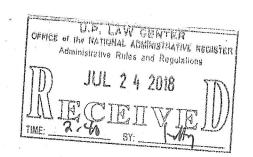


Republic of the Philippines DEPARTMENT OF AGRICULTURE PHILIPPINE FIBER INDUSTRY DEVELOPMENT AUTHORITY

Elliptical Road, Diliman, Quezon City 1100, Philippines

June 11, 2018

ADMINISTRATIVE ORDER No. <u>07</u> SERIES OF 2018



SUBJECT: Determination and Description of the Philippine National Standards (PNS) for the Commercial Grades of Hand – Stripped and Spindle/Machine - Stripped Abaca fiber (Musa *textilis Nee*).

Pursuant to the provisions of Republic Act (RA) 8435 of 1997, otherwise known as Agriculture and Fisheries Modernization Act (AFMA), the development of the Philippine National Standards (PNS) on the Grading and Classification of Hand-Stripped and Spindle/Machine – Stripped Abaca Fiber numbered PNS/BAFS 180:2016 is hereby promulgated for the information, guidance and compliance of all concerned.

1 Scope

This Standard specifies requirements and establishes a system of grading and classifying of commercial grades hand-stripped and spindle/machine-stripped abaca fiber.

2 References

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

3 Definitions

- **3.1 abaca** a plant scientifically known as *Musa textilis nee*.
- **3.2 abaca fiber** fiber extracted from the abaca plant.
 - **3.2.1 hand-stripped** fiber extracted through the use of manually operated stripping apparatus.
 - **3.2.2 spindle/machine-stripped -** fiber extracted through the use of semi-mechanized apparatus aided by an engine.

- **3.3 color** influenced by the layer of leafsheaths or the variety from which the fiber is extracted, extent of stripping, oxidation, care taken in drying the fiber, and attack of micro- organisms on the fiber as a result of poor postharvest management.
- **3.4 grade** shall refer to the fiber quality as designated by an alphanumeric code generally described as normal, residual and wide strips fiber.
 - **3.4.1 normal grade** fibers with tensile strength ranging from 35 to 55kgf /gm, length not less than 60 cm, and not discolored, soiled or stained.
 - **3.4.2 residual grade -** fiber with < 35 kgf/gm tensile strength, less than 60 cm in length, soiled, stained, discolored, or excessively stripy.
 - **3.4.3 wide strips -** abaca fiber of very irregular cleaning, too stripy and woody to fit in any of the normal and residual grades
- 3.5 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.
- **3.6 length** attribute of abaca fiber that varies according to the growth and development of the plant.
- 3.7 stripping process of extracting fiber from the outer layer of the leafsheath that contains the primary fibers (aka tuxy) using a knife either in a hand stripping or spindle/machine stripping apparatus. Knives may or may not have serrations. Serrations shall be of uniform width and depth. The amount of tension applied by the knife on the block is also uniform.
 - **3.7.1** excellent stripped fiber- abaca fiber when very little or no pulp at all is attached to the stripped abaca. The texture of fiber is generally soft, and the size ranges from 0.2 mm to 0.5 mm.
 - **3.7.2 fair stripped fiber-** stripped fibers with the diameter ranging from 1.00 to 1.50mm.
 - **3.7.3 good stripped fiber-** abaca fiber when filaments are sticking together but the whole size should be in the range of 0.51 mm to 0.99 mm.
- 3.8 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
- **3.9 texture** attribute of abaca fiber influenced by the size of the fiber strand and categorized as soft, medium soft, and medium.
- **3.10 tuxy** process of separating the outer layer from the inner layer of the leafsheath. The outer layer contains the primary fibers while the inner layer contains the secondary fibers and pulpy material.

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Supervising Administrative Officer

4 Minimum Requirements

In all normal grades subject to the special provisions for each grade and the tolerances allowed, hand-stripped and spindle/machine-stripped abaca fiber shall meet the following requirements:

- **4.1** The tensile strength of abaca fiber ranges from 35 to 55 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 stripping.
- **4.5** The stripped abaca fiber must not be soiled, stained or discolored and must be free from foreign matters.

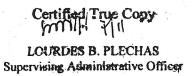
5 Grading

Hand-stripped and spindle/machine-stripped abaca fiber shall be classified into various grades according to where it is produced from, fiber strand size, color, stripping process and texture.

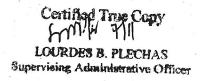
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Table 1- Normal grades of hand and spindle/machine stripped abaca fiber

Grade		Description				
		Extracted from	Fiber strand	Color	Stripping	Texture
Name	Alpha- numeric code		size mm		*	
Mid current	EF	Inner leafsheath	0.20 - 0.50	Light ivory to a hue of very light	Excellent	Soft
	9	2 2		brown to very light ochre	- B	
	a a		8 4 ,	Frequently intermixed with ivory white	, -	
	S-EF	Inner leafsheath	0.20 - 0.50	Light ivory or pale brown to a hue of ivory-white	Excellent	Soft
		ı		Frequently intermixed with ivory white	1	
Streaky Two	S2	Next to the outer leafsheath	0.20 - 0.50	Ivory white, slightly tinged with very light brown to red or purple streak	Excellent	Soft
	S-S2	Next to the outer leafsheath	0.20 - 0.50	Light ivory to very pale brown with very red or very light purple streaks	Excellent	Soft
Streaky Three	S3	Outer leafsheath exposed to the sun	0.20 - 0.50	Predominant color - light to dark red or purple or a shade of dull to dark brown	Excellent	Soft
	S-S3	Outer leafsheath exposed to the sun	0.20 - 0.50	Light brown to dark red or light purple with occasional streak of very light green	Excellent	Soft



Gra	ide	*-	N _	Description	9	
Name	Alpha- numeric code	Extracted from	Fiber strand size mm	Color	Stripping	Texture
Current	I	Inner and middle leafsheath	0.51- 0.99	Very light brown to light brown	Good	Medium soft
	S-I	Inner and middle leafsheath	0.51- 0.99	Light to very light brown	Good	Medium soft
Soft seconds	G	Next to the outer leafsheath or similar	0.51 - 0.99	Dingy white, light green and dull brown	Good	Medium soft
		leafsheath source where S2 is obtained				Ÿ
	S-G	Same leafsheath that produces grade S-S2	0.51- 0.99	Light brown with occasional streaks of very light green	Good	Medium soft
Soft Brown	Н	Outer leafsheath	0.51- 0.99	Dark brown	Good	
B. G.W.I.	S-H	Same leafsheath that produces S-S3	0.51- 0.99	Brown to dark brown Intermixed with substantial portion of fiber	Good	To the second
			, e.	with lighter colors In some, color approaches black		
Seconds	JK	Inner, middle and next to outer	1.00 - 1.50	Dull brown to dingy light brown or dingly light yellow, frequently	Fair	
*		leafsheath		streaked with light green		. ,
	S-JK	Inner, middle and next	1.00 -	Light dull brown to dingy light brown or dingy	Fair	
		to the outer leafsheath		light yellow with occasional streaks light green		,



Grade		Description					
Name	Alpha-	Extracted	Fiber	Color	Stripping	Texture	
r r	numeric	from	strand				
	code		size		9		
* * *	1 1		mm				
Medium	M1	Outer	1.00 -	Dark brown to	Fair		
brown	2	leafsheath	1.50	almost black			
	S-M1	Same	1.00 -	Brown or nearly	Fair		
		leafsheath	1.50	black			
6.7		from	2 2 2				
		which S-H	9 " -	9 D D			
		is obtained		Cil			

NOTE: For the spindle/machine stripped abaca fiber, it is designated with an 'S' separated by a dash before the alphanumeric code.

Table 2- Residual grades of hand and spindle/machine stripped abaca fiber

G	rade .	Description		
Name	Alphanumeric code	Consists of	Otherwise graded as	
Residual fine	Y1	weak, stained, discolored, and/or soiled fiber	EF, S2, S3, I and G	
	S-Y1	weak, stained, discolored, and/or soiled fiber	S-EF, S-S2, S-S3, S-J and S-G	
Residual fair	Y2	weak, stained, discolored, and/or soiled fiber	H" JK, M1	
	S-Y2	weak, stained, discolored, and/or soiled fiber	S-H, S-JK and S-M1	
String	0	Made up of strings and twisted or knotted strands of	Ordinary handmade cords used for tying hanks, bales and binding bundles of loose ungraded fibers	
	S-0	hand-stripped abaca fibers		
Tow	T S-T	Less than 60cm in length	Consists of abaca tip cuttings, short, tangled and broken, resulting from sorting during the process of classification	

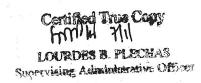


Table 3 - Wide Strips Grades of hand and spindle/machine stripped abaca fiber

Gra	nde .	Description		
Name	Alphanumeric code	Consists of	Otherwise graded as	
Wide strip	WS	All fibers that are excessively strippy	None	
	S-WS	and woody which does not fit in any of		
	3-7/3	the normal and residual grades of hand stripped and		
		spindle / machine stripped abaca fibers.	**************************************	

6 Tolerances

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

- 6.1 Negative (-) 5% of the 35 kgf/gm tensile strength
- 6.2 Negative (-) 5% of 60 cm length
- **6.3** Positive (+) 5% fiber strand size for excellent, good and fair stripping.

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

Hand-stripped and spindle-stripped abaca fiber may be baled in this manner:

- 8.1 Every bale of fiber shall contain only dry fibers of the same kind of stripping, 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 Hand-stripped and spindle/machine-stripped 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.

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8.4 Hanks of abaca shall not be divided in two (2) or three (3) parts but shall be felded 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.

- 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 material of the same kind as the baled 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 unstarched 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.

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In case of bales of short fibers where tying of the long cloth tag is not practical, one end 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 (1 1/2) centimeters in height:

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- **9.6.1** The words 'PRODUCT OF THE PHILIPPINES';
- **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.

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.

- 10 Repealing Clause Fiber Industry Development Authority Administrative Order No. 1, S. 2001 and all orders, rules and regulations inconsistent with the provision of this Administrative Order are hereby repealed.
- 11 Effectivity This Philippine Fiber Industry Development Authority Administrative Order No. <u>07</u>, S. 2018 shall take effect fifteen (15) days after its publication in the official Gazette or in a daily newspaper of general circulation.

Recommending Approval:

KENNEDY T. COSTALES

Executive/Director III

APPROVED:

EMMANUEL F. PIÑOL

Secretary

Department of Agriculture

DEPARTMENT OF AGRICULTURE

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Received : 06/26/2018 08:33 AM

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Supervising Administrative Officer