Market Study: Printing Inks -Europe







Dear decision-makers,

Nowadays, information is available in overwhelming amounts. But what is the best way to find the crucial data?

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Oliver Kutsch, CEO



Our Market Studies

Your Strategic Planning

Your **Success**

Your competent partner for market studies:

- Experienced and neutral experts
- Quantitative and qualitative primary and secondary market research
- Reliable and objective survey, analysis, forecast, and preparation of data
- Expertise in branches, legal situation, innovations, and technologies

The basis for your strategic planning:

- Analysis of attractiveness and current situation of the market
- · Analysis of the future development of the market
- Analysis of competitors
- Analysis of customer industries
- · Analysis of supply industries

With our studies you will recognize:

- Current market trends and developments on time
- Ideal procurement and sales markets
- Relevant future markets and target groups
- · Risks and market chances on time
- Candidates for mergers and acquisitions as well as divestments

The strategic planning enables you to:

- Restructure your product portfolio
- Evaluate current and potential locations
- Plan and develop new marketable products
- Better adapt to needs and requirements of customers
- · Deal with future markets

A crucial question for many players in the printing ink industry is: How to operate successfully in a shrinking market; where can growth areas still be found? Decisions should be supported by solid information and well-considered. This study provides transparency for the European printing ink market and makes future scenarios quantifiable. The rapid ascent of online printing plants has revolutionized the printing industry in recent years. In increasing numbers of segments, digital printing can serve customers faster and more efficiently than analogue printing processes. Besides substitution effects between the particular printing processes, especially publication printing is exposed to a high competition with digital publishing processes. Ceresana expects the market for printing inks to decrease to 1.17 million tonnes until 2024.

Growth Market Eastern Europe

In various Eastern European countries, total demand for printing inks is expected to increase in the upcoming years. Publication printing also has to face the problems of decreasing print circulations, a lack of advertising budgets, and the migration to competing digital products. However, the losses in this segment will be more than compensated by a very dynamic packaging market. In Russia for instance, the demand of newspaper printing will most presumably decline by about 3.8 % per year, but the demand in the segment packaging printing will increase by 4.2 %.

Digital printing: Trend Towards Inkjet Unbroken

There is a trend towards smaller circulations, a higher number of printing orders and personalized contents in an ever shorter time which favors digital printing that enables enormous time savings due to a fast production, adaption, and transmission. Digital printing systems can demonstrate their strengths in the case of job printing of advertising inserts and other occasional printed materials. Digital printing is also gaining ground in letterpress, label printing, and other packaging applications, especially since steel, aluminum, and plastics can now also be printed on. The technological progress is constantly increasing the printing quality and speed, while the costs are declining: Digital printing is becoming competitive in more and more applications.

Packaging Printing: Demanding But Worthwhile

Packaging printing is gaining importance for manufacturers of printing inks: There is no digital replacement for packaging. The packaging effort even increases. The labeling obligations become stricter. Internet trade strengthens the mail order business and thus the demand for shipping packaging. These are very good conditions for further growth: For the upcoming eight years, Ceresana expects demand for packaging inks to increase at 2.0 % per year. Regulations regarding the migration of pollutants are an important aspect in food packaging.

Green Printing: UV-Curing Printing Inks Are In Demand

A growing health and environmental awareness is leading to the development of new printing inks and processing methods, for example the use of UV and other radiation-curing printing inks. Complete curing prevents photoinitiators from being released by low-migration UV inks. While the demand for conventional solventborne products is declining, the market for modern inks low in harmful substances is developing dynamically.

The Study in Brief:

<u>Chapter 1</u> analyzes demand, production, import, and export as well as revenues in regard to printing inks for 21 countries. Furthermore, the study analyzes the demand in the individual applications as well as split by printing processes.

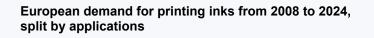
<u>Chapter 2</u> offers a detailed analysis of various application areas of printing inks: Data on the development of demand in the application areas newspapers, books, magazines, advertising, packaging as well as other applications.

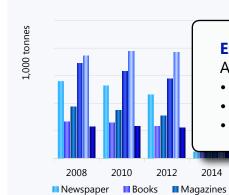
<u>Chapter 3</u> examines the demand for printing inks split by the printing processes offset, gravure, flexo, digital, and other printing processes.

<u>Chapter 4</u> provides useful profiles of important manufacturers – clearly arranged according to contact details, turnover, profit, product range, production sites, and profile summary. In-depth profiles of 67 manufacturers are provided, including Agfa Graphics, Altana, Colorgraf, Druckfarben Hellas, Flint, Fujifilm, hubergroup, Inx Europe, Sicpa, and Siegwerk.

1 Market Data

- 1.1 Europe
- 1.1.1 Demand
- 1.1.2 Revenues
- 1.1.3 Production
- 1.2 Austria
- 1.2.1 Demand & Revenues
- 1.2.2 Production & Trade
- 1.3 Belgium
- 1.3.1 Demand & Revenues
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- 1.4.1 Demand & Revenues
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- 1.5 Denmark
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- 1.15 Romania
- 1.15.1 Demand & Revenues
- 1.15.2 Production & Trade
- 1.16 Russia
- 1.16.1 Demand & Revenues
- 1.16.2 Production & Trade





Example from chapter 1

2018p

■ Commercial Printing

Analyses from 2008 to 2024 of

Ceresana

- production
- revenues
- demand

2016

- 1.17 Spain 3 Printing
- 1.17.1 Demand & Revenues
- 1.17.2 Production & Trade
- 1.18 Sweden
- 1.18.1 Demand & Revenues
- 1.18.2 Production & Trade
- 1.19 Switzerland
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- 1.21 Turkey
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- 1.21.2 Production & Trade
- 1.22 United Kingdom
 - 1.22.1 Demand & Revenues
 - 1.22.2 Production & Trade
- 1.23 Other Europe
 - 1.25.1 Demand & Revenues
 - 1.25.2 Production & Trade

2 Applications

- 2.1 Newspaper Printing
- 2.2 Letterpress Printing
- 2.3 Magazine Printing
- 2.4 Commercial Printing
- 2.5 Packaging Printing
- 2.6 Other Applications

3 Printing Processes

2020p

2022p

Packaging

2024p

Other

- 3.1 Offset Printing
- 3.2 Gravure Printing
- 3.3 Flexographic Printing
- 3.4 Digital Printing
- 3.5 Other Printing Processes

4 Company Profiles

Belgium (3 Producers)

Denmark (1)

France (5)

Germany (16)

Greece (1)

Hungary (1)

Italy (5)

Luxembourg (2)

Poland (2)

Russia (1)

Slovenia (1)

Spain (6)

Switzerland (6)

The Netherlands (2)

Turkey (2)

United Kingdom (13)

Market Study Printing Inks - Europe: 21 Countries, 67 Producers; 290 Pages

1.20.1 Czechia - Demand and Revenues In 2016, about X tonnes of printing inks were consumed in Czechia, Demand has decreased by, on average, X% p.a. up to this year. We forecast demand to increase by X% p.a. to approx. X tonnes in 2024. **Chapter 1:** Market data for Europe and 21 countries: Revenues Demand Production Import and Export Applications Printing Processes Graph: Demand for printing inks in Czechia from 2008 to 2024 2008 2010 2012 2014 2016 2018p 2020p 2022p 2024p 2024 2024 Newspaper Х Х% р.а. X X% p.a. Table: Demand for printing inks in Czechia from 2008 to 2024 - split by applications

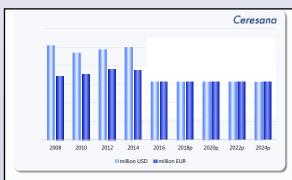
The circulation of Czech daily newspapers has declined by almost X% between 2008 and 2017. Even though this development is currently easing slightly, the fundamental trend of decreasing total circulation will most likely continue in the upcoming years. The magazine market experienced a downturn between 2008 and 2016 in particular. Weekly titles were hit hardest; the circulation dropped by almost X per cent in the same period. In comparison, magazines published every few weeks only lost X per cent. Periodicals published monthly or less frequently lost about X% of circulation between 2008 and 2016. However, we expect circulation of magazines to decrease only slightly by about X per cent in 2017.

in 1,000 tonnes	2008	2010	2012	2014	2016	2018p	2020p	2022p	2024p	2016- 2024
Offset	Х	Х	Х	Х	Х	Х	Х	Х	Х	X% p.a.
Gravure	Х	Х	Х	Х	х	Х	Х	Х	Х	X% p.a.
Flexography	Х	Х	х	Х	х	Х	Х	Х	х	X% p.a.
Digital	Х	Х	х	х	х	Х	Х	х	х	X% p.a.
Other	Х	Х	х	х	х	Х	Х	Х	х	X% p.a.
Total	х	х	х	х	х	х	х	х	х	X% p.a.

Table: Demand for printing inks in Czechia from 2008 to 2024 - split by printing processes

Revenues

The market value of printing inks amounted to about EUR X million in 2016. Revenues are projected to rise to approx. EUR X million in 2024.



Graph: Revenues generated with printing inks in Czechia from 2008 to 2024 in million USD and million EUR

1.20.2 Production and Trade

About X tonnes of printing inks were produced in Czechia in 2016. For the year 2024, we forecast a production volume of approx. X tonnes. This corresponds to a decrease of, on average, X % p.a. when compared to 2016.



Import and Export

Czechia had an import volume of approx. X tonnes of printing inks in 2016; export volume amounted to X tonnes.



Graph: Import and export of printing inks in Czechia from 2008 to 2024

2.5 Packaging

For a long time, the use of digital printing systems for packaging printing was gaining only slowly. At first, it started in label printing. A milestone here was presumably the individualized label campaign of Coca Cola. Similar campaigns of other manufacturers followed soon afterwards. By now, suitable printing systems are available for many other segments of packaging printing. High growth rates exceeding X% are to be expected for packaging printing in the upcoming years. Nevertheless, there is still need for development, for example with regard to printing on coated paper. The still very high costs of digital printing inks have to be reduced further. However, digital packaging printing is very well suited for the future where more orders with less circulations have to be fulfilled due to demographic developments and a rising product differentiation. Personalization of packaging will also gain importance in the coming years.

Demand for printing inks in the segment packaging amounted to about X tonnes in 2016. Compared to 2008, this translates into a growth rate of X% p.a. We forecast that the processing volume in this sector will continue to increase until 2024. That year, approx. X tonnes will be processed. This corresponds to an average increase of X% p.a. when compared to 2016.

in 1,000 tonnes	2008	2010	2012	2014	2016	2018p	2020p	2022p	2024p	2016- 2024	
Belgium	Х	Х	Х	Х	Х	Х	Х	Х	Х	X% p.a.	
Denmark	Х	Х	Х	Х	Х	Х	Х	Х	Х	X% p.a.	
Germany	Х	Х	Х	Х	Х	Х	Х	Х	Х	X% p.a.	
Finland	Х	Х	Х	Х	Х	Х	Х	Х	Х	X% p.a.	
France	Х	Х	Х	Х	Х	Х	Х	Х	Х	X% p.a.	
Greece	Х	Х	Х	Х	Х	Х	Х	Х	Х	X% p.a.	
United Kingdom	Х	Х	(Cha	ant	er i) • [)em	an	d per	
Italy	Х	Х	4							•	
The Netherlands	Х	Х		cou	ıntr	'y s	plit	by	apı	olicati	O
Norway	Х	Х		• N	lew.	sna	ne	r pr	inti	nα	
Austria	Х	Х	- 1			•	•	•		_	
Poland	Х	Х	1	• L	ette	erpi	ess	pri	ıntı	ng	
Portugal	Х	Х	- 1	• N	/lan		na i	orin	tin	ď	
Romania	Х	Х	1							_	
Russia	Х	Х	1	• C	om	ıme	rcia	al p	rint	ing	
Sweden	Х	Х	1	• D	عدلا	· ani	na	prir	ntin	·α	
Switzerland	Х	Х				_	_	•		_	
Spain	Х	Х		• C)the	er a	ppl	icat	tion	ıs	
Czechia	Х	Х	χ.	^	^	^	^	٨	^	Λ70 μ.a.	
Turkey	Х	Х	Х	Х	Х	Х	Х	Х	Х	X% p.a.	
Hungary	Х	Х	Х	Х	Х	Х	Х	Х	Х	X% p.a.	
Other	Х	Х	Х	Х	Х	Х	Х	Х	Х	X% p.a.	

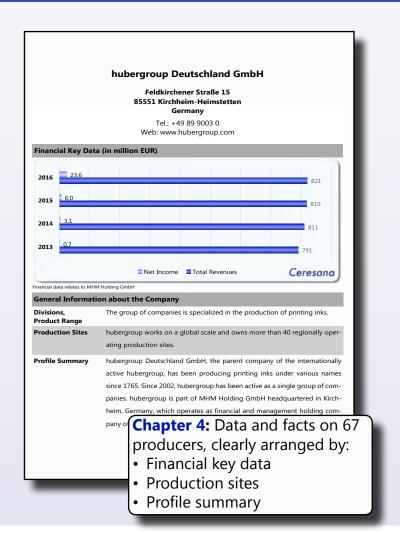
2024 - split by major countries

3.4 Digital Printing

Increases of digital printing processes are exhaustively positive; high growth rates are also generated in Europe. A part of digital printing is accounted for by xerography (laser printing, electrophotography), where toner is used as printing ink. Toners are included in printing inks in this study and therefore also taken into consideration in the market data for digital printing. In Europe, toners still account for about X% of the market for digital printing inks. The remaining part is mainly accounted for by inkjet printing. However, the demand for inkjet inks is increasing rapidly (well above X%) and thus also within the segment digital printing, so that their market share will increase in the upcoming years. Especially in digital web printing, inkjet systems have gained importance in the past years. Even in newspaper and magazine printing, as well as in letterpress printing and in the segment transpromotional, inkjet printers are used. The number of nozzles per system tend to increase strongly, as do the print speed and quality. Inkjet systems also present an alternative that should be taken seriously in large format printing. In the packaging segment, especially label printing shows today's efficiency of inkjet printing.

The processors of printing inks in Europe consumed about X tonnes of digital printing inks in 2016. This corresponds to an average increase of X% p.a. since 2008. With a market volume of X tonnes in 2016, around X% of demand originated in Germany. According to our forecasts, European demand will rise at slightly lower rates of, on average, X% per year in the upcoming eight years. We forecast a market volume of approx. X tonnes to be reached in 2024.

	2008	2010	2012	2014	2016	2018p	2020p	2022p	2024p	2016- 2024
Belgium	Х	Х	Х	Х	Х	Х	Х	Х	Х	X% p.a.
Denmark	Х	Х	Х	Х	Х	Х	Х	Х	Х	X% p.a.
Germany	Х	Х	Х	Х	Х	Х	Х	Х	Х	X% p.a.
Finland	Х	Х	Х	Х	Х	Х	Х	Х	Х	X% p.a.
France	Х	Х	Х	Х	Х	Х	Х	Х	Х	X% p.a.
Greece	Х	Х	Х	Х	Х	Х	Х	Х	Х	X% p.a.
United Kingdom	Х	Х	Х	Х	Х	Х	Х	Х	Х	X% p.a.
Italy	Х		² ha	nte	r 3	• D	em.	and	ne	er cou
The Netherlands	Х			•					•	
Norway	Х	S	plit	. by	pr	ıntı	ng	pro	ces	ses:
Austria	Х	□.	0	ffse	t n	rint	ina			
Poland	Х				•		_	_		
Portugal	Х	□ •	GI	avı	ıre	prii	ntir	ıg		
Romania	Х	•	Fle	exo	ara	ida	ic p	rint	ina	
Russia	Х									
			:	~:+	_	•			9	
Sweden	Х	•		gita	al p	rin	ting	J	J	
	X X			_	al p	rin	ting	J	J	
Switzerland				_	al p	rin	ting	J	J	sses
Switzerland Spain	Х	×		_	al p	rin	ting	J	J	sses
Switzerland Spain Czechia	X X	×	0	the	al p r pr	rint inti	ting ing	prc x	ces	X% p.a.
Sweden Switzerland Spain Czechia Turkey Hungary	X X X		O x	the	al p	rinti	ting ing ×	pro × ×	ces	SSES X% p.a. X% p.a.
Switzerland Spain Czechia Turkey	X X X	Х	X X	the ×	al p	rinti x	ting ing ×	pro × ×	ces	X% p.a. X% p.a. X% p.a. X% p.a.



hubergroup consists of more than 40 companies, most of which focus on the production of printing inks for offset and packaging printing. The companies employ a consolidated workforce of more than 3,500 people and the company's revenues amounted to EUR 825,000 in 2017. Total annual production volume amounts to approx. 340,000 tonnes of printing inks.

The quality and environmental management systems of most companies

within the hubergroup are ISO 9001, ISO 14001, and OHSAS 18001 certified.

Specific Information about Printing Inks

hubergroup offers various inks for application areas including sheet-fed offset, heatset- and coldsetoffset, web offset, gravure, flexographic, continuous form and letterpress printing, especially for package, commercial and newspaper printing. The product portfolio includes offset, solvent, web offset
and water based as well as energy-curing systems.

Chapter 4: Detailed profiles of the most important producers, such as Agfa Graphics, Altana, Colorgraf, Druckfarben Hellas, Flint, Fujifilm, hubergroup, Inx Europe, Sicpa, and Siegwerk.

This study is useful for:

- Manufacturers and distributors of printing inks, solvents, pigments and other components, as well as packaging
- Printing plants and print houses for the segments newspaper, books, magazines, commercial printing, packaging, etc.
- Machine and plant manufacturers, associations and institutes
- Executive board, technology and production, strategic planning, R&D, market research, marketing, sales and distribution, procurement

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Bio-Economy

Automotive Coatings - World	Biobased Packaging - World
A C C DI C E	D' 1 (* 14/ 11

<u>Automotive Plastics - Europe</u>

<u>Bioplastics - World</u>

<u>Automotive Plastics - World</u>

<u>Polylactic Acid (PLA) - World</u>

Hybrid & Electric Cars - Europe Starch Based Plastics - World

Biocides - World Adhesives - Europe

Carbon Black - World Adhesives - World

<u>Chelating Agents - World</u> <u>Insulation Material - Europe</u>
<u>Fillers - Europe</u> <u>Insulation Material - World</u>

<u>Fillers - World</u> <u>Paints & Coatings - Europe</u>

Flame Retardants - World Paints & Coatings - World

<u>Pigments - World</u> <u>Plastic Extrusion - Europe</u>

<u>Plastic Additives - World</u> <u>Plastic Injection - Europe</u>

<u>Plastic Pipes - Europe</u>

<u>Solvents - World</u>

<u>Plastic Pipes - World</u>

<u>Stabilizers - World</u> <u>Plastic Windows - World</u>

<u>Surfactants - World</u> <u>Printing Inks - Europe</u>

<u>Titanium Dioxide (TiO2) - World</u> <u>Printing Inks - World</u>

Windows & Doors - Europe

Composites (CFRP & GFRP) - World

<u>Expandable Polystyrene (EPS) - World</u>
<u>Bags, Sacks & Pouches - Europe</u>

<u>Bags, Sacks & Pouches - World</u>

Masterbatches - World Corrugated Board & Solid Board - Europe

<u>Plastics - Europe</u>

<u>Plastics - World</u>

<u>Food Packaging - Europe</u>

<u>Polyethylene (HDPE) - World</u> <u>Labels - Europe</u>

<u>Polyethylene (LDPE) - World</u> <u>Plastic Caps & Closures - Europe</u>

Polyethylene (LLDPE) - World Plastic Caps & Closures - World

<u>Polypropylene - World</u> <u>Plastic Containers - Europe</u>

Polystyrene & EPS - World

Polyvinyl Chloride (PVC) - World

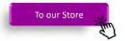
Plastic Films - Europe

Plastic Films - World

<u>Silicones - World</u> <u>Plastic Packaging for Cosmetics - Europe</u>

<u>Synthetic Rubber - World</u>
<u>Rigid Metal Packaging - Europe</u>

<u>Thermoplastic Elastomers (TPE) - World</u>
<u>Rigid Plastic Packaging - World</u>



Packagir