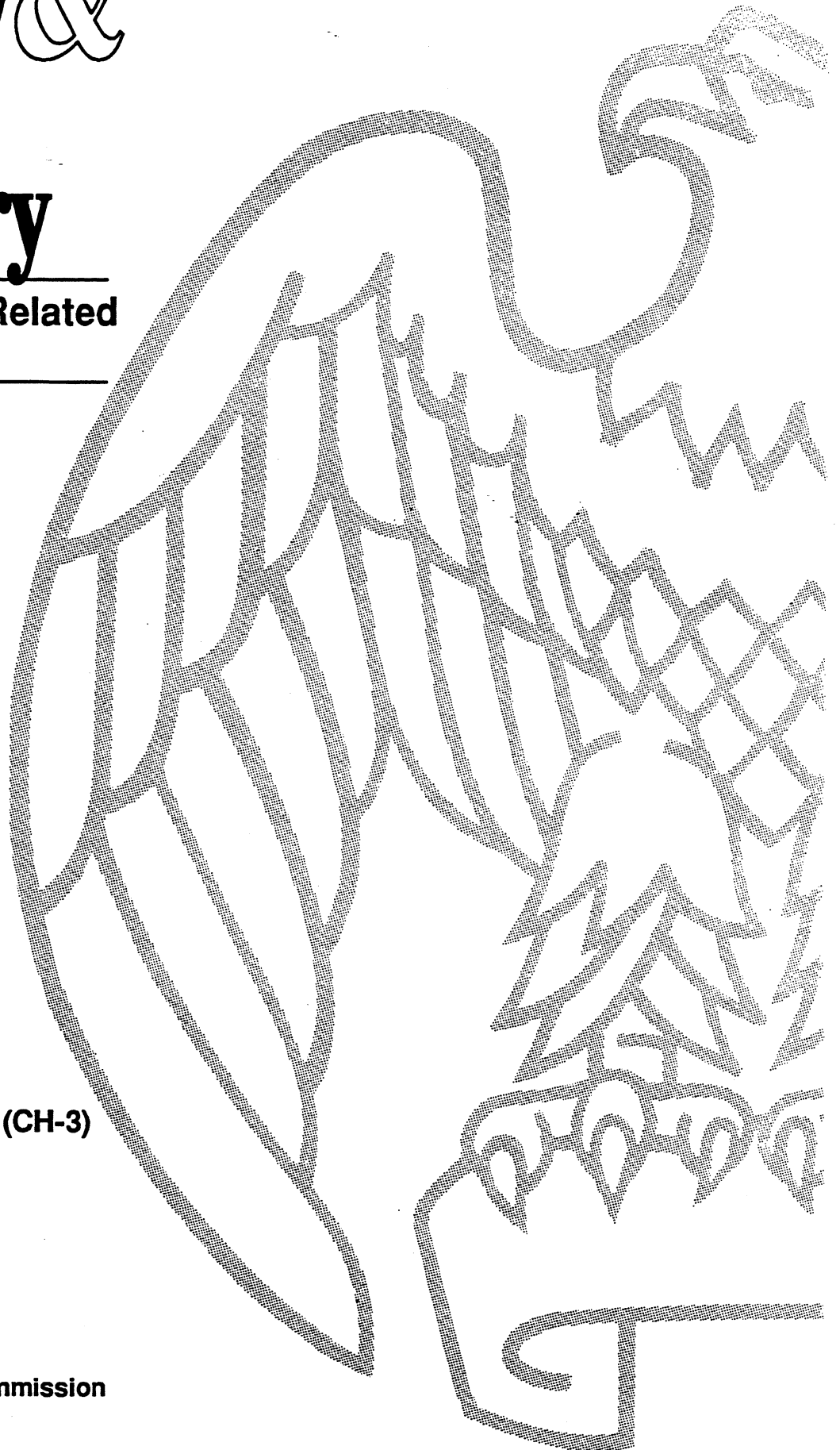


Industry & Trade Summary

Paints, Inks, and Related
Items

USITC Publication 2548 (CH-3)
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OFFICE OF INDUSTRIES
U.S. International Trade Commission
Washington, DC 20436



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PREFACE

In 1991, the United States International Trade Commission initiated its current *Industry and Trade Summary* series of informational reports on the thousands of products imported into and exported from the United States. Each summary addresses a different commodity/industry area and contains information on product uses, U.S. and foreign producers, and customs treatment. Also included is an analysis of the basic factors affecting trends in consumption, production, and trade of the commodity, as well as those bearing on the competitiveness of U.S. industries in domestic and foreign markets.

This report on paints, inks, and related items covers the period 1986 through 1990 and represents one of approximately 250 to 300 individual reports to be produced in this series during the first half of the 1990s. Listed below are the individual summary reports published to date on the energy and chemicals sector.

<i>USITC publication number</i>	<i>Publication date</i>	<i>Title</i>
2458 (CH-1)	November 1991	Soap, detergents, and surface-active agents
2509 (CH-2)	May 1992	Inorganic acids
2548 (CH-3)	August 1992	Paints, inks, and related items

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INTRODUCTION

This summary of industry and trade information on paints, inks, and related items covers the period 1986 through 1990. The report is organized into three major sections: U.S. and foreign industry profiles; tariffs and nontariff measures; and U.S. industry performance in domestic and foreign markets. In addition, an appendix provides an explanation of tariff and trade agreements terms.

The products covered by this summary are paints, inks, and related items. All of these products are surface coatings or treatments and include paints, varnishes, lacquers, stains, artists' colors and paint sets, putty, sealants, mastics, plasters, resin cements, printing, writing, and drawing inks, and a large number of similar products. These products have a very wide variety of uses in both industry and the home.

Paints and related items make up the largest volume product category covered in this summary in terms of imports, domestic production, and total shipments. Total domestic shipments of all types of paints and related items reportedly exceeded \$12 billion in each year during 1986-90. U.S. imports of paints and related items represent a very small portion of domestic consumption of these products. As a result, the overall U.S. trade balance in paints and related items is positive. Paints and related items are generally formulations of several types of organic and inorganic chemicals, including pigments, resins, fillers, stabilizers, performance additives, and solvents (both aqueous and nonaqueous). Each product covered here is designed to meet certain specific end-use performance requirements. Paints and related items are generally used to repair or fill gaps, holes, dents, and other faults in surfaces; to join the edges of surfaces together and to cover the joint; to seal and protect surfaces from weather and other types of wear or damage; and to decorate, emphasize, or alter the characteristics of the surfaces to which they are applied. These paints and related items are generally divided on the basis of their major end use into three principal subcategories: architectural coatings, original equipment manufacturer coatings, and specialty coatings.

Inks make up the second major category covered in this summary in terms of imports, domestic production, and shipments. Total domestic shipments of all types of inks reportedly exceeded \$2 billion during each year of the period covered in this summary. U.S. imports of inks represent a significant part of domestic consumption. The product category covered in this summary includes printing inks, writing inks, drawing inks, and other inks and ink powders. The inks and ink powders covered in this summary are also generally formulations of several types of chemicals and in many cases have characteristics similar to paints and other surface coatings. Inks are used primarily in the production of various types of printed materials such as newspapers, books, pamphlets, catalogs, and magazines; in writing or drawing; or in the

manufacture of a wide variety of end-use consumer and industrial products such as wallpaper, signs, patterned textiles, clothing, containers, and the like.

This summary on paints, inks, and related items does not include information on waxes, certain polishing compounds and oils, or xerographic toners.

U.S. INDUSTRY PROFILE¹

Industry Structure

The principal types of raw materials, primary producer types, major products, and principal consumers of the paints, inks, and related items are shown on the next page in figure 1.

The paints, inks, and related items covered in this summary were manufactured by more than 1,400 firms in over 2,000 production facilities in 1990. Paints and other surface coatings were produced by more than 1,000 firms, operating over 1,300 manufacturing plants in 1990. In addition, an estimated 200 to 250 firms, operating over 500 production facilities, manufactured various types of ink and ink powders.

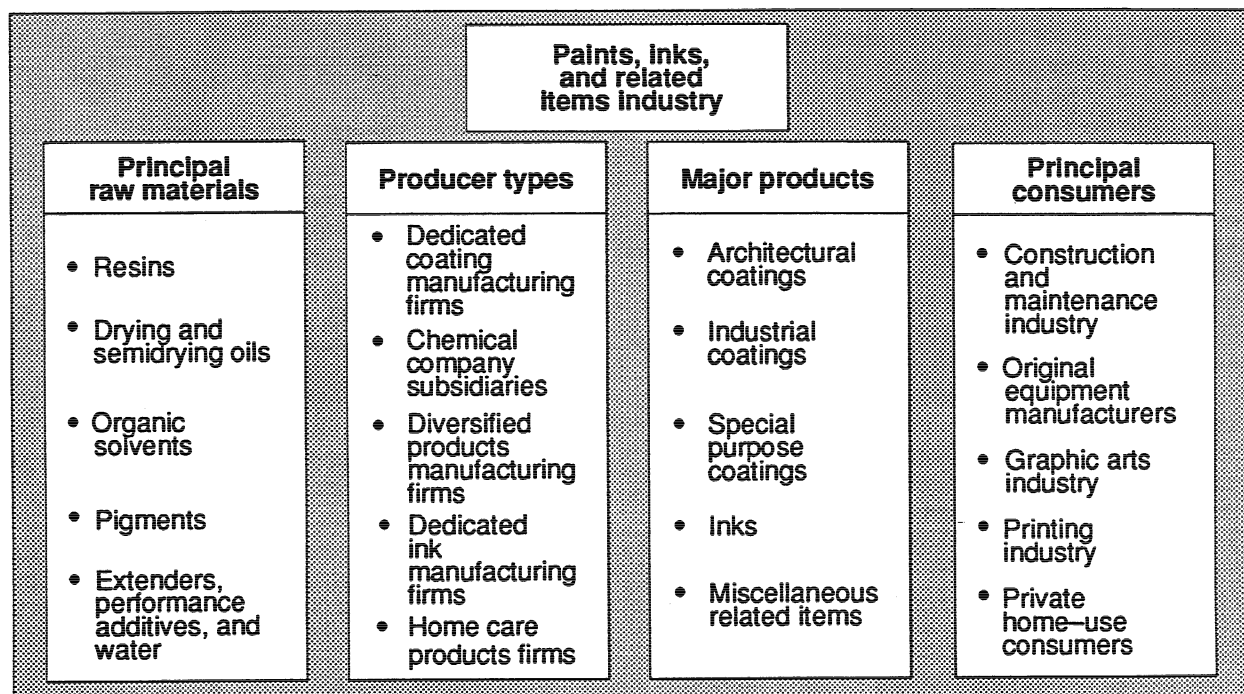
There is a moderate degree of concentration in the aggregation of industries that manufacture products covered by this summary. Industry analysts estimated that the 100 largest firms produced in excess of 50 percent of all the products covered in this summary. The top 25 firms are estimated to account for approximately 50 percent of all paints and related items. The total number of manufacturing firms making the types of products covered in this summary is believed to have declined during 1986-90, primarily as a result of consolidations and mergers within the industry. However, the actual number of operating plants is estimated to have increased slightly during the period to meet the overall increase in demand.

Total estimated employment by all firms manufacturing the types of products covered in this summary amounted to about 80,000 workers in 1990, with production workers accounting for about half of the total. Industry analysts estimated that aggregate employment in this collection of industries increased by about 10 percent during 1986-90. The major categories of employees in the paints, inks, and related items industries that experienced the largest increases in employment during the period were sales, technical support, and research and development personnel. In the paint and related items industries, total employment is reported to have increased by about 8 percent, from about 55,800 workers in 1986 to about 60,200 workers in 1990. The number of production workers in

¹ The products covered here are included in Standard Industrial Classification (SIC) category 2893, Printing Ink; and parts of SIC categories 2842, Specialty Cleaning, Polishing, and Sanitation Preparations; 2851, Paints, Varnishes, Lacquers, Enamels, and Allied Products; 2891, Adhesives and Sealants; 2899, Chemicals and Chemical Preparations Not Elsewhere Specified; 3944, Games, Toys, and Children's Vehicles, Except Dolls and Bicycles; and 3952, Lead Pencils, Crayons, and Artists' Materials. The relative significance of the producer types shown in figure 1 for the products covered in this summary is not available for this aggregation of SIC categories.

Figure 1

U.S. paints, inks, and related items industry: Principal raw materials, producer types, major products, and principal consumers



Source: U.S. International Trade Commission.

the paint and related items segment increased from about 28,800 in 1986 to about 29,200 in 1990, or by about 1 percent. Employment by firms manufacturing inks is estimated to have ranged between about 11,200 and 13,000 workers during 1986-90.

The production facilities that manufacture the products covered in this summary are widely distributed geographically. There is some concentration in major metropolitan areas and in areas with a large number of industrial consumers. The major reason for both the large number of establishments and their wide distribution is the relatively small profit margin on many of the products. Consequently, many of the manufacturing facilities are located as closely as possible to the targeted market or major customers in an effort to reduce transportation costs. In many cases it is more economical to build a new manufacturing facility or mixing station at or near the location of a major customer or market than it is to ship products from a more distant existing facility. The reduction of transportation costs is particularly important in the paint and related items segment, where the per-unit profit margins are generally the lowest among the products covered in this summary. The high cost of transportation is the major reason for the large number and wide geographical distribution of the manufacturing facilities in these industries, as well as

for the very small role that foreign trade plays in total shipments of these products.

The manufacturing processes used to produce the paints, inks, and related items covered in this summary are generally low to moderately labor intensive. Most of the manufacturing processes are fairly highly automated, and in many cases the production worker is a skilled technician with the primary task of keeping the machinery running. In addition, a number of the individual products require workers with a fairly high level of skill and the technical knowledge to maintain both the production equipment and batch-to-batch consistency in the physical and chemical composition of the finished product. For example, consistent color matches in different batches of ink are very important to some customers, and even very minor variations are not acceptable. The production workers often must have a level of skill that will allow them to make adjustments in the process that will yield the consistency required.

Productivity data measured by output per hour worked for the aggregation of industries covered in this summary are not available for 1986-90. However, for the paint and related items segment, the largest segment in terms of the value of total shipments, the level of productivity, in terms of annual value added per employee, increased by about 24 percent, from

\$210,124 in 1986 to \$260,947 in 1990. This increase averages out to about 5.5 percent annually and probably reflects an increase in the use of computer process control, robotics, and other automation in the manufacturing processes. Inasmuch as the other segments of the aggregation are relatively closely linked, industry analysts believe that the level of productivity for all summary products also increased during the period.

The degree of vertical and horizontal integration in the aggregation of industries covered in this summary ranges from high to very low. Most of the firms that manufacture paints, inks, and related items are integrated vertically and horizontally to some extent.

The top 100 manufacturers are highly vertically integrated, and most exhibit a moderate degree of horizontal integration. Several of them have operations that span the entire range of vertical integration from raw material production to end-use consumer sales at both the wholesale and retail levels. These companies also generally operate a number of similar plants that manufacture a wide variety of horizontally related products. Some even operate, or are affiliated with, retail outlets that sell finished downstream products, as well as paints, inks, and related items, directly to the public at large. These manufacturers account for more than half of all domestic shipments of paints, inks, and related items, as well as nearly all U.S. exports of these products.

There are also a large number of small "mom-and-pop" or "artisan" type facilities. These firms generally employ 20 or fewer people, manufacture a relatively small number of products, and exhibit little or no vertical integration. The products they manufacture are often the same as those manufactured by larger firms, but they generally have relatively few product lines available, and often manufacture only for one or a small group of customers located very close by. Some also supply proprietary products for specific end-use applications that are not produced elsewhere.

A number of large, multinational firms have subsidiaries or affiliates that manufacture the products covered in this summary as part of their operations. Several large Japanese and Western European firms own or are joint venture partners with U.S. firms in domestic production facilities. The overall level of foreign investment in the ink industry segment is believed to be higher than in the rest of the aggregation. Foreign investment in domestic production facilities is usually in the form of outright ownership or joint venture partnerships.

Manufacturers of the bulk of the products covered in this summary market them to end-use consumers (industrial or private home-use consumers) for inclusion in, or application to, a finished downstream product of some type. That product may be a house, car, toy, newspaper, bridge, currency, or any of thousands of other things. Most of the products sold to

large industrial consumers, such as automakers, and to large printing houses are sold directly, although some of these sales may include a wholesaler in the distribution channel. The level of technical support services for some products, particularly in the ink segment, results in a very short distribution channel. For smaller industrial consumers and for products sold to retail outlets, the distribution channel is more likely to include at least one intermediate level such as a wholesaler. In some instances the retail outlet, particularly those that market products for architectural construction or renovation, may act as a wholesaler to contractors and as a retailer to the general public.

Retail consumers generally consider price a major factor in their decision to purchase these products. For example, most homeowners tend to perceive little difference between various brands and grades of housepaint, although there may be considerable difference in the characteristics that affect performance, such as the quantity and type of solids, the hiding power of the pigments, and the types of additives that are included in the formulation. The homeowner tends to buy the least expensive product that appears likely to do the job. However, in the case of many industrial consumers of both coatings and inks, the percentage of the cost of these products relative to the total cost of the end product (e.g., a stove, a car, a dress, a book, a ship) is small. As a result, the performance characteristics of the coating or ink increase in importance.

Industry analysts indicate that the paints, inks, and related items industry is a fairly mature market segment. The average level of technology involved in developing the products covered in this summary, and in the processes involved in making them, is considered to be moderate. There are some multipart coating systems that could be considered "high tech," but many of the paints, inks, and related items covered in this summary are relatively simple formulations that are easily made and could be considered "low tech." The level of technology in the manufacturing plants ranges from hand mixing operations to very high-tech computer-controlled machines designed to maintain the characteristics of the finished product within very small tolerances.

The principal direction of research and development (R&D) in these industries is toward developing new processes and products and reformulating of older products to meet increasingly restrictive environmental regulations, particularly regarding volatile organic chemical (VOC) emissions during application and drying or curing operations. In addition, developments in the areas of industrial waste disposal, and particularly waste product, byproduct, and raw material recycling programs, account for significant portions of many R&D budgets. The other major applications of R&D expenditures in these industries include tailoring products to specific customer requirements and providing technical support to the sales divisions.

Consumer Characteristics and Factors Affecting Demand

The major domestic industries that consume paints, inks, and related items in the process of manufacturing are the construction and maintenance industry, original equipment manufacturers, the graphic arts industry, and the printing industry (figure 1). The products manufactured by the firms in these industries are used in the manufacture of many thousands of finished products, including houses, bridges, textiles, toys, tools, electronic equipment, paintings and other artwork, printed matter, meat and poultry inspection stamps, wire and cable sheathing, postage stamps, and money. In addition, a substantial amount of paint, inks, and related items are consumed by individuals for personal use in activities such as painting the house, writing a letter, etc. The amount of income that is available to the ultimate consumer that would be allocated to the purchase of paints, inks, and related items, and the downstream consumer goods that these products are part of, are directly related to the economic health of the general economy. As a result, demand shifts for the paints, inks, and related items manufactured in this industry tend to closely track the patterns exhibited by the general economy.

FOREIGN INDUSTRY PROFILE

It is not always practical to import these products, for several reasons. Paints, inks, and related materials are widely used. Many of the simpler formulations can be produced relatively easily. Many coatings offer only relatively small profit margins. Finally, transportation costs are high. These industries have therefore developed early in nearly every country in the world. As the population and the level of industrialization increase in a developing country, so too do the range and complexity of products and the number and type of manufacturing facilities. At present, the United States, Western Europe, and Japan are the largest manufacturers of these products in the world, with combined production exceeding 30 billion pounds, valued at nearly \$40 billion. Industry observers estimate that the levels of production and consumption of paints, inks, and related items in United States and Western Europe are about the same. They also estimate that Japan produces and consumes a little less than half the volume of paints, inks, and related items that are produced and consumed in the United States.

Foreign producers of paints, inks, and related items are constrained by the same distribution-limiting economic factors as are U.S. producers. As a result, international trade in the conglomeration of products covered in this summary is generally limited to specialty coatings, inks, and related items for which there is little domestic competition, to products for which the profit margin is high enough to cover transportation costs, and, to a much lesser extent, to trade or product transfers between related firms. The

bulk of the products covered in this summary are not internationally competitive when transported over long distances. For most of the subject products and particularly for the paints and related items segment, transportation costs far outweigh any other single factor or combination of factors in determining their competitiveness in international markets. As a result, there is more trade in paints, inks, and related items among the countries in Western Europe as a result of their relative proximity than between these countries and the United States. Likewise, Canada is the largest foreign market for domestically manufactured paints, inks, and related products, as well as the largest foreign supplier of these products to the United States.

U.S. TRADE MEASURES

Tariff Measures

Table 1 provides the column 1-general rates of duty, any applicable special rates of duty, U.S. imports for 1990, and U.S. exports for 1990 for each of the 8-digit Harmonized Tariff Schedule (HTS) headings² and subheadings describing the products covered in this summary. See appendix A for an explanation of tariff and trade agreement terms. The aggregate trade-weighted average rate of duty for the paints, inks, and related items covered in this summary amounted to slightly less than 3 percent ad valorem during 1990.

There were no substantive changes in the classification of paints, inks, and related items at the 8-digit rate of duty level resulting from the conversion from the Tariff Schedules of the United States (TSUS) to the HTS that affected the levels of international trade in these products. There were, however, several differences in the relevant product descriptions at the 8-digit level resulting from the conversion that affected the ability to reconcile the statistical data collected under these classification systems on some individual items.

In the case of artists' colors and the like, whether or not they are imported in sets, some categories of the former TSUS have been consolidated in the HTS, thus resulting in a loss of statistical detail. In the case of paints, varnishes, and the like, the basis on which they are classified has been changed. In the TSUS, paints, varnishes, and stains were separately classified.

In addition, paints and enamels were classified in the TSUS on the basis of whether or not they contained the white pigment titanium dioxide, and varnishes were classified by type as being either shellac, oleoresinous, cellulosic, or other. Stains were not subdivided in the TSUS but were listed separately from paints and varnishes and other coatings. In the HTS, paints, varnishes, and stains are classified together, and the

² 3210.00.00 and 3211.00.00 as shown in table 1 are headings, not subheadings as defined in general note 7(f) of the HTS.

Table 1

Paints, Inks, and related items: Harmonized Tariff Schedule subheading; description; U.S. col. 1 rate of duty as of Jan. 1, 1991; U.S. exports, 1990; and U.S. imports, 1990

HTS subheading	Description	Col. 1 rate of duty As of Jan. 1, 1991		U.S. exports, 1990	U.S. imports, 1990
		General	Special ¹		
Million dollars					
3207.20.00	Vitrifiable enamels and glazes, engobes (slips), and similar preparations	4.9%	Free (A,E,IL) 1.9% (CA)	24	1
3207.30.00	Liquid lusters and similar preparations	3.1%	Free (A,E,IL) 1.2% (CA)	28	1
3208.10.00	Paints and varnishes (including enamels and lacquers) based on synthetic or chemically modified natural polyesters, dispersed or dissolved in a nonaqueous medium.1.4% (CA)	3.7%	Free (A,E,IL)	43	5
3208.20.00	Paints and varnishes (including enamels and lacquers) based on synthetic or chemically modified natural acrylic or vinyl polymers, dispersed or dissolved in a nonaqueous medium	3.6%	Free (A,E,IL) 1.4% (CA)	84	19
3208.90.00	Paints and varnishes (including enamels and lacquers) based on synthetic or chemically modified natural polymers other than polyesters, acrylic, or vinyl polymers, dispersed or dissolved in a nonaqueous medium; solutions as defined in note 4 of HTS chapter 32	3.2%	Free (A,E,IL) 1.2% (CA)	133	36
3209.10.00	Paints and varnishes (including enamels and lacquers) based on synthetic or chemically modified natural acrylic or vinyl polymers, dispersed or dissolved in an aqueous medium	5.1%	Free (A,E,IL) 2% (CA)	42	6
3209.90.00	Paints and varnishes (including enamels and lacquers) based on synthetic or chemically modified natural polymers other than acrylic or vinyl polymers, dispersed or dissolved in an aqueous medium	5.9%	Free (A,E,IL) 2.3% (CA)	67	15
3210.00.00 ²	Other paints and varnishes (including enamels, lacquers, and distempers); prepared water pigments of a kind used for finishing leather	1.8%	Free (A,E,IL) 0.7% (CA)	25	6
3211.00.00 ²	Prepared driers	3.7%	Free (E,IL) 1.4% (CA)	3	3
3212.10.00	Stamping foils	4.7%	Free (A,E,IL) 1.8% (CA)	16	20

See footnotes at end of table.

Table 1—Continued

Paints, inks, and related items: Harmonized Tariff Schedule subheading; description; U.S. col. 1 rate of duty as of Jan. 1, 1991; U.S. exports, 1990; and U.S. imports, 1990

HTS subheading	Description	Col. 1 rate of duty As of Jan. 1, 1991		U.S. exports, 1990	U.S. imports, 1990
		General	Special ¹		
Million dollars					
3213.10.00	Artists', students', or signboard painters' colors, modifying tints, amusement colors, and the like, in tablets, tubes, jars, bottles, pans, or similar forms or packings and assembled into sets.	6.5% on the entire set	Free (A,E,IL) 2.6% on the entire set (CA)	6	7
3213.90.00	Artists', students', or signboard painters' colors, modifying tints, amusement colors, and the like, in tablets, tubes, jars bottles, pans, or similar forms or packings not assembled into sets	0.5¢/piece + 2.8%	Free (A,E,IL) 0.2¢/piece + 1.1% (CA)	12	11
3214.10.00	Glaziers' putty, grafting putty, resin cements, caulking compounds, and other mastics; and painters' fillings	3.7%	Free (A,E,IL) 1.4% (CA)	48	15
3214.90.10	Nonrefractory surfacing preparations for facades, indoor walls, floors, ceilings or the like based on rubber.	Free	None	14	2
3214.90.50	Nonrefractory surfacing preparations for facades, indoor walls, floors, ceilings or the like not based on rubber	11%	Free (E,IL) 4.4% (CA)	59	4
3215.11.00	Black printing ink	1.8%	Free (A,E,IL) 0.7% (CA)	46	20
3215.19.00	Printing inks other than black	1.8%	Free (A,E,IL) 0.7% (CA)	48	42
3215.90.10	Drawing ink	3.1%	Free (A,E,IL) 1.2% (CA)	1	2
3215.90.50	Inks other than printing or drawing inks	1.8%	Free (A,E,IL) 0.7% (CA)	49	22

¹ Programs under which special tariff treatment may be provided, and the corresponding symbols for such programs as they are indicated in the "Special" subcolumn of the HTS, are as follows: Generalized System of Preferences (A); Automotive Products Trade Act (B); Agreement on Trade in Civil Aircraft (C); United States-Canada Free-Trade Agreement (CA); Caribbean Basin Economic Recovery Act (E); and United States-Israel Free-Trade Area (IL).

² 3210.00.00 and 3211.00.00 are headings, not subheadings as defined in general note 7(f) of the HTS.

Source: U.S. exports and imports compiled from official statistics of the U.S. Department of Commerce.

grouping is divided into various subheadings on the basis of the type of solvent (aqueous or nonaqueous) and the type of film-forming polymer or combination of polymers that is included in the formulation of these products. In the HTS, the type of pigment contained in the formulation is not considered a factor for the purpose of classification.

In addition, vitrifiable enamels and glazes, liquid lusters, and the like, which are used primarily in the manufacture of glazed pottery and various other types of ceramic products, were classified in the TSUS in the category of glass and glass products, whereas in the HTS they are treated as surface coatings.

FOREIGN TRADE MEASURES

The major foreign markets for U.S. manufacturers of paints, inks, and related items were Canada, Japan, Germany, the United Kingdom, and the Netherlands during 1986-90. The level of tariffs in all of these countries is generally higher than the comparable U.S. rates of duty applied to the like or similar paints, inks, and related items covered in this summary. With respect to printing inks, in particular, the disparity between the rates of duty imposed by the United States and those of some of the major trading partners has resulted in limiting U.S. producers' attempts to export domestically produced merchandise to these countries. In addition, the relatively low U.S. duty rates on printing and other inks have resulted in a level of import penetration in that market segment that is somewhat higher than the aggregate level of import penetration for all of the products covered in this summary. The disparity in duty rates with regard to trade in paints, inks, and related items between the United States and Canada has been declining since 1988 as a result of the U.S.-Canada Free Trade Agreement (CFTA). These disparities will end completely in 1993 when the duty rates for each country with respect to articles imported from the other will be reduced to "free."

There are no known nontariff import restrictions, quotas, or other governmental actions affecting international trade in paints, inks, and related items.

U.S. MARKET

Consumption

The estimated value of apparent U.S. consumption of paints, inks, and related items increased at an average annual rate of about 7.8 percent, from about \$14.8 billion in 1986 to nearly \$20.0 billion in 1990 (table 2, figure 2). U.S. imports of paints, inks, and related items have accounted for about 1 percent of U.S. apparent consumption for many years (figure 3).

The majority of the paints, inks, and related items covered in this summary are relatively low unit cost items with relatively small profit margins. They are also heavy and bulky to ship, resulting in relatively high transportation costs, which constitute a major portion of the final delivered price of the product. As a result, the manufacturing facilities that produce paints, inks, and related items are numerous and widely scattered throughout the country, and the products they make are generally sold to customers located close by. Transportation costs, then, are the primary deterrent to increased import penetration for most of these products.

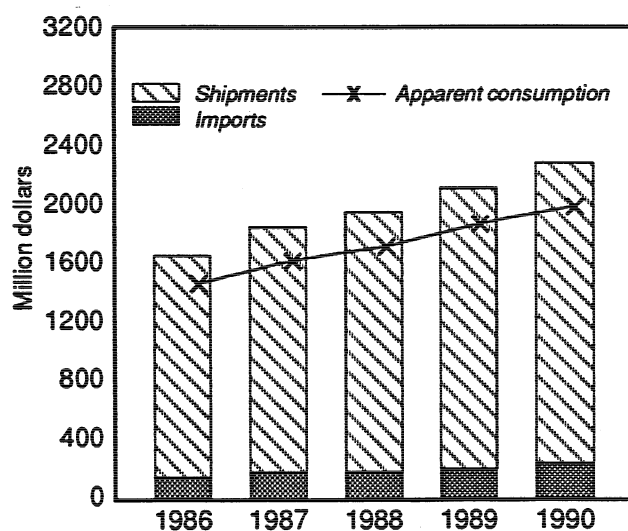
There are some exceptions, however, the most important example being printing inks. Printing inks account for approximately 12 to 15 percent of the total value of all shipments of the products covered in this summary. Industry analysts estimated that the level of import penetration of the domestic printing ink market ranged from 3 to 5 percent of apparent U.S. consumption during 1986-90. Printing inks are generally higher value-added products with relatively larger profit margins than the typical item covered in this summary. As a result, they can be shipped further and still be profitable.

Among the major foreign producing countries, the levels of technology, quality, price, support services, performance, responsiveness to orders, and so forth are generally similar to those for competing products manufactured in the United States. However, as noted previously, transportation costs are the overriding deterrent to increased import penetration for most of the products covered in this summary. Because of this constraint, and the fact that most of these industries are considered to be fairly mature, the overall share of U.S. consumption supplied by imported paints, inks, and related items is unlikely to change markedly in the foreseeable future.

Production

The value of U.S. shipments of paints, inks, and related items increased from about \$15.1 billion in 1986 to about \$20.5 billion in 1990. This growth represents an increase of about 36 percent and an average annual rate of about 8 percent during the period. However, in terms of constant dollars, the total increase in U.S. shipments during the period is estimated to have been only about 5 to 6 percent, representing an average annual increase of between 1 and 2 percent. The quantity of production during the same period is estimated to have increased at an average annual rate of only about 1 to 3 percent. The increase in the value of shipments during 1986-90 is accounted for primarily by inflation and by some changes in the aggregate product mix toward a larger proportion of higher value products. Most of the

Figure 2
Paints, inks, and related items: U.S. Imports, producers' shipments,¹ and apparent consumption²

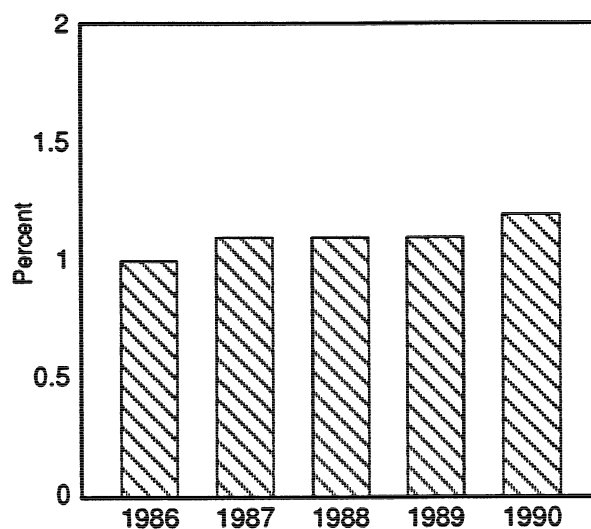


¹ Estimated by the staff of the U.S. International Trade Commission.

² Apparent consumption = producers shipments + imports - exports.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

Figure 3
Paints, inks, and related items: Ratio of U.S. imports, to apparent U.S. consumption



Source: Compiled from official statistics of the U.S. Department of Commerce and estimates by the staff of the U.S. International Trade Commission.

Table 2

Paints, Inks, and related items: U.S. shipments, exports of domestic merchandise, imports for consumption, and apparent U.S. consumption, 1986-90

Year	U.S. shipments ¹	U.S. exports	U.S. imports	Apparent U.S. consumption	Ratio of imports to consumption
	Million dollars				Percent
1986	15,058	399	148	14,807	1.0
1987	16,662	502	183	16,343	1.1
1988	17,681	556	183	17,308	1.1
1989	19,154	534	200	18,820	1.1
1990	20,500	748	239	19,991	1.2

¹ Estimated by the staff of the U.S. International Trade Commission.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

industries covered here are considered mature, and rapid growth in the quantities of production is believed to be unlikely. There are some high-value specialty product areas where rapid growth could occur. However, the total quantity of all of the products covered in this summary is expected to continue to grow at an average annual rate of 1 to 3 percent.

Estimated end-of-year inventories of paints, inks, and related items are believed to have remained fairly consistent at levels amounting to about 10 to 13 percent of the value of product shipments during the period. Such product inventories are estimated to have ranged from about \$1.5 billion in 1986 to about \$2.6 billion in 1990. The recession and higher energy, oil, and other raw material prices are believed to have resulted in some increase in inventories during 1990. However, these industries appeared to have been reasonably well prepared for this recession and inventories of paints, inks, and related items do not appear to have increased unmanageably through the end of 1990.

Imports

Products Imported

There is a significant difference in the variety and the per-unit value of the mix of imported products compared with the general mix available in the U.S. marketplace. However, because of its proximity to U.S. markets, particularly those markets located in border States, the product mix of imports of paints, inks, and related items from Canada generally contains a somewhat higher percentage of low-to-moderately valued products than does the mix of products imported from other countries. The U.S. imports from countries other than Canada consist nearly entirely of high-value inks, particularly printing inks, high-performance specialty coatings and sealants, and art supplies. As a result, the average unit value of imported products is estimated to be considerably higher than the average unit value of all domestically produced products.

Import Levels And Trends

The value of U.S. imports of paints, inks, and related items increased from about \$148 million in 1986 to about \$239 million in 1990, representing an average annual increase during the period of about 12.8 percent (table 3). The actual rate of increase in the total quantity of these products probably was considerably less during the period. The aggregate level of import penetration has remained relatively stable, ranging from 1 to 1.2 percent of the value of apparent domestic consumption during 1986-90. The majority of the increase in the total value of imports of paints, inks, and related items occurred during 1989 and 1990. The increase in the value of imports of these products in 1990 alone accounted for 43 percent of the increase for the entire period. This increase is principally the result of significant increases in the costs of raw materials, energy, and transportation, all of which were fueled by sharp increases in crude oil prices, particularly in the last half of the year when tension in the Persian Gulf area was increasing.

Imports of paints, inks, and related items that entered the United States duty free or at reduced duties as a result of trade agreements or special programs amounted to about \$34 million, or about 14 percent of total imports of these products during 1990. Nearly \$30 million of these products entered under special rates of duty from Canada during 1990, as a result of the U.S.-Canada Free-Trade Agreement. In addition, about 4 million dollars' worth of paints, inks, and related items entered the United States during 1990 under the provisions of the Generalized System of Preferences (GSP). Venezuela and Mexico supplied nearly 85 percent of GSP imports in 1990. Also, about 205,000 dollars' worth of paints, inks, and related items entered into the United States duty free or at reduced duties from Israel under provisions of the U.S.-Israel Free-Trade Area Implementation Act (IFTA) during 1990, and about 102,000 dollars' worth

Table 3
Paints, Inks, and related items: U.S. imports for consumption, by principal source, 1986-90
(1,000 dollars)

Source	1986	1987	1988	1989	1990
Canada	(2)	(2)	(2)	44,480	59,224
Japan	(2)	(2)	(2)	41,385	47,461
Germany	(2)	(2)	(2)	33,703	41,570
United Kingdom	(2)	(2)	(2)	23,836	28,156
Netherlands	(2)	(2)	(2)	17,057	19,257
Belgium	(2)	(2)	(2)	8,469	8,048
Italy	(2)	(2)	(2)	6,896	5,972
Sweden	(2)	(2)	(2)	5,218	5,656
France	(2)	(2)	(2)	4,154	4,759
Switzerland	(2)	(2)	(2)	2,644	4,617
All other	(2)	(2)	(2)	11,771	14,617
Total	147,619	182,647	183,389	199,613	239,393

¹ Quantities and unit values are not available because of the incompatibility of the units of quantity in which the data are collected.

² Country detail is provided only for years in which there are actual import data under the HTS and is suppressed for years in which the data were derived from the TSUS using a concordance.

Source: Compiled from official statistics of the U.S. Department of Commerce.

of imports entered duty free under the Caribbean Basin Economic Recovery Act (CBERA). Most CBERA imports of these products came from Panama and Costa Rica. There were no imports of paints, inks, or related items under HTS subheading 9802.00.60 (products of U.S.-origin metal processed in a foreign location and returned to the United States for further processing) or HTS subheading 9802.00.80 (imported goods containing U.S.-made components) during 1986-90. Paints, inks, and related items manufactured in developing countries tend to be principally lower value products manufactured for local consumption. Because of the high cost of transportation relative to the profit margin on these items, they generally are not attractive as exports.

Principal Import Suppliers

The principal supplier of imported paints, inks, and related items to the United States during 1986-90 was Canada. In 1990, Canada supplied about \$59 million in paints, inks, and related products to customers in the United States. These imports amounted to about 25 percent of all U.S. imports of paints, inks, and related items during 1990. Japan, Germany, the United Kingdom, and the Netherlands make up the rest of the top five foreign suppliers of these products to the U.S. marketplace. Together these five countries supplied nearly 82 percent of all U.S. imports of paints, inks, and related items in 1990. Canada's prominence in supplying the U.S. import market is principally the result of its proximity to many of the U.S. end-use consumers of these products (e.g., the automotive industry and durable goods manufacturers), which have manufacturing facilities located in States adjacent to the U.S.-Canadian border. The only broad group of countries that supplied a significant quantity of paints, inks, and related items to the U.S. market during 1986-90 was the European Community (EC). U.S. imports of paints, ink, and related items from the EC

during 1990 amounted to about \$110 million, or 46 percent of the total of all U.S. imports of these products. This level represents an increase of about \$15 million, or nearly 16 percent more than the total in 1989. About \$89 million, representing about 81 percent of all U.S. imports of these products from EC countries, came from Germany, the United Kingdom, and the Netherlands.

There do not appear to be any small but rapidly growing suppliers for paints, inks, and related items. Nor would one expect to find such suppliers, given the relative maturity of the industries that manufacture products covered in this summary and the constraints that transportation costs put on international trade.

U.S. Importers

The principal importers of paints, inks, and related items were industrial and architectural end-use consumers or international traders acting as agents for them. A significant amount of paints, inks, and related items was also imported by some of the larger domestic manufacturers of these products. In addition, there were also some imports by retail stores and catalog order houses for sale to the general public.

FOREIGN MARKETS

Foreign Market Profile

The predominant foreign market for U.S. exports of paints, inks, and related items during 1986-90 was Canada. Again, proximity and, therefore, relatively low transportation costs were the major factors. U.S. exports of paints, inks, and related items to Canada in 1990 amounted to about \$288 million, representing nearly 39 percent of the total of U.S. exports of these products. Japan (\$48 million, 6 percent); the United Kingdom (\$45 million, 6 percent); Mexico (\$37 million, 5 percent); and Germany, including both

eastern and western Germany (\$26 million, 3 percent), make up the rest of the top five markets for U.S. exports of paints, inks, and related items. The major factors affecting trade with countries other than Canada, where relatively low transportation costs were the primary factor, included product quality, performance, and the ability to meet stringent environmental or other special requirements in certain end-use applications. In addition, some of the trade is with firms in countries that do not have the expertise or the inclination to produce the high-performance specialty coatings required by some of the products they do manufacture. Industry analysts have indicated that it is unlikely that the implementation of the EC 92 program, the shift of Eastern European countries to a market economy, or any other major events in foreign markets will significantly affect imports or exports in the foreseeable future.

U.S. Exports

Products Exported

U.S. exports of paints, inks, and related items to all countries accounted for approximately 2 to 4 percent of domestic production during 1986-90. The product mix of U.S. exports generally tends to include a larger proportion of high-value specialty coatings and inks than does the product mix of paints, inks, and related items available in the domestic marketplace. In addition, the range of domestic paints, inks, and related items produced for export is much narrower than that of products available in the U.S. market. The most important items of foreign trade in terms of the value of shipments were nonaqueous specialty coatings, which amounted to about \$271 million, or 35 percent of all U.S. exports of paints, inks, and related items during 1990.

Export Levels And Trends

U.S. exports of paints, inks, and related items increased from around \$399 million in 1986 to about

\$748 million in 1990, representing an increase of more than 87 percent during the period (table 4). The average annual increase during the period was about 17 percent. U.S. exports of paints, inks, and related items, though larger than imports because of the strength and broad range of products manufactured domestically, were still constrained for the most part by transportation costs. Canada, Japan, Mexico, and the EC countries—particularly Germany, the United Kingdom, and the Netherlands—are now, and are expected to continue to be, the principal foreign markets for domestically manufactured paints, inks, and related items.

U.S. Exporters

The principal exporters of paints, inks, and related items were generally the manufacturers themselves, or international trading firms acting as agents for them. There were also some exports by wholesale distributors, some of which may be subsidiaries or otherwise affiliated with one or more of the producing firms. In addition, some exports are offered through catalog sales. Examples include specialty coatings or inks in small quantities, art supplies and sets, and specialty consumer items such as porcelain refinishing compounds.

U.S. TRADE BALANCE

The U.S. trade balance increased from a positive \$252 million in 1986 to a positive \$508 million in 1990 (table 5). The average annual increase during the period was about 19.2 percent. This trend is expected to continue in the foreseeable future for the products covered in this summary. The quantity of U.S. exports is projected to grow at a rate similar to that of U.S. imports. Exports are already larger than imports, and the average unit values of the respective product mixes are estimated to be similar and are expected to remain so. Therefore, the gap between the values of imports and exports can only grow wider, resulting in an increasingly positive trade balance in these products.

Table 4
Paints, inks, and related items: U.S. exports of domestic merchandise, by principal markets,
1986-90¹

(1,000 dollars)

Market	1986	1987	1988	1989	1990
Canada	(2)	(2)	(2)	152,719	287,870
Japan	(2)	(2)	(2)	45,200	47,718
United Kingdom	(2)	(2)	(2)	29,361	45,241
Mexico	(2)	(2)	(2)	29,496	37,082
Germany	(2)	(2)	(2)	11,383	26,023
Netherlands	(2)	(2)	(2)	18,523	24,692
Hong Kong	(2)	(2)	(2)	18,691	21,020
Singapore	(2)	(2)	(2)	14,906	20,815
Australia	(2)	(2)	(2)	16,811	19,453
Taiwan	(2)	(2)	(2)	17,603	17,480
All other	(2)	(2)	(2)	178,891	200,138
Total	399,377	501,662	556,445	533,584	747,531

¹ Quantities and unit values are not available because of the incompatibility of the units of quantity in which the data are collected.

² Country detail is provided only for years in which there are actual export data under the new Schedule B and is suppressed for years in which the data were derived from the old Schedule B using a concordance.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 5

Paints, inks, and related items: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 1986-90¹
(Million dollars)

Item	1986	1987	1988	1989	1990
U.S. exports of domestic merchandise:					
Canada	(2)	(2)	(2)	153	288
Japan	(2)	(2)	(2)	45	48
Mexico	(2)	(2)	(2)	29	37
Germany	(2)	(2)	(2)	11	26
United Kingdom	(2)	(2)	(2)	29	45
Taiwan	(2)	(2)	(2)	18	17
Republic of Korea	(2)	(2)	(2)	19	17
France	(2)	(2)	(2)	9	16
Italy	(2)	(2)	(2)	7	8
China	(2)	(2)	(2)	6	3
All other	(2)	(2)	(2)	207	242
Total	399	502	556	533	748
EC-12	65	79	96	87	134
OPEC	27	29	32	32	28
ASEAN	19	23	26	29	38
CBERA	29	32	34	33	32
Eastern Europe	1	(3)	(3)	(3)	(3)
U.S. imports for consumption:					
Canada	(2)	(2)	(2)	44	59
Japan	(2)	(2)	(2)	41	47
Mexico	(2)	(2)	(2)	3	4
Germany	(2)	(2)	(2)	34	42
United Kingdom	(2)	(2)	(2)	24	28
Taiwan	(2)	(2)	(2)	2	1
Republic of Korea	(2)	(2)	(2)	1	1
France	(2)	(2)	(2)	4	5
Italy	(2)	(2)	(2)	7	6
China	(2)	(2)	(2)	1	2
All other	(2)	(2)	(2)	38	44
Total	148	183	183	200	239
EC-12	86	101	93	95	110
OPEC	(3)	(3)	(3)	(3)	2
ASEAN	(3)	(3)	1	(3)	(3)
CBERA	(3)	(3)	(3)	(3)	(3)
Eastern Europe	(3)	(3)	(3)	3	0
U.S. merchandise trade balance:					
Canada	(2)	(2)	(2)	109	229
Japan	(2)	(2)	(2)	4	(3)
Mexico	(2)	(2)	(2)	26	33
Germany	(2)	(2)	(2)	-22	-16
United Kingdom	(2)	(2)	(2)	6	17
Taiwan	(2)	(2)	(2)	16	16
Republic of Korea	(2)	(2)	(2)	18	17
France	(2)	(2)	(2)	5	11
Italy	(2)	(2)	(2)	(3)	2
China	(2)	(2)	(2)	5	2
All other	(2)	(2)	(2)	169	197
Total	252	319	373	334	508

See footnotes at end of table.

Table 5—Continued

Paints, Inks, and related items: U.S. exports of domestic merchandise, Imports for consumption, and merchandise trade balance, by selected countries and country groups, 1986-90¹
(Million dollars)

<i>Item</i>	<i>1986</i>	<i>1987</i>	<i>1988</i>	<i>1989</i>	<i>1990</i>
EC-12	-21	-22	3	-9	25
OPEC	26	28	32	32	25
ASEAN	17	23	25	29	38
CBERA	29	32	34	33	31
Eastern Europe	1	(³)	(³)	(³)	(³)

¹ Import values based on customs value; export values based on f.a.s. value, U.S. port of export. U.S. trade with East Germany is included in "Germany" but not "Eastern Europe." Data before 1989 are estimated.

² Country detail is provided only for years when there were actual import data under the HTS and export data under the new Schedule B, and is suppressed for years in which the data were derived from the TSUS and the old Schedule B using concordances.

³ Less than \$500,000.

Source: Compiled from official statistics of the U.S. Department of Commerce.

APPENDIX A
EXPLANATION OF TARIFF AND TRADE AGREEMENT TERMS

TARIFF AND TRADE AGREEMENT TERMS

The *Harmonized Tariff Schedule of the United States* (HTS) replaced the *Tariff Schedules of the United States* (TSUS) effective January 1, 1989. Chapters 1 through 97 are based on the internationally adopted Harmonized Commodity Description and Coding System through the 6-digit level of product description, with additional U.S. product subdivisions at the 8-digit level. Chapters 98 and 99 contain special U.S. classification provisions and temporary rate provisions, respectively.

Rates of duty in the *general* subcolumn of HTS column 1 are most-favored-nation (MFN) rates; for the most part, they represent the final concession rate from the Tokyo Round of Multilateral Trade Negotiations. Column 1-general duty rates are applicable to imported goods from all countries except those enumerated in general note 3(b) to the HTS, whose products are dutied at the rates set forth in *column 2*. Goods from Armenia, Bulgaria, the People's Republic of China, Czechoslovakia, Estonia, Hungary, Latvia, Lithuania, Moldova, Mongolia, Poland, Russia, the Ukraine and Yugoslavia are currently eligible for MFN treatment. Among articles dutiable at column 1-general rates, particular products of enumerated countries may be eligible for reduced rates of duty or for duty-free entry under one or more preferential tariff programs. Such tariff treatment is set forth in the *special* subcolumn of HTS column 1. Where eligibility for special tariff treatment is not claimed or established, goods are dutiable at column 1-general rates.

The *Generalized System of Preferences* (GSP) affords nonreciprocal tariff preferences to developing countries to aid their economic development and to diversify and expand their production and exports. The U.S. GSP, enacted in title V of the Trade Act of 1974 and renewed in the Trade and Tariff Act of 1984, applies to merchandise imported on or after January 1, 1976, and before July 4, 1993. Indicated by the symbol "A" or "A*" in the special subcolumn of column 1, the GSP provides duty-free entry to eligible articles the product of and imported directly from desig-

nated beneficiary developing countries, as set forth in general note 3(c)(ii) to the HTS.

The *Caribbean Basin Economic Recovery Act* (CBERA) affords nonreciprocal tariff preferences to developing countries in the Caribbean Basin area to aid their economic development and to diversify and expand their production and exports. The CBERA, enacted in title II of Public Law 98-67, implemented by Presidential Proclamation 5133 of November 30, 1983, and amended by the Customs and Trade Act of 1990, applies to merchandise entered, or withdrawn from warehouse for consumption, on or after January 1, 1984; this tariff preference program has no expiration date. Indicated by the symbol "E" or "E*" in the special subcolumn of column 1, the CBERA provides duty-free entry to eligible articles the product of and imported directly from designated countries, as set forth in general note 3(c)(v) to the HTS.

Preferential rates of duty in the special subcolumn of column 1 followed by the symbol "IL" are applicable to products of Israel under the *United States-Israel Free-Trade Area Implementation Act* of 1985, as provided in general note 3(c)(vi) of the HTS. When no rate of duty is provided for products of Israel in the special subcolumn for a particular provision, the rate of duty in the general subcolumn of column 1 applies.

Preferential rates of duty in the special duty rates subcolumn of column 1 followed by the symbol "CA" are applicable to eligible goods originating in the territory of Canada under the *United States-Canada Free-Trade Agreement*, as provided in general note 3(c)(vii) to the HTS.

Preferential nonreciprocal duty-free or reduced-duty treatment in the special subcolumn of column 1 followed by the symbol "J" or "J*" in parentheses is afforded to eligible articles the product of designated beneficiary countries under the *Andean Trade Preferences Act* (ATPA), enacted in title II of Public Law 102-182 and implemented by Presidential Proclamation 6455 of July 2, 1992 (effective July 22, 1992), as set forth in general note 3(c)(ix) to the HTS.

Other special tariff treatment applies to particular *products of insular possessions* (general note 3(a)(iv)), goods covered by the *Automotive Products Trade Act* (general note 3(c)(iii)) and the *Agreement on Trade in Civil Aircraft* (general note 3(c)(iv)), and *articles imported from freely associated states* (general note 3(c)(viii)).

The *General Agreement on Tariffs and Trade* (GATT) (61 Stat. (pt. 5) A58; 8 UST (pt. 2) 1786) is the multilateral agreement setting forth basic principles governing international trade among its more than 90 signatories. The GATT's main obligations relate to most-favored-nation treatment, the maintenance of scheduled concession rates of duty, and national (nondiscriminatory) treatment for imported products. The GATT also provides the legal framework for customs valuation standards, "escape clause" (emergency) actions, anti-dumping and countervailing duties, and other measures. Results of GATT-sponsored multilateral tariff negotiations are set forth by way of separate schedules of concessions for each participating contracting party, with the U.S. schedule designated as schedule XX.

Officially known as "The Arrangement Regarding International Trade in Textiles," the *Multifiber Arrangement* (MFA) provides a framework for the negotiation of bilateral agreements between importing and producing countries, or for unilateral action by importing countries in the absence of an agreement. These bilateral agreements establish quantitative limits on imports of textiles and apparel, of cotton and other vegetable fibers, wool, manmade fibers, and silk blends, in order to prevent market disruption in the importing countries—restrictions that would otherwise be a departure from GATT provisions. The United States has bilateral agreements with more than 30 supplying countries, including the four largest suppliers: China, Hong Kong, the Republic of Korea, and Taiwan.

