



**TOGETHER**  
*for a sustainable future*

## OCCASION

This publication has been made available to the public on the occasion of the 50<sup>th</sup> anniversary of the United Nations Industrial Development Organisation.



**TOGETHER**  
*for a sustainable future*

## DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

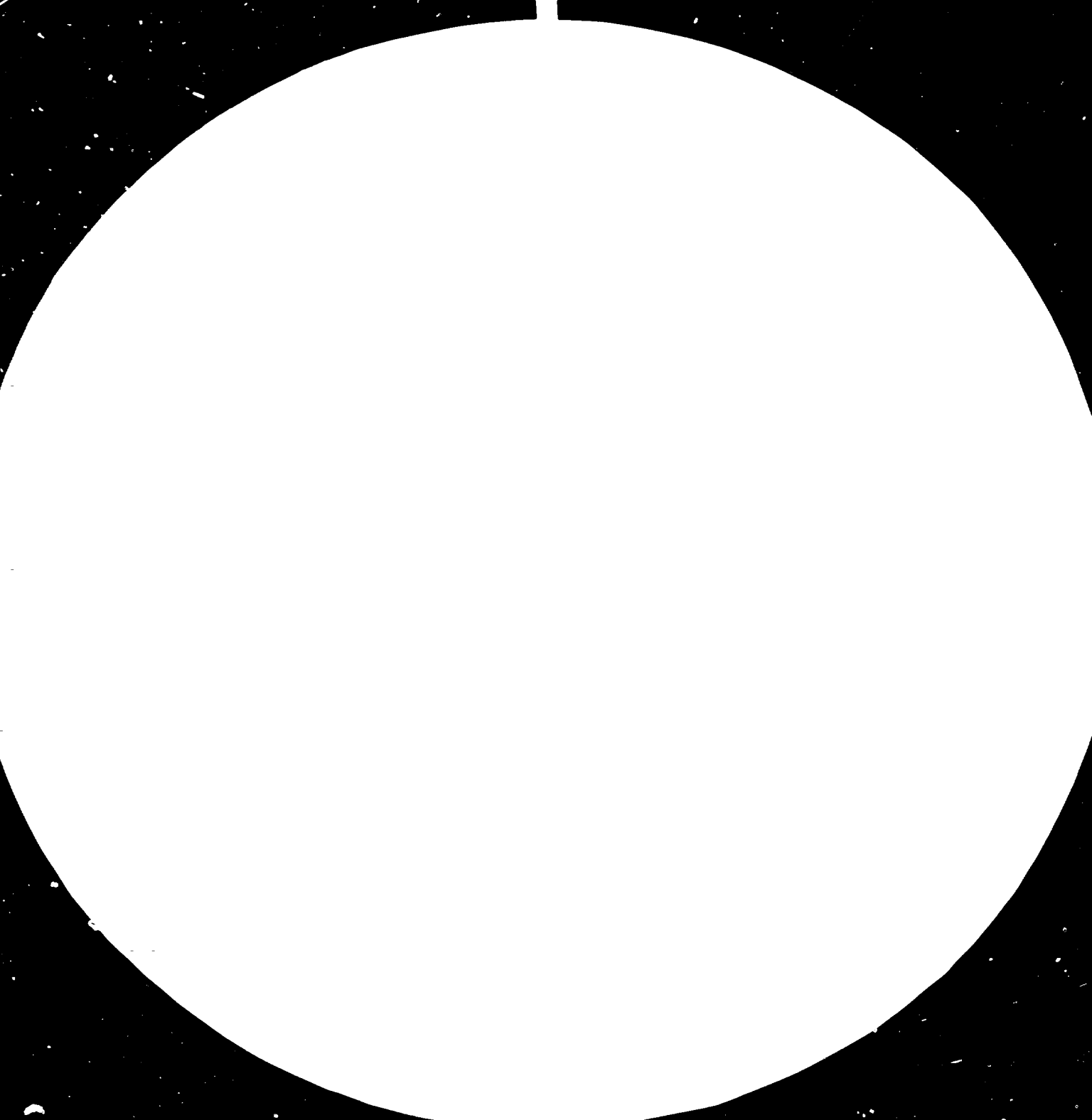
## FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

## CONTACT

Please contact [publications@unido.org](mailto:publications@unido.org) for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at [www.unido.org](http://www.unido.org)







10917



Distr.  
LIMITED  
ID/WG.352/33  
30 October 1981  
ENGLISH

United Nations Industrial Development Organization

International Experts Group Meeting  
on Pulp and Paper Technology

Manila, Philippines, 3 - 8 November 1980

PHILSA STANDARDS FOR PAPER PRODUCTS \*

by

Jaime O. Escolano \*\*

\* The views expressed in this paper are those of the author and do not necessarily reflect the views of the secretariat of UNIDO. This document has been reproduced without formal editing.

\*\* Assistant Chief, Forest Products Research and Industries Development Commission (FORPRIDECOM), National Science Development Board (NSDB), College, Laguna, Philippines.

## INTRODUCTION

Taking a look at the brief history of the Philippine Standards Association (PHILSA), it will be noted that this association was born out of the necessity to standardize local products for public consumption (1)<sup>1/</sup>. It was then felt that locally manufactured products could not compete with imported goods in terms of quality.

As such, the organizers of PHILSA a quarter of a century ago, have already realized the need for standard specifications for different types of products. Conditions at that time were different from the present. However, situations have changed immensely due to the fast rate of the industrialization program of our country wherein various types of industries have been established during the past two decades.

---

<sup>1/</sup> Underscored numbers in parentheses refer to literature cited.

With the constantly increasing local production and demand for the various types of products, the need and importance of standards will be more strongly felt. These statements hold true not only for the pulp and paper industry but also for the other industries.

#### IMPORTANCE OF PRODUCT STANDARDS

Although most of the products available in the local market are already of acceptable quality, some are still deficient in strength, durability, and other properties. Standards are extremely necessary, so that manufacturers of these products will be guided accordingly in meeting the specifications and end-use requirements of each particular product. Without any set of standards, the quality of a good product may not be maintained and may subsequently deteriorate. Furthermore, the manufacturers of sub-standard products will lose the initiative to improve the quality of their products, as long as they can make profits.

Standardization is beneficial to both consumers and manufacturers. For one, consumers will be assured of the same quality products they purchase at any given time. Then also, manufacturers will be encouraged to improve their products and maintain their quality to insure a steady share of the market, thereby creating a positive approach to production for the benefit of end-users as well.

#### FORMULATION OF STANDARDS

The formulation of PHILSA standard specifications for paper products is a cooperative undertaking between the government and private sectors. In the Technical Committee on Pulp and Paper Industries, the government sector is represented by the Philippines Bureau of Standards (PBS), Bureau of Supply Coordination (BSC), National Institute of Science and Technology (NIST), Forest Products Research and Industries Development Commission (FORPRIDECOM), and other agencies concerned. The private sector is represented by the paper mills, paper converters and dealers, and the consumers.

The first step in the standardization process is the procurement of commercial samples of the particular type of paper product under consideration, from different sources (both imported and locally produced) for testing and evaluation. These samples are then tested at the paper laboratories of FORPRIDECOM and NIST, using test methods approved as standard by PHILSA. In the absence of an approved test method, acceptable foreign standards are used or, if necessary, modifications are made to suit local requirements. In such a case, the adopted test method is included as part of the specifications.

Test results for each particular type of paper product are then compiled, tabulated, and evaluated. These, together with the available specifications from other countries, such as the U.S.A., Canada, Great Britain, Australia, India, Sweden,

etc. and from the International Organization for Standardization (ISO) (2-11), serve as guides or references in the formulation of the standards.

Based on the test results, the first draft of the standard specification is prepared by the "Working Group". This draft is then sent to the technical committee for deliberation. It takes several meetings before the final draft is approved by the committee.

Upon approval by the committee, the final draft is circularized for one month, i.e., copies are sent to committee members, paper mills, paper converters, government agencies concerned, etc. for comments, suggestions and/or approval. These comments are then consolidated and again deliberated on by the technical committee, before forwarding to the PHILSA Review Council for further review and discussions. The draft as approved by the Review Council, is then sent to the PHILSA Board of Directors for final approval.

#### APPROVED STANDARD SPECIFICATIONS

Table 1 presents the PHILSA standard specifications prepared for different types of paper products while Table 2 gives the PHILSA standard methods for testing paper products (12).

From Table 1, it can be seen that standards for 25 types of paper products and one specification for trimmed sizes of writing paper and certain classes of printed matters have been



prepared. Of this number, one has been revised (bond paper) and nine have been adopted as national standards by the PBS.

Table 2 shows that 20 standard methods have been approved by PHILSA for testing paper products. Most of these test methods were adopted from foreign countries, especially those of the U.S. Technical Association of the Pulp and Paper Industry (4).

These standards for paper products and test methods are available at the PHILSA Office, Manila.

#### PHILSA AND METRICATION

It is worth mentioning here that PHILSA has been actively involved in the promotion of the metric system. In fact, it has already sponsored or co-sponsored at least three (3) seminars on the subject of metrication. In view of this, PHILSA has always emphasized the use of the metric units in all its standards, except in the earlier ones wherein the English units were also used but were placed in parentheses after the metric units.

#### SUMMARY

In the celebration of the Silver Anniversary of PHILSA, the following must be noted:

1. PHILSA was organized 25 years ago due to the felt need for the standardization of local products;
2. Standardization work of PHILSA on various products

started immediately although standardization of paper products started only 10 years ago and the first paper standard was approved in 1972;

3. Standardization of various products is a co-operative effort of both the government and private sectors; and
4. PHILSA is very active in the promotion and the use of the metric system.

###

LITERATURE CITED

1. Philippine Standards Association. 1979. Brief history of PHILSA. Mimeographed Note. PHILSA, Manila
2. American Society for Testing Materials. 1978. Annual Book of ASTM Standards. ASTM, Philadelphia.
3. Joint Committee on Printing. 1960. Government Paper Specification Standards, Congress of the United States, Washington, D.C.
4. Technical Association of the Pulp and Paper Industry. 1977. Testing Methods, Recommended Practices and Specifications, TAPPI, Atlanta, Georgia.
5. U.S. Department of Commerce. 1974. Commercial Standards, Washington, D.C.
6. British Standards Institution. Standards, London.
7. Canadian Government Specifications Board. 1971. Annual Index of Standards, National Research Council, Ottawa.
8. Standards Association of Australia. 1973. Sydney.
9. Swedish Standard Commission. 1970. Swedish Standards, Stockholm.
10. Indian Standards Institution. 1973. Indian Standards, New Delhi.
11. International Organization for Standardization. ISO Publications, Geneva.
12. Philippine Standards Association, 1979. List of PHILSA Standard specifications established and printed. PHILSA, Manila.

Table 1. PHILSA Standard Specifications Prepared for Different Types of Paper Products

No.	Type of Paper or Board	PHILSA No.	Remarks
1	Bond paper	XVI - 1 - 72	Revised 1976
2	Mimeograph paper	XVI - 2 - 72	
3	Manifold or onionskin	XVI - 3 - 72	
4	Toilet tissue paper	XVI - 4 - 72	
5	Facial tissue paper	XVI - 5 - 72	
6	Heavy-duty wrapping paper	91:1974	
7	Kraft wrapping paper	92:1974	
8	Machine finish uncoated book paper	93:1974	
9	Yellow ruled pad paper	94:1974	
10	Newsprint	95:1974	
11	Waxed paper	99:1974	
12	Stencil paper	100:1975	
13	Linerboard	101:1975	X
14	Corrugating medium	107:1975	X
15	Carbon paper	113:1975	
16	Trimmed sizes of writing paper and certain classes of printed matters	125:1976	
17	File folders	130:1976	
18	Corrugated fiberboard boxes	132:1976	
19	Notebooks	144:1977	X
20	Grade school pad paper	145:1977	X
21	Textbook paper	1977	
22	Bristolboard	166:1978	X
23	Chipboard	167:1978	X
24	White cigarette paper	207:1979	X
25	Carbonizing tissue	217:1979	X
26	Diazo base paper	229:1979	X

X/ Adopted as National Standards by the Philippine Bureau of Standards.

Note: Most of these standards have already been adopted by the Philippine Bureau of standards.

Table 2. PHILSA Standard Methods for Testing Paper Products

No.	Test Method	PHILSA No.	Remarks
1	Method of sampling paper and board for testing	XVI - 6 - 72	
2	Method of test for condition of paper and board	XVI - 7 - 72	
3	Method of test for determination of paper substance	XVI - 8 - 72	
4	Method of test for determining bursting strength of paper	XVI - 9 - 72	
5	Method of test for tensile strength of paper	XVI - 10 - 72	
6	Method of test for absorption of water by bibulous paper	XVI - 11 - 72	
7	Method of test for determining pH value of paper extracts	XVI - 12 - 72	
8	Method of test for ash in paper	XVI - 13 - 72	
9	Method of test for thickness of paper and board	XVI - 14 - 72	
10	Method of test for opacity of paper	XVI - 15 - 72	
11	Method of test for brightness of paper	XVI - 16 - 72	
12	Method of test for oil penetration of paper	XVI - 17 - 72	
13	Method of test for stiffness of paper	XVI - 19 - 72	
14	Tentative method of test for folding endurance of paper by Schopper tester	XVI - 20 - 72	
15	Tentative method of test for folding endurance of paper by M.I.T. tester	XVI - 21 - 72	
16	Methods of test for wax determination of paper	133:1976	
17	Dirt in paper and paperboard	XVI - 18 - 76	
18	Method of test for determining tearing resistance of paper	XVI - 23 - 77	X
19	Method of test for air resistance (porosity) of paper	162:1977	X
20	Method of test for fiber identification	174:1978	X

X/ Adopted as National Standards by the Philippines Bureau of Standards.

