

# PHILIPPINE NATIONAL STANDARD

PNS/BAFS 21:2018  
ICS 59.060.10

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## Coconut fiber (coir) – Grading and classification



### BUREAU OF AGRICULTURE AND FISHERIES STANDARDS

BP1 Compound Visayas Avenue, Diliman, Quezon City 1101 Philippines  
Phone (632) 920-6131; (632) 455-2856; (632) 467-9039; Telefax (632) 455-2858  
E-mail: [bafpsda@yahoo.com.ph](mailto:bafpsda@yahoo.com.ph)  
Website: [www.bafps.da.gov.ph](http://www.bafps.da.gov.ph)

**Foreword**

The revision of the Philippine National Standard (PNS) on the Grading and classification of Coconut coir (PNS/BAFPS 21:2008) was undertaken in response to the Philippine Coconut Authority's (PCA) goal to help the thriving coir industry. The PNS/BAFPS 21:2008 was modified to primarily include the specifications based on current industry trends and acceptable practices which would enable Philippine coir and its by-products attain better quality and become globally competitive.

The Bureau of Agriculture and Fisheries Standards (BAFS), in collaboration with the PCA led the revision of the PNS/BAFPS 21:2008. A Technical Working Group (TWG) was created through Special Order No. 638 and 851 Series of 2017 wherein representatives from the Philippine Fiber Industry Development Authority (PhilFIDA), PCA - Zamboanga Research Center (PCA-ZRC), Department of Trade and Industry (DTI) and private stakeholders served as experts who undertook the revision of the PNS for the grading and classification of coir.

Majority of the revisions made were on the sections for the minimum requirements, grading, sampling, tolerances, baling and labelling.

This document was drafted in accordance with the editorial rules of the BPS Directives, Part 3.

This Standard cancels and repeals PNS/BAFPS 21:2008.

## **1 Scope**

This standard specifies requirements and establishes a system of grading and classifying coir produced from the husks of coconut (*Cocos nucifera* L.), to be used for the production of coconut bioengineering materials (i.e. coconets and cocologs), intended for domestic use and international trade.

## **2 Normative references**

The following documents, in whole or in part, are normatively referenced in this standard and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document including any amendments applies.

Fiber Industry Development Authority. (1999). Chapter 3: Baling, tagging, marking and inspection of fibers (Revised Administrative Order No.1).

PNS/BAFPS 21:2008, *Coconut coir – Grading and classification*

## **3 Terms and definitions**

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

### **3.1**

#### **bale**

compressed bundle of coir using suitable binding material

### **3.2**

#### **baling**

manner of packing coir by compressing into bundles for handling and transport

### **3.3**

#### **coir**

natural fiber extracted from the coconut husk

### **3.4**

#### **decorticated coir**

fiber derived from the process of decortivating husks of mature coconut fruit

### **3.5**

#### **decortivating**

mechanical process of extracting coir from coconut husks through beating using a decorticator

### **3.6**

#### **defibered coir**

fiber derived from the process of defibering coconut husks

**3.7****defibering**

mechanical process of extracting coir from coconut husks through combing using defibering machine

**3.8****coco dust/coco peat**

fine spongy by-product derived in the process of decorticating or defibering the husk

**3.9****foreign matter**

any material other than coconut husk, includes but not limited to stones, plastics and metals

**3.10****Grading and Baling Establishment (GBE)-processor**

firm engaged in buying, grading/baling and selling commercial coir for domestic and/or foreign consumption fully equipped with the required equipment, facilities and manpower and at the same time processing/manufacturing coir or semi-finished coir-based products into finished products including converters of semi-finished or finished coir-based products into another form

**3.11****grade**

designation of coir quality according to the established government standard expressed in alphanumeric codes

**3.12****impurity**

anything other than coir, including pulp, husk pieces and coco dust/coco peat

**4 Minimum requirements**

In all grades subject to the special provisions for each grade and the tolerances allowed, coir shall meet the following requirements:

**4.1** The coir must be extracted from the husk of a mature coconut.

**4.2** The coir must be with at most 18% moisture content (MC).

**4.3** The fiber length must be within the range of 10 cm to 35 cm.

**5 Grading**

Coir shall be classified into five (5) grades according to its length, dust and total impurities.

**Table 1 – Grading of coir**

<b>Grades</b>	<b>Name</b>	<b>Length cm</b>	<b>Dust % (weight)</b>	<b>Total Impurities % (weight)</b>
<b>CH-1</b>	Defibered coir	>12	< 1	< 2
<b>CH-2</b>	Defibered coir	>12	< 2	< 4
<b>CH-3</b>	Decorticated coir	70% > 12 30% < 12	< 3	< 6
<b>CH-4</b>	Decorticated coir	60% > 12 40% < 12	< 3	< 6
<b>CH-5</b>	Decorticated coir waste	40% > 12 60% < 12	> 3	> 6

## 6 Tolerances

In all grades, 5% tolerance level for moisture content, length, dust and total impurities shall be allowed.

## 7 Sampling

Sampling method to be used for ascertaining conformance to the requirements of the PNS by the competent government authority.

## 8 Baling

Coir should be baled with a net weight within the range of 50 kg to 200 kg net.

## 9 Labelling

**9.1** Each bale shall bear a cloth tag not less than 58 cm long and 10 cm wide, one (1) end of which shall be securely tied to the coir inside the bale and the other end shall project out of the bale about 15 cm long. The following data in their order shall be stamped one (1) below the other on the cloth tag placed inside the bale:

- a. The words, "PRODUCT OF THE PHILIPPINES";
- b. Full or abbreviated name of Grading and Baling Establishment (GBE)-processing plant;
- c. Full or abbreviated name of the province of origin;
- d. Date of pressing;
- e. Initial of the station, establishment mark and the alphanumeric designation of the grade; and
- f. The Identification Control Number (ICN) should be stamped on the reverse side of the cloth tag projecting out of the bale.

**9.2** All markings whether letter or numerals shall be stamped with clear indelible ink and shall not be less than 1 ½ cm in height except the initial of the station, the registered mark of the establishment and the alphanumeric designation of the grade which shall not be less than four (4) cm.

**Bibliography**

BIS/ISO 9308:1987. (Parts 1-3), *Specification for mechanically extracted coir fibres*

Bristle fibre. (n.d). In *Colombo Quality Coir Products*. Retrieved on June 18, 2017 from [www.coconutcoirsrilanka.com/products\\_industrial](http://www.coconutcoirsrilanka.com/products_industrial).

Coir fiber bales. (n.d). In *Rajesh Agencies*. Retrieved on July 4, 2017 from [rajeshagencies.com/coir-fiber-bales.php](http://rajeshagencies.com/coir-fiber-bales.php).

M. P. Coir Exports. (2012). Coir catalogue. Retrieved on July 4, 2017 from <http://www.coirexports-india.com/Coir-Products-Catalogue>.

Quality specifications. (2014). In *Coirboard*. Retrieved on June 24, 2017 from [www.coirboard.gov.in/?page\\_id=4076](http://www.coirboard.gov.in/?page_id=4076).

**Annex A**  
**(informative)**  
**Method of sampling**

The Inspector shall pick out at random sample bales from among those of the same grade and lot not bearing the Identification Control Number (ICN). At least one sample (1) bale may be examined for every ten (10) bales of each grade. The Inspector shall mark the tag of each sample bale with his initials and stamp it with letter 'S' on the reverse side. Only sample bales picked out shall be inspected and in case such bales are found to be substandard, only those of the same grade and lot not bearing the inspector's ICN shall be rejected. The inspection shall immediately be made after the completion of the segregation of sample bales.

Each lot of coir submitted for inspection shall remain under the exclusive control of the Inspector until all grades comprising it shall have been inspected. The Inspector may inspect additional sample bales of each grade of lot if he has reasonable grounds to believe that the classification and grading thereof have been defective or inaccurate. In case of dispute, the owner or baler of the fiber may request the inspection of additional samples to resolve the dispute.



Department of Agriculture  
Bureau of Agriculture and Fisheries Standards

**Technical Working Group (TWG) for the Revision of the Philippine National Standard (PNS) Coconut fiber (coir) – Grading and classification**

Chairperson:

**Mr. Luisito J. Peñamora**  
Philippine Coconut Authority – Zamboanga Research Center

Co - Chairperson:

**Mr. Romeo O. Bordeos, Jr.**  
Philippine Fiber Industry Development Authority

Members:

**Ms. Rosella B. Villaruel**  
**Ms. Luz Brenda P. Balibrea**  
Philippine Coconut Authority

**Mr. Renato B. Tiratira**  
Philippine Fiber Industry Development  
Authority

**Ms. Ma. Melvin A. Joves**  
Department of Trade and Industry –  
Export Marketing Bureau

**Mr. Reynaldo A. Go**  
Regwill Industries, Inc.

**Ms. Maria Teresa Diokno**  
**Mr. Mark Joseph Lector**  
Pilipinas Ecofiber Corporation

**Atty. Ariel F. Aguirre**  
**Mr. Leo Alexandro Y. Aguirre**  
Pontmain Resources, Inc.

**Ms. Nena E. Mawalic**  
Green Asia Agri Ventures, Inc.

**Mr. Brian Mamad**  
Agri Solutions Marketing Cooperative

Adviser:

**Ms. Karen S. Bautista / Dr. Vivencio R. Mamaril**  
Bureau of Agriculture and Fisheries Standards

Project Manager:

**Ms. Lara V. Navarro**  
**Ms. Farlash D. Pancho**  
**Ms. Sharmaine C. Biñas**  
**Ms. Francesca Louise P. Garcia**  
Bureau of Agriculture and Fisheries Standards



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**BUREAU OF AGRICULTURE AND FISHERIES STANDARDS**

**BPI Compound Visayas Avenue, Diliman, Quezon City 1101 Philippines**  
**T/ (632) 928-8741 to 64 loc. 3301-3319**  
**TF/ (632) 455.2858 / 456.6552**  
**E-mail: [bafpsda@yahoo.com.ph](mailto:bafpsda@yahoo.com.ph)**  
**Website: [www.bafps.da.gov.ph](http://www.bafps.da.gov.ph)**