

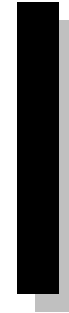
INTRODUCTION

Printing inks (NAICS Code 325910) are a small part of the large chemical and allied products industry. Their use is widespread, particularly in the printing, publishing and packaging industries. The ink industry is comparatively concentrated, with the leading suppliers controlling high market shares. It is also complex, with success depending on factors such as raw material costs, continued development and introduction of new technology, and lastly, the overall economy.

The U.S. printing ink industry comprises companies manufacturing inks in paste or liquid form as complete formulations or as bases subject to subsequent blending. Products not covered in this Guide include inks for office and writing instruments and copying machines.

Shipments of printing inks are estimated at 2,225 million pounds valued at \$4,048 million in 2004, including a minor captive segment that probably accounts for 185 million pounds of shipments. Captive production includes ink produced and used on-site, shipped to other locations, and in some cases, sold to the merchant market. Figure 1-1 presents an overview of ink industry shipments, including its structure, markets and consumption of raw materials.

Market data for printing inks are available from the *Bureau of the Census* annually in the *Annual Survey of Manufactures* and in more detail every fifth year in the *Economic Census*. Limited unit shipment data are provided only in the *Economic Census*. Companies reporting to the *Bureau of the Census* are classified in the industry that they mainly serve. However, they also report information on all products



ECONOMICS

HIGHLIGHTS

- Introduction
-
- Industry Shipments
-
- Forecast
-
- Company Performance
-
- Prices
-
- Operations/Expenditures
-
- Employment/Productivity
-
- Transportation/Distribution
-
- Packaging
-
- Government Regulations
-
- Foreign Trade
-
- World Production
-
- Global Producers

TABLE I-2 Shipments of US Printing Ink 1960-2004 and Forecast for 2010

YEAR	\$ MILLION	% CHANGE
1960	\$221.2	-
1965	324.4	-
1970	389.0	-
1975	698.9	-
1980	1,235.4	12.3%
1985	1,807.8	-0.3
1990	2,754.4	4.4
1995	3,869.2	11.6
1996	4,032.4	4.2
1997	4,076.5	1.1
1998	4,332.2	6.3
1999	4,668.5	8.0
2000	4,669.9	-0.1
2001	4,596.1	-1.6
2002	4,048.0	-12.0
2003	3,940.0	-2.7
2004	4,048.2	2.7
2010	4,450.0	1.6

Average annual rate of change

1960-1970	5.8%
1970-1980	12.3
1980-1990	8.3
1990-2000	5.1
2000-2004	-3.5
2004-2006	1.6

Sources: *Annual Survey of Manufactures - Product Shipments, Economic Census*; and estimates by *Grey House Publishing, Inc.*

TABLE I-3 U.S. Shipments of Related Ink Products 1995, 2000- 2004

Product	<i>Million dollars</i>					
	1995	2000	2001	2002	2003	2004
Pens	619.7	847.1	750.5	623.8	634.0	599.8
Markers	449.6	585.9	520.6	488.2	472.3	491.7
Marking devices	688.9	590.4	543.2	520.0	526.6	522.6
Inked ribbons	795.7	583.5	537.2	507.7	437.8	423.9
Carbon paper	299.9	80.2	86.3	90.1	72.3	82.1

Source: *Annual Survey of Manufactures.*

Lithographic inks are forecast to grow by 1.7% annually through 2010, while flexographic ink growth is forecast at 2.0% a year due to its growth prospects in flexible packaging. Gravure inks are forecast to decline by 1.3% a year as their use in the printing of labels, magazines and catalogues will decline. Letterpress inks will continue to decline at the rate of 2.5% a year. Screen ink growth is forecast at 2.4% a year, while ink jet inks are expected to be the best performer of all ink classes with growth forecast at an annual rate of 4.1%. Miscellaneous inks, including specialty, metallics and other inks, are forecast to grow by 2.2% a year. Overall, unit shipments are forecast at only 0.8% a year, reaching 2,325 million pounds in 2010. Lithographic inks are forecast to grow by 1.7% annually through 2010, while flexographic ink growth is forecast at 2.0% a year due to its growth prospects in flexible packaging. Gravure inks are forecast to decline by 1.3% a year as their use in the printing of labels, magazines and catalogues will decline. Letterpress inks will continue to decline at the rate of 2.5% a year. Screen ink growth is forecast at 2.4% a year, while ink jet inks are expected to be the best performer of all ink classes with growth forecast at an annual rate of 4.1%. Miscellaneous inks, including specialty, metallics and other inks, are forecast to grow by 2.2% a year. Overall, unit shipments are forecast at only 0.8% a year, reaching 2,325 million pounds in 2010.

COMPANY PERFORMANCE

Table 1-5 ranks the 35 leading U.S. ink producers with their principal products based on estimated domestic sales in 2005. This group historically holds 75-80% of industry shipments, with the top ten companies traditionally accounting for 65-70% of the industry total

With the exception of screen, ink jet inks and digital inks, most of the larger companies offer a full line of products. The medium-sized companies tend to specialize in either paste or liquid ink, and the smaller producers in lithographic or specialty inks for sale

regionally. Many of the large suppliers are owned by foreign parents—Sun Chemical by Dianippon, Inx International by Sakata, Siegwark by Siegwark Druckfarben, and Van Son Holland by Van Son NV.

Concentration ratios in the industry indicate a high level of control by the leading suppliers. Data for the industry for 1972 to 1997 in five-year periods are shown in Table 1-6. The information from the 2002 Census will be available in June 2006. As illustrated, concentration is strong among the top four and eight largest companies. However, control after the leaders is more fragmented. Concentration among four leading ink suppliers of 55% in 1997 compares to 19% for paper manufacturing; 22% for the adhesives and sealants industry; 32% for paints and allied products; 45% for explosives; and 12% for chemicals.

Despite the numerous recent acquisitions, we estimate that the industry has become somewhat less concentrated, particularly after the top suppliers. The primary reasons for the trend are the continual creation of new companies and the increasing share of digital inks and ink jet inks, which are produced by a different group of companies, mostly smaller. Major acquisitions from 1998 to late mid 2006 are shown in Table 1-7. Of the 49 listed, four companies—Flint Ink, Wickoff Color, Braden Sutphin, and Sun Chemical purchased 19 companies between them, or 39% of the total. Notable acquisitions include Flint Ink's purchases of XSYS, Noveon, The Ink Company, the heatset and coldset inks of SICPA, Manders, and the Canadian business of Druckfarben Gebruder Schmidt; Wickoff Color's acquisitions of Century Color, Merit Ink & Coating, and Frontier Printing Inks; Braden Sutphin's purchases of INCO, Roli Ink and Water Color Graphics; and Sun Chemical's acquisitions of Rycoline, Organic pigments division of Bayer, Thomas Printing Inks, Heritage Inks International, Coates Lorilleux from TotalFina, the printing ink business United Printing Ink & Supply, and Allied Printers Ink.