

PHILIPPINE NATIONAL STANDARD

PNS/BAFS 181:2016
ICS

Abaca fiber – Grading and Classification – Decorticated



BUREAU OF AGRICULTURE AND FISHERIES STANDARDS

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Foreword

This Philippine National Standard for Abaca Fiber- Grading and Classification - Decorticated, PNS/BAFS 181:2016, intends to provide specification on the requirements and grading quality of decorticated abaca fiber for local consumption and international trade.

A Technical Working Group (TWG) for the crafting of the said standard was created through Special Order No. 662 Series of 2015 spearheaded by the Department of Agriculture through the Philippine Fiber Industry Development Authority (PhilFida), Bureau of Agriculture and Fisheries Standards (BAFS) and representation from the private sectors.

The Bureau in collaboration with the members of the TWG conducted a series of technical reviews and public consultations in Region IV-A- Antipolo, Rizal, Region V – Naga, Camarines Sur and Region VII- Cebu for the crafting of the standard. Comments from the stakeholders on the draft were carefully assessed and deliberated prior to its finalization and approval.

1 Scope

This Standard specifies requirements and establishes a system of grading and classifying of commercial grades of decorticated abaca fiber.

2 References

The titles of the standards publications referred to in this standard are listed on the inside back cover.

3 Definitions

3.1

abaca

plant scientifically known as *Musa textilis nee*

3.2

abaca fiber

fiber extracted from the abaca plant scientifically known as *Musa textilis nee*

3.3

color

influenced by the layer of leafsheaths or the variety from which the fiber is extracted, extent of decortication, oxidation, care taken in drying the fiber, and attack of micro-organisms on the fiber as a result of poor postharvest management.

3.4

decorticated abaca fiber

fiber derived from plant scientifically known as *Musa textilis nee* extracted through decortications

3.5

decorticating

mechanized process for fiber extraction where leafsheaths are scraped by means of revolving wheels with knives.

3.6

good decorticated abaca fiber

abaca fibers with fiber strand size that does not exceed one-half millimeter in diameter

3.7

grade

shall refer to the fiber quality as designated by an alphanumeric code generally described as normal and residual fiber

3.7.1

normal grade

fiber with tensile strength ranging from 19.5 to 32.6 kgf/gm, length not less than 60 cm, and not discolored, soiled or stained.

3.7.2

residual grade

fiber with < 19.5 kgf/gm tensile strength, less than 60 cm in length, soiled, stained, discolored, or excessively stripy.

3.8

Grading/Baling Establishments or GBE

firm engaged in buying, grading/baling and selling commercial fibers for domestic and/or foreign consumption fully equipped with the required equipment, facilities, and manpower.

3.9

length

attribute of abaca fiber that varies according to the growth and development of the plant.

3.10

tensile strength

basic quality for all the normal grades, the fiber which must possess the average strength considered normal for the grade in which it is included and measurable by a device called tensile strength tester

3.11

texture

attribute of abaca fiber influenced by the size of the fiber strand and categorized as soft, medium soft, and medium.

4 Minimum Requirements

In all normal grades subject to the special provisions for each grade under Section 5 and the tolerances allowed, decorticated abaca fiber shall meet the following requirements:

- 4.1** The tensile strength of the decorticated abaca fiber ranges from 19.5 to 32.6 kilogram force per gram meter (kgf/g.m).
- 4.2** The minimum length shall not be less than 60 centimeters.
- 4.3** The abaca fiber must be of uniform color according to the grade.
- 4.4** The abaca fiber must be of the same kind of decortivating.
- 4.5** The abaca fiber must not be soiled, stained or discolored and must be free from foreign matters.

5 Grading

Decorticated abaca fiber shall be classified into various grades according to decortivating process, color and length.

Table 1- Normal grades of decorticated abaca fiber

Grade		Description				
Name	Alpha-numeric code	Decorticating process	Color	Extracted from	Length cm	Fiber strand size mm
Abaca Deco One	AD-1	Good	White to ivory white	Inner and middle leaf sheaths	not less than 60 cm	Not greater than ½ mm
Abaca Deco Two	AD-2	Good	Light brown to white	Second, middle and inner sheaths	not less than 60 cm	Not greater than ½ mm
Abaca Deco Three	AD-3	Good	Streaks of: purple green brown	Outer sheath to the next to outer sheath	not less than 60 cm	Not greater than ½ mm
Abaca Deco Four	AD-4	Irregular	Regardless of color with some admixture of fiber of good cleaning / stripping Dark colored streaks but of good cleaning/ stripping	—	not less than 60 cm	Not greater than ½ mm

Table 2 – Residual Grades of decorticated abaca fiber

Grade		Description
Name	Alphanumeric code	
Residual	AD-R	Soiled, stained, weak or discolored regardless of decortivating process Strings, twisted, knotted strands Wide strips Short, tangled, low colored, improperly decorticated Improperly decorticated Various lengths, partly wide strips of dried abaca sheaths, fragments falling under the decortivating machine

6 Tolerances

In all normal grades, a 5% tolerance level would be provided as follows:

- 6.1 Negative (-) 5% of the 19 kg f/gm tensile strength
- 6.2 Negative (-) 5% of the 60 cm length
- 6.3 Positive (+) 5% of the fiber strand size for good and irregular decortivating process.

7 Sampling

Sampling method to be used for ascertaining conformance to the requirements of this specification shall be in accordance with the established procedures used by the competent authority.

8 Baling

Decorticated abaca fiber may be baled in this manner:

- 8.1 Every bale of fiber shall contain only dry fibers of the same kind of decortivating, grade and province of origin. The fibers must, more or less, be of the prescribed length and free from plastic and other foreign matters.
- 8.2 Decorticated abaca fiber shall be baled and bound securely by a suitable and strong material of the same kind of fiber.
- 8.3 In case of fibers tied into hanks, hanks shall be five (5) to ten (10) centimeters in diameter at the butt or head. The strand used in tying the hanks shall be of the same kind and grade as the fiber forming the hank and each strand shall not be knotted.

- 8.4** Hanks of abaca shall not be divided in two (2) or three (3) parts but shall be folded once or twice to keep the fibers together before they are laid straight in the press box, the heads or butts of the hanks in one row alternating the tips of the hanks of the next row until the bale is completed. The hanks shall be packed such that the tips of one layer doubles back over the butt of the layer of hanks beneath, and so on.

Grading/Baling Establishment (GBE) may also press bales in such a manner that three (3) or four (4) hanks of fibers are laid straight side-by-side in the press box at the middle of the lower press block 'cojin', the ends of which are laid apart from the inner end-side of the press box. The remaining portion of the hanks shall be coiled along the opposite end-side and along the sides of the press block encircling the butt ends until the entire length of the hanks is so coiled. The subsequent layer of hanks shall similarly be arranged with the butts or head on the opposite side of the layer of hanks below, until all the hanks composing the bale are so placed in the press box.

- 8.5** Unless otherwise provided, each bale shall have an approximate dimension of 100 centimeters by 55 centimeters by 60 centimeters (100cm x 55cm x 60cm) with a net weight of 125 kilograms after pressing.
- 8.6** Unless otherwise specified, each bale of fiber shall be securely bound by a suitable and strong binding material of the same kind of fiber which shall not be less than seven (7) ties crosswise nor less than three (3) ties lengthwise. To hold the bales in their regular size, the 2nd, 4th and 6th crosswise ties may be doubled. The extreme ties shall not be closer than ten (10) centimeters from the edge of the bale. The fiber binding materials on each bale shall not weigh more than one (1) kilogram.

9 Labelling

The tagging and marking of bales shall be as follows:

- 9.1** Each bale shall bear a tag known as the long cloth tag for local and long cloth and square tag for export made of unstarved raw cotton of good quality material not less than 58 centimeters long and ten (10) centimeters wide, one end of which shall be securely tied to the fiber inside the bale and the other end shall project out from one end of the bale 15-20 centimeters long.

In case of bales of short fibers where tying of the long cloth tag is not practical, one ends of the long cloth tag shall, instead, be knotted and securely tied to the ties of either bundle composing the bale and must be placed between bundles.

- 9.2** The following data in their order shall be stamped, one below the other, on the long cloth tag placed inside the bale:

- 9.2.1** The full or abbreviated name of the GBE;

- 9.2.2** The name of the municipality or city where the establishment is located;
- 9.2.3** The establishment and lot number separated by a dash;
- 9.2.4** The full or abbreviated name of the province of origin;
- 9.2.5** The date of pressing; and
- 9.2.6** The initial of the station, the registered mark of the establishment, and the letter designation of the grade, the three (3) forming one line separated from one another by bars.
- 9.3** The classifier's license number shall be indicated on the upper portion of the long cloth tag tied inside the bale.
- 9.4** The other end of the long cloth tag projecting out of the bale shall be divided into two (2) sections. The one adjacent to the bale shall bear the same data stamped in the upper end of the tag in the same order, except the classifiers license number, and the rest of the long tag shall be reserved for the official stamps of the Authority.
- 9.5** All markings on the cloth tag, whether letters or numerals, shall be stamped with clear indelible stamping ink and shall not be less than one (1) centimeter in height except the name of the municipality / city where the establishment is located and the date of pressing which shall not be less than eight (8) millimeters.
- 9.6** For baling of abaca fiber intended for export, another cloth tag of the same or better material than the long cloth tag provided herein may be placed, on one side of the bale underneath the binding or ties. This tag should be in the form of a square tag measuring 35 by 35 centimeters. Upon it, the following data in their order shall be stamped or stenciled, one below the other, clearly in letters not less than five (5) centimeters high except the words 'PRODUCT OF THE PHILIPPINES' which shall have a measurement of not less than one-and-a-half (1½) centimeters in height:
- 9.6.1** The words ' PRODUCT OF THE PHILIPINES';
- 9.6.2** The initial of the station where the establishment is located;
- 9.6.3** The registered mark of the establishment;
- 9.6.4** The letter designation of the grade of fiber contained in the bale.
- In the absence of the square cloth tag the data required to be placed thereon shall invariably appear clearly on the exposed surface of the wrapping materials on either side of the bale.
- 9.7** Additional marks required by the buyers may only appear on the square tag or long cloth tag, as the case maybe, after the bale has been inspected and approved.
- 9.8** Data/marks required herein to be placed upon the square and long cloth tags shall appear in black paint/ink or its equivalent.

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Except those specified in this section unless requested and granted by the authority, no other data marks whatsoever shall appear on the tags of any bale of fiber before inspection.

References:

Fiber Industry Development Authority. FIDA Revised Administrative Order NO. 1 s.1999. Revised Rules and Regulations to Govern Licensing, Baling, Tagging, Marking, Inspection, Certification and Shipment of Philippine Commercial Fibers.

Bureau of Fiber Inspection Service. BFI Administrative Order No. 2-2. 1961. Determination and description of the official standards for the commercial grades of decorticated abaca fiber (*Musa textilis*).

**Department of Agriculture
Bureau of Agriculture and Fisheries Standards
Philippine National Standard for Abaca Fiber- Grading and Classification-
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