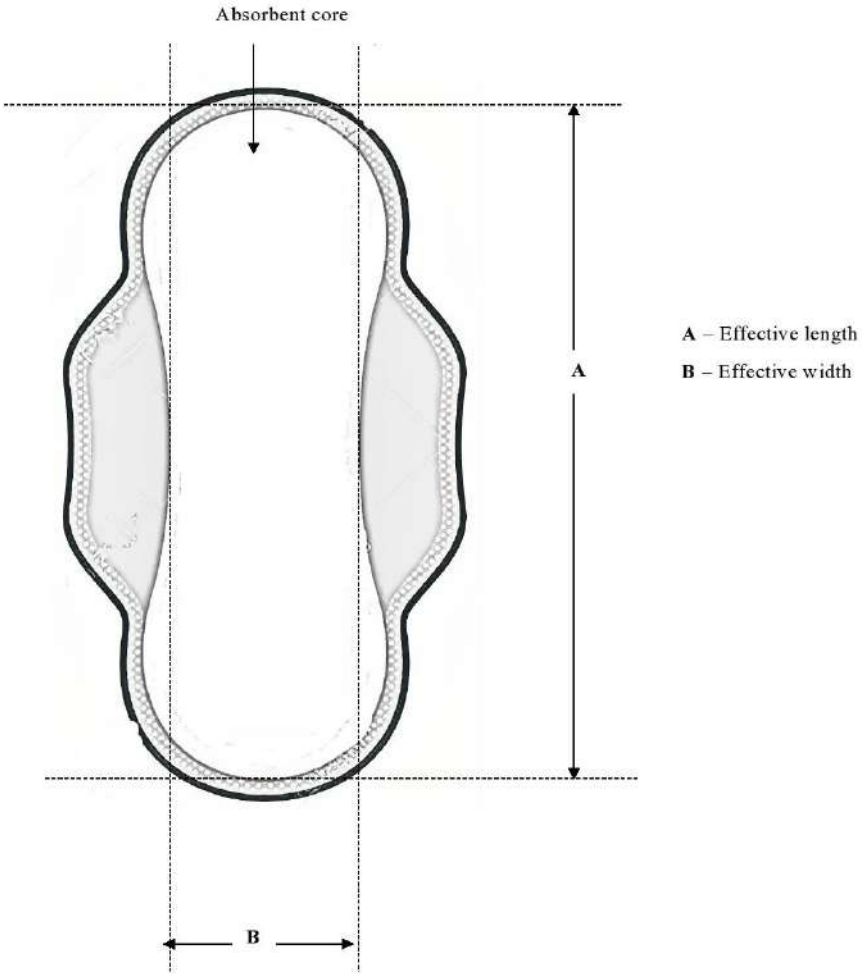

Figure 1 – Effective length and effective width measurements

APPENDIX D
DIAGRAM OF A REUSABLE SANITARY PADS
(Informative)

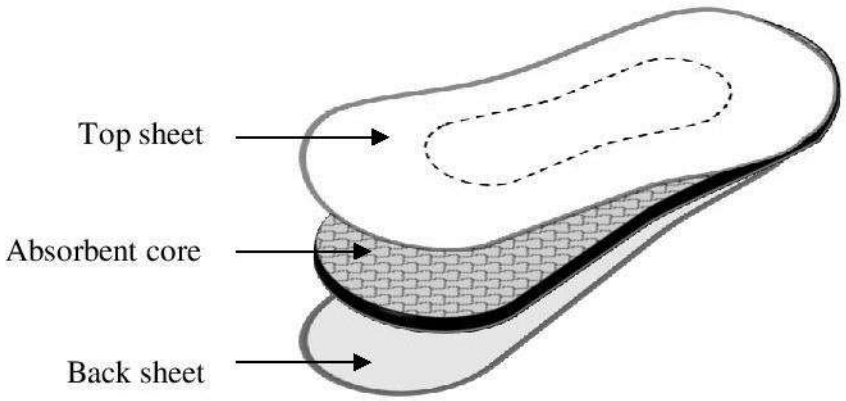

Figure 2 – Major components of a reusable sanitary pad

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