DRAFT SAINT LUCIA NATIONAL STANDARD

DNS 23

TOILET TISSUE — SPECIFICATION (CRS 51: 201X, MOD)

Edition 2.0

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THIS IS A MODIFICATION OF CARICOM REGIONAL STANDARD, CRS 51: 201X.

GENERAL STATEMENT

The Saint Lucia Bureau of Standards was established under the Standards Act (No. 14 of 1990) and started operations on 01 April 1991. A broad-based 15-member Standards Council directs the affairs of the Bureau.

The Standards Act gives the Bureau the responsibility to develop and promote standards and codes of practice for products and services for the protection of the health and safety of consumers and the environment as well as for industrial development in order to promote the enhancement of the economy of Saint Lucia. The Bureau develops standards through consultations with relevant interest groups. In accordance with the provisions of the Standards Act, public comment is invited on all draft standards before they are declared as Saint Lucia National Standards.

The Bureau also administers the Metrology Act No. 17 of 2000. This legislation gives the Bureau the responsibility to regulate all weights and measures and to manage and co-ordinate the metrication of Saint Lucia.

The Bureau operates a Product Certification Scheme applicable to all products for which national standards exist. If a product satisfies all the requirements for certification, a licence to carry the Saint Lucia Standard Mark is issued to the manufacturer of the product. The presence of the mark on a product indicates that the product conforms to all the requirements of a specific national standard and assures consistent quality (of the product) to the consumer.

The Bureau is a member body of the International Organisation for Standardisation (ISO), an affiliate member of the International Electrochemical Commission (IEC) and a member of the CARICOM Regional Organisation for Standards and Quality (CROSQ) and the Pan American Standards Commission (COPANT). The Bureau is the local agent for several foreign standards bodies such as the British Standards Institution (BSI) and the ASTM International (formerly known as the American Society for Testing and Materials). The Bureau serves as the enquiry point for the World Trade Organisation (WTO) on matters pertaining to the Technical Barriers to Trade (TBT) Agreement. The Bureau also serves as the National CODEX Alimentarius enquiry point with responsibility for coordinating national positions on CODEX matters.

In accordance with good practice for the adoption and application of standards, Saint Lucia National Standards are subject to review every five years. Suggestions for improvements are always welcomed at any time after publication of the standard.

TOILET TISSUE — SPECIFICATION (CRS 51: 201X, MOD)

AMENDMENTS ISSUED SINCE LAST PUBLICATION

Amendment No.	Date of Issue	Type of Amendment	Text(s) Affected

ATTACHMENT PAGE FOR SLBS AMENDMENT SHEET

DRAFT SAINT LUCIA NATIONAL STANDARD

DNS 23

TOILET TISSUE — SPECIFICATION (CRS 51: 201X, MOD)

TECHNICAL COMMITTEE FOR GENERAL CONSUMER PRODUCTS AND PRACTICES

The following persons comprised the Technical Committee which was responsible for the [overseeing the adoption]:

Chairperson	**Representing**
Peter Lorde	General Interest
Members	
Debra Lewis	Saint Lucia Industrial and Small Business Association
Lorraine Louise King	Hair and Beauty Association
Lyn Bristol	Textile Industry Co-Operative
Maclean James	Windward and Leeward Brewery Limited
Mathias D Polius	National Consumers Association
Melanie Hippolyte	Customs and Excise Department
Rody Alcindor	Customs and Excise Department
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Sonia Severin	Sir Arthur Lewis Community College
Sophia Jules Branford	Infinitee Designs Inc Textile Co-Op
Hubert Reynolds	Saint Lucia Bureau of Standards
Jilian King (Technical Secretary)	Saint Lucia Bureau of Standards
Kensha Neptune (Recording Secretary)	Saint Lucia Bureau of Standards

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Foreword

This national standard is a revision of SLNS 23: 1992 Specification for toilet tissue in roll form, single ply and two-ply. This revised version of the standard is a modification of CRS 51: 201x Toilet tissue – Specification. This 2nd Edition was adopted by the standards council on ...

Toilet issue is widely used and traded throughout the Caribbean market and globalization has resulted in increased importation of this product from extra-regional sources. SLNS 23: 1992 was revised to address relevant issues to ensure that a minimum acceptable quality product is offered for sale in the Caribbean market.

This standard is intended for use by a wide range of stakeholders including:

1) manufacturers – to facilitate production of an acceptable quality including minimum performance, dimensional and other parameters;

2) purchasers – to assist in the procurement process;

3) importers and distributors – to identify suppliers and source products that comply with minimum requirements;

4) regulatory agencies – as a basis for assessing imported and manufactured products;

5) conformity assessment (including certification) bodies – to provide a basis for conformity assessment activities; and

6) consumers – to allow persons to make an informed purchasing decision.

1 Scope

This standard specifies dimensional, mechanical, performance and labelling requirements for single-ply, two-ply and multi-ply toilet tissue.

This standard applies to single rolls, multi-packs and cartons of toilet tissue. It also applies to coreless tissue.

It does not apply to jumbo rolls of toilet tissue.

2 Normative references

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

International Organization for Standardization;

— *ISO 186:2002, Paper and board – Sampling to determine average quality;*

Technical Association of the Pulp and Paper Industry (TAPPI)
— *TAPPI T 432 cm-09, Water absorbency of bibulous papers;*

Saint Lucia Bureau of Standards
— *SLNS 1-2 Labelling of commodities Part 2: Labelling of Pre-packaged goods — Specification.*

3 Terms and definitions

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

3.1 basis weight
the weight of paper expressed in grams per square metre determined under standard test condition

3.2 dry tensile strength
unit of force required to break a sample of tissue paper of a specific width

3.3 lot
aggregate of paper of a single kind with specified characteristics produced under conditions that are presumed uniform and available for sampling at one time

NOTE A unit is a component of a lot which may be in the form of a bale or carton.

3.4 multi-ply

toilet tissue that contains more than two layers of paper per sheet

3.5 pulp
the fibrous cellulose material of natural vegetable origin, which has been prepared for the manufacture of paper

3.6 recycled paper

paper manufactured from a pulp prepared from reclaimed waste paper

3.7 sheet
the portion of toilet tissue between two consecutive perforations on a roll

NOTE A sheet may comprise of one or more plies.

3.8 soiled
tissue that has undergone a change in appearance due to the surface attachment of dirt or other foreign material

3.9 specimen
the sheet of toilet paper selected at random for testing purposes

4 General requirements

4.1 The tissue shall be manufactured from any of the following:

a) virgin chemical or mechanical pulp;

b) secondary fibres from virgin chemical or mechanical pulp;

c) a mixture of both (a) and (b); or

d) a mixture of (a) and (b) and recycled paper.

4.2 The tissue shall be unglazed, soft, flexible and of even formation.

4.3 The tissue shall not be soiled and shall be free from foreign material and breaks.

NOTE Foreign material may include wood, metal, plastic or specks of wood, metal or plastic.

4.4 The tissue shall not include excessive holes or wrinkles so as to affect the performance of the product.

4.5 The dye used in coloured tissue shall not be leached out by water.

4.6 The tissue shall not cause irritation or harm to human skin.

4.7 The tissue shall not emit a foul odour.

NOTE An initial inspection should be conducted and if necessary further assessment can be conducted by a randomly chosen panel of 5 persons.

4.8 The sheets shall not be torn or otherwise mutilated.

4.9 Glue spots shall be permissible on a maximum of the first three layers of the roll and the last three layers closest to the core and there shall be easy release of the tissue at initial opening.

4.10 The start of the roll shall be easily discernible and detachable.

4.11 The individually-packaged roll shall be wrapped in a protective covering and closed at both ends to prevent contamination during handling and storage.

5 Specific requirements

5.1 Core

5.1.1 The paper shall be evenly wound on a stiff cylindrical core made of paste board or other suitable material.

5.1.2 The core shall be sufficiently rigid so as not to collapse under normal conditions of transportation, storage and usage.

5.1.3 The core shall have an internal diameter of not less than 32 mm.

5.2 Dry tensile strength

The average dry tensile strength in the machine direction shall be not less than 0.30 kg per 25 mm for the single ply and 0.40 kg per 25 mm for the two-ply and multi-ply as determined by the method outlined in Annex A.

5.3 Absorption time

The average absorption time shall be not more than 25 s when tested according to the method outlined in TAPPI T 432 cm-09.

5.4 Basis weight

The minimum basis weight of the roll of toilet tissue shall be 19 g per m^2 for single ply and 14.5 g per m^2 for two-ply and multi-ply tissue as determined by the method outlined in Annex B.

5.5 Perforations

5.5.1 The perforations shall be uniform.

5.5.2 The perforations shall extend along the entire width of the roll.

5.5.3 The perforations shall be perpendicular to the edges of the sheets and shall facilitate the easy separation of sheets.

6 Multi-ply rolls

Multi-ply rolls shall be in compliance with all of the requirements of this standard.

7 Coreless tissue

Coreless tissue shall be in compliance with all of the requirements of this standard except 5.1.

8 Labelling

8.1 Individually packaged rolls

8.1.1 The wording on labels for use in Saint Lucia shall be in English language.

8.1.2 Labels on individually wrapped toilet tissue rolls shall conform to *SLNS 1-2 Labelling of commodities — Part 2: Labelling of Pre-packaged goods — Specification* and contain the following minimum information:

a) name and address of the manufacturer or supplier;

b) name of the item:

c) trade name if any;

d) number of plies;

e) number of sheets per roll;

f) the total area of the roll of tissue paper in square metres;

g) colour of the tissue if not white;

h) country of origin.

NOTE 1 Acceptable wording for expressing this information includes:

1) "product of (name of territory)";

2) "made in (name of territory)", or

3) "manufactured in (name of territory)".

NOTE 2 The word "recycled" may be used to give additional information to the consumer.

8.2 Multi-packs

Multi-packs shall be labelled according to 8.1 and the label shall also include the number of rolls in the pack.

8.3 Cartons

The carton, if opaque, shall be labelled with the following minimum information:

a) name and address of the manufacturer or supplier;

b) name of item; and

c) number of rolls in the carton.

9 Sampling

9.1 Toilet tissue shall be sampled in accordance with Table 3 of *ISO 186: 2002*.

9.2 Care shall be taken to select samples or portions of the rolls that are not damaged.

NOTE It is good practice to discard the first few layers of the roll to be sure of obtaining a representative sample.

9.3 Test samples shall be kept flat and free from wrinkles and folds. They shall be protected from exposure to heat, direct sunlight, liquids, varying humidity conditions as well as any other harmful influences.

9.4 Test samples shall be handled as little as possible and contact with sweated hands shall be strictly avoided.

NOTE Contact with hands may affect the characteristics of the tissue.

10 Testing

10.1 The test methods outlined in the Annexes shall be used when a lot is tested to ascertain if it conforms to the requirements of this standard.

10.2 Before testing, specimens shall be conditioned in the standard atmosphere by the procedure given in A.1 of Annex A.

10.3 The dry tensile strength test shall not be carried out with portions bearing watermarks, creases or any visible imperfections.

11 Compliance

11.1 A lot or consignment shall be deemed to conform to the requirements of this standard if the test samples satisfy all of the requirements:

11.2 If a sample fails to meet two (2) or more of the requirements of this standard, the lot or consignment from which the samples were taken shall be deemed not to conform.

11.3 If a sample fails to meet one (1) of the requirements, then a second sample of the same size shall be taken from the same lot or consignment and tested.

11.4 If the re-tested sample fails at least one (1) requirement then the lot or consignment shall be deemed not to conform.

Annex A
(normative)

Determination of Dry Tensile Strength

A.1 Conditioning

A.1.1 General

Since the exact relationship between moisture content of paper and the results of various test are unknown, the specimens under test shall be conditioned to standard atmosphere conditions at (65 ± 2) % relative humidity and a temperature of (27 ± 2) ºC (81 ± 3 ºF). The temperature in any series of experiments shall not vary by more than ±1 ºC (±1.8 ºF). The conditioning shall be done in a suitable room or chamber, unless otherwise specified in the test method.

A.1.2 Procedure

A.1.2.1 Suspend each specimen, in a suitable room or chamber maintained at standard atmospheric conditions until equilibrium is reached. The conditioning atmosphere shall have free access to all the surfaces of the specimen. The air shall be so circulated that the humidity and temperature of the room or chamber are maintained uniform. The specimen shall be deemed to have reached equilibrium when the results of two consecutive weightings at an interval of not less than one hour between weightings do not differ by more than 0.25 % of the total weight. Most common varieties of paper require approximately 4 hours to reach equilibrium.

A.1.2.2 After the specimens for the test purposes are conditioned, they shall be handled as little as possible and not breathed on.

A.2 Machine direction

The machine direction shall be the dimension of the paper corresponding to the direction of flow on the paper machine.

A.3 Procedure

A.3.1 Calibration of apparatus

Set up the apparatus as recommended by the manufacturer, using a suitable method for calibration. Check the correct operation of the indicating mechanism which should be free from excessive back-lash, lag or friction. If errors of more than 1 % are found, use a correction curve.

A.4 Apparatus

A.4.1 Tensile tester

A.4.2 Cutting device – Sharp knife and template capable of cutting specimens accurately.

A.4.3 Method

A.4.3.1 Test pieces

From the conditioned specimen cut a test piece of width (25 ± 1.0) mm from the full length between perforations. Sufficient pieces should be cut to make at least ten tests.

A.4.3.2 Test method

Carry out the operation involved in the measurement of the tensile strength of each test piece in the manner recommended by the manufacturer of the apparatus in use.
The test length (the distance between jaws of clamp) shall initially be (100 ± 2) mm.
By an initial trial experiment, select a rate of application of tensile force which causes a fracture in a mean time of (20 ± 5) s.

Clamp the test piece within the jaws of the apparatus so that no slipping occurs during the test. It is essential that the test piece be clamped in such a manner that its edges are parallel to the direction of application of the tensile force and the test length at the start of the test is within the tolerance ± 2 mm. Ignore tests which result in failure within 10 mm of the line of contact, or the inner edge of the contact area of the clamps.

Read the breaking force to a consistent number of decimal places and record to two or three significant figures, and note the time to break to the nearest second.

A.4.4 Expression of results

The results shall be expressed as the average value of the test carried out in kilograms per 25 mm strip.

Annex B
(normative)

Determination of Basis Weight

B.1 Apparatus

B.1.1 Cutting device as outlined in A.4.2

B.1.2 Balance that is sensitive enough to detect ± 0.2 % change in load and accurate to ± 0.5 % of correct weight over the range used.

B.2 Conditioning

The test specimen shall be conditioned and the test carried in the conditioned atmosphere as in Annex A.

B.3 Procedure

B.3.1 Measure the area of each specimen. Measurements shall be read to within + 1.0 mm. If necessary, trim the sides of the specimen using the cutting device. The trimmed specimen shall have a surface area as near to that of the untrimmed piece as possible. The area of each specimen should preferably not be less than 150 cm^2.

B.3.2 Weight a batch comprising two specimens to the nearest milligram, and calculate the basis weight as follows:

$$\text{Basis Weight} = \frac{W\ x\ 10{,}000 g/m^2}{\text{A}}$$

where

W = weight of the two specimens in grams,
A = area of the two specimens in cm^2.

B.3.3 Report the mean of three determinations as the basis weight of the tissue.

Annex C
(informative)

Technical deviations made to CRS 51: 201X

In this standard certain modifications were made due to the good manufacturing practices for toilet paper. This additional information has been added directly to clauses to which they refer. Below is a complete list of the modification together with their justifications: -

Clause	Modification	Justification
8.1.1	Delete 'the Caribbean Community shall be in the official language or languages of the country in which the goods are sold'. Add 'use in Saint Lucia shall be in English language'.	The main language spoken in Saint Lucia is English.
8.1.2	Add 'Labelling shall conform to other labelling of cosmetics standards and SLNS 1 Specification for Labelling of commodities Part 2: Pre-packaged goods.'	Labelling standards are mandatory and it needs to be mentioned in the standard.

END OF DOCUMENT