

Part XVI--Proposed New Industry Structure for Paper Manufacturing

Section A--NAICS Structure

North American Industry Classification System

(NAICS)

Agreement Number 27

This document represents the proposed agreement on the structure of the North American Industry Classification System (NAICS) for the following industries:

Paper Manufacturing

The detailed NAICS structure along with a brief description of the structure is attached (Attachments 1 and 2). Each country agrees to release a copy of the proposed NAICS structure to interested data users. Comments received will be shared among the countries and additional discussions will be held before a final decision on the structure is made. Each country may add additional detailed industries, below the 4-digit level of NAICS, as necessary to meet national needs, so long as this additional detail aggregates to a 4-digit NAICS level in order to ensure full comparability among the three countries. This NAICS structure was presented and provisionally accepted at the NAICS Committee meeting held on November 8 and November 9, 1995 in Washington, D.C.

Accepted	Signature	Date
Canada	/S/ Jacob Ryten	11/9/95
Mexico	/S/ Enrique Ordaz	11/9/95
United States	/S/ Jack E.Triplett	11/9/95

ATTACHMENT 1--NAICS STRUCTURE

XX	Paper Manufacturing
XXX	Pulp, Paper, and Paperboard Mills
XXXX	Pulp Mills
XXXX	Paper Mills
XXXX	Paperboard Mills
XXX	Converted Paper Product Manufacturing
XXXX	Paperboard Container Manufacturing
XXXX	Paper Bag and Coated and Treated Paper Manufacturing
XXXX	Stationery Product Manufacturing
XXXX	Other Converted Paper Product Manufacturing

Attachment 2--North American Industry Classification System

Draft Classification for:

Paper Manufacturing

Representatives of the statistical agencies of Canada, Mexico, and the United States agree to a draft industrial classification for these industries.

The draft classification provides for the subsector, Paper Manufacturing. This subsector is further subdivided into two industry groups and seven industries. The subsector will be part of the Manufacturing sector of the classification.

A General Outline

The Paper Manufacturing industries produce pulp, paper and converted paper products. The manufacture of these products is grouped together because they constitute a series of vertically connected processes. More than one is often carried out in a single establishment. There are essentially three activities. The manufacture of pulp involves separating the cellulose fibers from other impurities in wood or used paper. The manufacture of paper involves matting these fibers into a sheet. Converted paper products are produced from paper and other materials by various cutting and shaping techniques.

The Paper Manufacturing subsector is subdivided into two industry groups, the first for the manufacture of pulp and paper and the second for the manufacture of converted paper products. Paper making is treated as the core activity of the subsector. Therefore, any establishment that makes paper (including paperboard), either alone or in combination with pulp manufacture or paper converting, is classified as a Paper or Paperboard Mill. Establishments that make pulp but no paper are classified as Pulp Mills. Pulp Mills, Paper Mills and Paperboard Mills comprise the first industry group.

Establishments that make products from purchased paper and other materials make up the second industry group, Converted Paper Product Manufacturing. This general activity is then subdivided based, for the most part, on process distinctions. Paperboard Container Manufacturing uses corrugating and cutting machinery to form paperboard into containers. Paper Bag and Coated and Treated Paper Manufacturing establishments cut and coat paper. Stationery Product Manufacturing establishments produce a variety of paper products used for writing, filing and similar applications. Other Converted Paper Product Manufacturing includes in particular the conversion of sanitary paper stock into such things as tissue paper and disposable diapers.

An important process used in the Paper Bag and Coated and Treated Paper Manufacturing industry is lamination, often combined with coating. Lamination and coating produces a composite material with improved properties of strength, impermeability and so on. The laminated materials may be paper, metal foil or plastic film. While paper is often one of the components, it is not always. However, lamination of plastic film to plastic film is classified in Rubber and Plastic Product Manufacturing because establishments that do this often first produce the film. The same situation holds with respect to bags. The manufacture of bags from plastic only, whether or not laminated, is classified in Rubber and Plastic Product Manufacturing, but all other bag manufacturing is classified in this industry.

Limitations and Constraints of the Classification

In the Paper Manufacturing industry, most activities that were identified in one country exist in the others. However, often an activity is not economically significant to the same degree in all

three countries. For example, a relatively broad NAICS industry was created for Paper Mills, because the possible subdivisions are small in Mexico.

An operating rule has therefore been adopted for this industry subsector that the NAICS industries must be economically significant and publishable in all three countries. Each country will publish additional categories that comprise subdivisions of NAICS industries, to present data for activities that are nationally significant.

For those users requiring detailed commodity information, each country will publish information on the products of these industries. Efforts are also underway to harmonize the commodity classifications to allow for greater comparability of these statistics.

Relationship to ISIC

Most 4-digit NAICS industries in this subsector are contained in Division 21, Manufacture of Paper and Paper Products, of the current International Standard Industrial Classification of all Economic Activities (ISIC, Revision 3) of the United Nations. Four of the seven NAICS 4-digit industries in this subsector are contained entirely in this Division. There are, however, some differences between the two systems.

NAICS includes the manufacture of some products that are made from non-paper materials, such as multi-web plastic bags, in Paper Bag and Coated and Treated Paper Manufacturing, because the production processes are similar regardless of the material. ISIC classifies these articles according to their principal component material.

The other differences with ISIC are minor, but they do result in the following NAICS industries not being entirely contained within ISIC Division 21. Paper Mills in NAICS includes the manufacture of saturated papers, if the paper is made in the same establishment. ISIC treats this activity in manufacture of Non-Metallic Mineral Products. It is a minor difference. Other Converted Paper Product Manufacturing includes some minor activities, such as the manufacture of paper novelties, that are classified elsewhere in ISIC.

Some Changes to the National Classifications

For Canada, the Paper Manufacturing subsector is largely the same as the current Canadian classification's Paper and Allied Products Industries major group. There are two major differences. The Canadian classification includes the manufacture of building board in Paper Manufacturing, whereas NAICS includes it in Wood Manufacturing, except Furniture because it is in fact made from wood fibers and not paper. The saturation of paper products with asphalt is classified in NAICS Petroleum and Coal Product Manufacturing, because the saturation process is more important to the activity than the material being saturated. The structure of this NAICS subsector is similar to that of the Canadian classification, but there is less detail.

For Mexico, the Paper Manufacturing subsector is largely the same as the current Mexican classification's Manufacture of Pulp, Paper and Paper Products. The main difference is the classification of some sanitary products, such as disposable paper diapers, in Textile Products. The structure and amount of detail of this NAICS subsector is similar to that of the corresponding area of the Mexican classification.

For the United States, there is little difference between the Paper Manufacturing subsector

of NAICS and the current Paper and Allied Products Major Group. Converted foil containers are included in the NAICS subsector; they are classified in Metal Fabricating in the 1987 SIC.

Achievement of Objectives

The classification meets the objectives for the North American Industry Classification System (NAICS). It includes industries that group establishments with similar production processes, that is, it applies the production-oriented economic concept. The hierarchical structure of the classification also follows the production concept. Pulp and paper manufacturing are much more capital intensive operations than paper converting, and the material inputs are different.

Other objectives of the NAICS project are not as relevant in this area of the classification as in others. These objectives are the delineation of new and emerging industries and service industries. The industrial sector in question is relatively mature and generally produces goods. At the product level, there are numerous developments, such as the use of recycled paper in pulp making; however, these do not form the basis of establishment organization and hence of industries. Therefore, the emphasis is on the objectives listed above.

The industries have high specialization ratios, and they are economically significant. The detail (4-digit) level and structure of the classification are balanced in size. This enhances the classification's suitability for sampling, data-publishing and other aspects of survey operations. Finally, while disruptions to time series exist, they have been minimized. The statistical agencies can develop statistical "links" to enable the re-tabulation of time series on the new NAICS classification structure.

The classification achieves comparability for the three participating countries. Based on existing data, all three countries expect to be able to publish data regularly at the industry (4-digit) level of the structure. All countries agree on the detailed definitions of the industries.

Section B-Annex: United States National Industry Detail

As explained in the *Structure* presentation of this notice, for a number of reasons 4-digit industries in the NAICS industry subsector presented in *Part XVI, Section A--Attachment 1*, contain less detail than is currently in the U.S. SIC system, and less detail than is required to meet important analytical requirements in the U.S. The three country agreement on NAICS envisions that each country may develop national detailed industries below the NAICS industry level, so long as the national detail can be aggregated to the NAICS classification, thus assuring full North American comparability.

The ECPC is proposing U.S. 5-digit industry detail for the NAICS industry subsector covered in Part XVI of this notice. For cases where no 5-digit detail is shown, the ECPC is proposing that the NAICS 4-digit industries will also represent the most detailed U.S. industries.

TABLE 1

The definitions of status codes are as follows: E-existing industry; L-null industry for the U.S.; N-new industry R-revised industry;; and * means “part of”. The abbreviation NEC is used for Not Elsewhere Classified.

1997 NAICS and U.S. Description	Status code	1987 SIC code	1987 SIC DESCRIPTION
XX Paper Manufacturing			
XXX Pulp, Paper and Paperboard Mills			
XXXX Pulp Mills	R	*2611	Pulp Mills (pulp producing mills only)
XXXX Paper Mills			
XXXXX Paper Mills, except Newsprint Mills	R	*2611	Pulp Mills (pulp mills producing paper)
		*2621	Paper Mills (pt) (except newsprint mills)
XXXXX Newsprint Mills	N	*2621	Paper Mills (pt) (newsprint mills)
XXXX Paperboard Mills	E	*2631	Paperboard Mills
XXX Converted Paper Product Manufacturing			
XXXX Paperboard Container Manufacturing			
XXXXX Setup Paperboard Box Manufacturing	E	2652	Setup Paperboard Boxes
XXXXX Corrugated and Solid Fiber Box Manufacturing	E	2653	Corrugated and Solid Fiber Boxes
XXXXX Fiber Can, Tube, Drum, and Similar Product Manufacturing	E	2655	Fiber Cans, Tubes, Drums, and Similar Products
XXXXX Non-Folding Sanitary Food Container Manufacturing	R	2656	Sanitary Food Containers, Except Folding
		*2679	Converted Paper and Paperboard Products, NEC (egg cartons and other containers from purchased paper)
XXXXX Folding Paperboard Box Manufacturing	E	2657	Folding Paperboard Boxes, Including Sanitary
XXXX Paper Bag and Coated and Treated Paper Manufacturing			
XXXXX Coated and Laminated Packaging Paper and Plastic Film Manufacturing	R	*2671	Packaging Paper and Plastics Film, Coated and Laminated (single-web paper, paper multiweb laminated rolls and sheets for packaging uses)
XXXXX Coated and Laminated Paper Manufacturing	R	2672	Coated and Laminated Paper, NEC
		*2679	Converted Paper and Paperboard Products, NEC (wallpaper and gift wrap paper)
XXXXX Plastic, Foil, and Coated Paper Bag Manufacturing	R	*2673	Plastics, Foil, and Coated Paper Bags (coated or multiweb laminated bags)
XXXXX Uncoated Paper and Multiwall Bag Manufacturing	E	2674	Uncoated Paper and Multiwall Bags

XXXXX	Laminated Aluminum Foil Manufacturing for Flexible Packaging Uses	N	*3497	Metal Foil and Leaf (laminated aluminum foil rolls and sheets for flexible packaging uses)
XXXX	Stationery Product Manufacturing			
XXXXX	Die-Cut Paper and Paperboard Office Supply Manufacturing	N	*2675	Die-Cut Paper and Paperboard and Cardboard (file folders, tabulating cards, and other paper and paperboard office supplies)
			*2679	Converted Paper and Paperboard Products, NEC (paper supplies for business machines and other paper office supplies)
XXXXX	Envelope Manufacturing	E	2677	Envelopes
XXXXX	Stationery, Tablet, and Related Product Manufacturing	E	2678	Stationery, Tablets, and Related Products
XXXX	Other Converted Paper Product Manufacturing			
XXXXX	Surface-Coated Paperboard Manufacturing	N	*2675	Die-Cut Paper and Paperboard and Cardboard (pasted, lined, laminated, or surface-coated paperboard)
XXXXX	Sanitary Paper Product Manufacturing	E	2676	Sanitary Paper Products
XXXXX	Other Converted Paper and Paperboard Product Manufacturing	R	*2675	Die-Cut Paper and Paperboard and Cardboard (die-cut paper and paperboard products, except office supplies)
			*2679	Converted Paper and Paperboard Products, NEC (Other converted paper and paperboard products such as paper filters, crepe paper, and laminated and tiled wallboard)

TABLE 2

The abbreviation "pt" means "part of". @ means time series break has been created that is greater than 3% of the 1992 revenues for the 1987 SIC industry.

1987 SIC code	1987 SIC code	1997 U.S. description
2611	Pulp Mills Pulp Producing Mills Only Pulp and Paper Producing Mills	Pulp Mills Paper Mills, except Newsprint Mills (pt)
2621@	Paper Mills Except Newsprint Mills Newsprint Mills	Paper Mills, except Newsprint Mills (pt) Newsprint Mills
2631	Paperboard Mills	Paperboard Mills
2652	Setup Paperboard Boxes	Setup Paperboard Box Manufacturing
2653	Corrugated and Solid Fiber Boxes	Corrugated and Solid Fiber Box Manufacturing
2655	Fiber Cans, Tubes, Drums, and Similar Products	Fiber Can, Tube, Drum, and Similar Product Manufacturing
2656	Sanitary Food Containers, Except Folding	Non-Folding Sanitary Food Container Manufacturing (pt)
2657	Folding Paperboard Boxes, Including Sanitary	Folding Paperboard Box Manufacturing
2671@	Packaging Paper and Plastics Film, Coated and Laminated Single-Web Paper, Paper Multiweb Laminated Rolls and Sheets for Packaging Uses Plastic Packaging Film and Sheet	Coated and Laminated Packaging Paper and Plastic Film Manufacturing Unsupported Plastic Packaging Film and Sheet Manufacturing (Included in Rubber and Plastic Product Manufacturing subsector)
2672	Coated and Laminated Paper, NEC	Coated and Laminated Paper Manufacturing (pt)
2673@	Plastics, Foil, and Coated Paper Bags Coated or Multiweb Laminated Bags Plastics Bags	Plastic, Foil, and Coated Paper Bag Manufacturing Unsupported Plastic Bag Manufacturing (Included in Rubber and Plastic Product Manufacturing subsector)
2674	Uncoated Paper and Multiwall Bags	Uncoated Paper and Multiwall Bag Manufacturing
2675@	Die-Cut Paper and Paperboard and Cardboard File Folders, Tabulating Cards, and Other Paper and Paperboard Office Supplies Pasted, Lined, Laminated, or Surface-Coated Paperboard Die-Cut Paper and Paperboard Products, Except Office Supplies	Die-Cut Paper and Paperboard Office Supply Manufacturing (pt) Surface-Coated Paperboard Manufacturing Other Converted Paper and Paperboard Product Manufacturing (pt)

2676	Sanitary Paper Products	Sanitary Paper Product Manufacturing
2677	Envelopes	Envelope Manufacturing
2678	Stationery, Tablets, and Related Products	Stationery, Tablet, and Related Product Manufacturing
2679@	Converted Paper and Paperboard Products, NEC	
	Egg Cartons and Other Containers from Purchased Paper	Non-Folding Sanitary Food Container Manufacturing (pt)
	Wallpaper and Gift Wrap Paper	Coated and Laminated Paper Manufacturing (pt)
	Paper Supplies for Business Machines and Other Paper Office Supplies	Die-Cut Paper and Paperboard Office Supply Manufacturing (pt)
	Other Converted Paper and Paperboard Products such as Paper Filters, Crepe Paper, and Laminated and Tiled Wallboard	Other Converted Paper and Paperboard Product Manufacturing (pt)
3497@	Metal Foil and Leaf	
	Laminated Aluminum Foil Rolls and Sheets for Flexible Packaging Uses	Laminated Aluminum Foil Manufacturing for Flexible Packaging Uses
	Foil and Foil Containers	All Other Fabricated Metal Product Manufacturing (pt) (Included in Fabricated Metal Product Manufacturing subsector)

Description of Changes to the U.S. System

Four new industries were added to the 1997 industry structure for this industry subsector. The industries created were:

Newsprint Mills from part of 1987 SIC 2621, Paper Mills, to achieve international comparability with Canada.

Laminated Aluminum Foil Manufacturing for Flexible Packaging Uses from part of 1987 SIC 3497, Metal Foil and Leaf, to achieve international comparability, and because the production processes are similar, regardless of the material used. This is the lamination, not creation of foil. Canada has this in CSIC 27, Paper and Allied Products.

Die-Cut Paper and Paperboard Office Supply Manufacturing from part of 1987 SIC 2675, Die-Cut Paper and Paperboard and Cardboard, and 1987 SIC 2679, Converted Paper and Paperboard Products, NEC. These two 1987 SIC industries (SIC 2675 and SIC 2679) were split and recombined in order to achieve international comparability with Canada and Mexico; as a result of this split, it was possible for the U.S. to form this new industry, which is justified on the production-oriented criterion and has the effect of reducing the size of an "NEC" category in the 1987 SIC.

Surface-Coated Paperboard Manufacturing from part of 1987 SIC 2675, Die-Cut Paper and Paperboard and Cardboard, to achieve international comparability.

Two activities were transferred out of 1987 Major Group 26, Paper and Allied Products, into the 1997 NAICS Rubber and Plastic Product Manufacturing subsector, because of similarities of production process. These were:

Plastic packaging film and sheet from 1987 SIC 2671, Packaging Paper and Plastics Film, Coated and laminated plastic bags from 1987 SIC 2673, Plastics, Foil, and Coated Paper Bags.

Also, several activities were transferred within the Paper Manufacturing subsector. The number of paper manufacturing industries increased from 17 in 1987 to 20 in 1997. For time series linkage, 13 of the 17 1987 industries are comparable within three percent of the 1997 industries.