

Multi-Client Study

## Research Proposal

\* 2022 version [Toner Market Forecast] \*

**“Comprehensive Analysis  
of the Toner Market in  
the Hybrid Work Era”**

*=Latest Trend in Toner, Resin, and Other Materials=*



June 2022  
Data Supply Inc.

<Overview>

## I. Theme

**\* 2022 version [Toner Market Forecast] \***

**“Comprehensive Analysis of the Toner Market in the Hybrid Work Era”**

*= Latest Trend in Toner, Resin, and Other Materials =*

## II. Abstract

The shortage of semiconductors and other factors have caused production to stagnate in all industries, including automobiles and smartphones, **disrupting global supply chains**. Similar disruptions have continued in the office equipment industry since last year, and it is now widely believed that MFP and laser printer production volume will fall short of expectations in 2022.

How is the toner market recovering? Toner production by major companies has been on a recovery trend since 2021, and this is widely believed that they are building up stocks in consumption areas against the backdrop of prolonged supply chain disruptions. In fact, **the office attendance rate, which is directly related to print volume, remains below 50% in the U.S.** (as reported by U.S. Kastle Systems that manages enter/leave records) and has not returned to the previous level in Japan and Europe, even though there has been a shift back to work in the office.

One of the focal points of the post-corona pandemic is that people are changing how and where they work. Telework, which spread rapidly after the pandemic, has advantages of securing diverse human resources, reducing office space, and cutting costs by reducing commuting and traveling, while its disadvantages are also becoming apparent, such as difficulties in managing attendance and a decline in creativity and team skills. **Moving forward, hybrid workplaces combining office and telework are expected to become the mainstream.** The demand of toner will depend on the ratio of office and telework.

The business world as a whole will accelerate digital transformation (DX). DX is defined as changes and reforms that bring more convenience to people, products, and companies by introducing services and systems based on IT and other technologies. It is believed that **there will be more companies “going paperless” as their first step toward DX.**

As the market matures faster, its outlook is increasingly uncertain, and it is widely viewed that the overall toner market demand will not return to its pre-pandemic level. **Toner manufacturers are also pressed to comply with environmental regulations, although demand is not recovering.** Regarding environmental regulations, following titanium dioxide, the control of HMDS-treated silica is also under discussion. In addition, in the context of the global trend toward SDGs (Sustainable Development Goals), companies have begun efforts to research and develop toners based on recycled raw materials.

We have been keeping our readers up-to-date on the latest developments in the "toner industry" for more than 30 years. In this report, we will continue to **research and analyze** the future of toner, resin, carrier, magnetic oxide, CCA, colorants, external additives, and wax that are in related business fields **beyond a general viewpoint and from a professional and objective standpoint.** We hope that this report will help our readers rebuild the industry again.

### III. Items and Makers

#### 1. Target Items

##### 1) Toner

- (1) Pulverized toner (color and monochrome)
- (2) Chemically prepared toner (color and monochrome)

##### 2) Toner resin

- (1) Polyester-based resin (2) Styrene-acrylic-based resin (3) Others

##### 3) Carriers 4) Magnetic oxide 5) Charge control agents (CCA)

##### 6) Color toner colorants 7) External additives 8) Carbon black

##### 9) Toner wax 10) Other related items

#### 2. Target makers

##### 1) Major makers

Toner makers (73) / Toner resin makers (19) / Carrier makers (4) / Magnetic oxide makers (3) / CCA makers (7) / Colorant makers (9) / External additive makers (14) / Carbon black makers (3) / Wax makers (7)

##### 2) Other related makers

### IV. Research Period and Methodology

#### 1. Research Period

From 2020 to 2026

#### 2. Methodology

- (1) On-site and direct interviews with target makers
- (2) Analysis and review of open literatures, materials, statistics, and other sources
- (3) Analysis of Data Supply's own proprietary database

### V. Format, Report Preparation Period, Others

#### 1. Research Form

This is a multi-client study.

#### 2. Research Period

From May to mid-June, 2022

#### 3. Publication Date (A4 size in PDF format)

**August 19, 2022 (English version)**

**(2021 version contains 541 pages)**

#### 4. How to Apply

Please apply via email. Please include your company name, department, office phone number, and your name in your email and send it at [infods@datasupply.jp](mailto:infods@datasupply.jp)

#### 5. Price

\$6,000- (English version)

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## VI. Items to Be Covered

### A. Comprehensive Analysis

#### **1. Worldwide Toner Production Trend**

- 1) Changes in overall production volume by Japanese and overseas maker (2020-2026)
- 2) Changes in overall production volume by application and component (2020-2026)
- 3) Breakdown of toner production volume for office and professional use (2021)
- 4) Changes in production volume by manufacturing method and type (2020-2026)
- 5) Toner production volume for OEM and third parties (2020-2022)
- 6) Changes in market share by maker (2020-2022)
- 7) Changes in overall production volume by production region (2020-2026)
- 8) Overall production trend by component and maker (2020-2026)
- 9) Overall production trend by color and maker (2020-2026)
- 10) Overall production trend by equipment and maker (2020-2026)
- 11) Production trend by chemically prepared toner maker (2020-2026)
- 12) Response to environmental regulations in Europe (titanium dioxide, silica, etc.)
- 13) Applications of value-added toners and their sales volume

#### **2. Current Production Trends and Changes by Region**

North America / Europe / Asia (China, South Korea, Taiwan, India, Malaysia, and others) and Japan

#### **3. Current Major Supply Relationships and Changes between Hardware Makers and Toner Makers**

- 1) Monochrome MFP (copier and MFP)
- 2) Color MFP (copier and MFP)
- 3) Monochrome printer and MFP
- 4) Color printer and MFP
- 5) Monochrome PP
- 6) Color PP

#### **4. Related Material Market Trend**

##### **4-1. History of Resin Market**

Changes in production volume and value of resin used for pulverized toner and chemically prepared toner

##### **4-2. History of Carrier Market**

Changes in production volume and value of carriers / Changes in production volume of dual-component, monochrome and color toner

##### **4-3. History of Magnetic Oxide Market**

Production volume and value of magnetic oxide / Changes in production volume of magnetic mono component toner

##### **4-4. History of Charge Control Agent (CCA) Market**

Changes in production volume and value / Market outlook

##### **4-5. History of Colorant Market**

Changes in production volume and value / Changes in production volume of full color toner

##### **4-6. History of External Additives Market**

Changes in production volume and value / Market outlook

##### **4-7 History of Carbon Black Market**

Changes in production volume and value / Market outlook

##### **4-8. History of Wax Market**

Changes in production volume and value / Market outlook

### B. Toner Market

#### **B-1. Japanese Makers**

##### **1. Production Trend**

- 1) Changes in production volume by application and component (2020-2026)

- 2) Changes in production volume by manufacturing method and type (2020-2026)
- 3) Overall toner production volume and value (2021)
- 4) Overall trend of production volume by maker (2020-2026)
- 5) Changes in production volume of monochrome / full color toner by maker (2020-2026)
- 6) Changes in production volume by maker's toner manufacturing method (2020-2026)
  - (1) Pulverized toner (monochrome / color)
  - (2) Chemically prepared toner (monochrome / color)
- 7) Changes in production volume by toner component and maker (2020-2026)
  - (1) Magnetic mono component (monochrome toner)
  - (2) Dual component (monochrome toner + color toner)
  - (3) Non-magnetic mono component (monochrome toner + color toner)
- 8) Production trend of toner by maker and resin type (2021)
- 9) Supply volume from toner makers to hardware makers, and in-house manufacturing rate of hardware makers (2021 results)

## **2. Outline of Production Bases Inside and Outside of Japan**

Plant name / Address / Phone number

## **3. Trend of Individual Makers** (2020-2026)

—— <<Items common among makers>> ——

Changes in production volume by application and component (production volume in Japan and overseas) / Breakdown of production volume by plant and toner type / Breakdown of overseas production volume by region / Production volume by manufacturing method and type / Production volume and value of toner / Trend of R&D of toner / Production facility and cost / Development for emerging countries and advanced countries / Chemically prepared toner (production volume and cost) / Pulverized toner (production volume and cost) / Ultrafine-particle toner / Low-temperature fusing, energy efficiency, etc. / Production volume by component and type, and purchase volume of resin by type / Production volume by color and particle size / Breakdown of production volume and value by office and professional use / The post-pandemic business strategy (response to environmental regulations, production, cost, partnership, etc.) / Development of value-added toner (gold, silver, white, clear, and fluorescent) and production volume by application / Supply volume by major user (2018-2020) / Changes in production volume for OEM and third parties / Response to third parties / Trend of production bases / Sale of facility and changes in facility investments and R&D spending / Corporate profile

[1] Canon [2] Ricoh [3] Fujifilm Business Innovation [4] Konica Minolta [5] Kyocera Document Solutions [6] Sharp [7] Toshiba TEC [8] Tomoegawa [9] Mitsubishi Chemical [10] Kao [11] FDK [12] Sakata Inx [13] Imex [14] Nippon Zeon [15] Mikasa Sangyo [16] Other makers (five companies)

## **B-2. Overseas Makers**

### **1. Production Trend**

- 1) Changes in production volume by application and component
- 2) Overall changes in production volume by maker
- 3) Changes in production volume of monochrome / full color toner by maker and component
- 4) Breakdown of production volume for office and professional use
- 5) Volume for OEM and third parties
- 6) Business description of each company

## **2. Trend of Individual Overseas Makers**

**Changes in production volume by application, component, and color / Latest trend of toner / Production volume of chemically prepared toner**

Region	Country	Toner maker
<b>North America</b>	U.S.A.	Hunt Imaging, Kodak (Nexpress Solutions), Lexmark International, Raven Industries, Troy Group, Xerox Corporation
	<b>Europe</b>	
	Ireland	Xerox Europe
	Germany	Integral
	Russia	Ros Toner
	Belgium	Xeikon
	Turkey	IPM (Imaging Products Manufacturing)
<b>Asia</b>	South Korea	Cosmo AM&T (Saehan Media), Lotte Fine Chemical, Union Chemical
	Taiwan	Royal Precision Technology, Trend Tone Imaging
	China	Cangzhou ASC Toner Production, Cangzhou HuiBao Toner Production, CET Group, Excellent Color Technology (HuBei), Fujian Meihong Technology, Ganghou Ninealley Technology, Guangzhou Auking Digital Technology Enterprise, Guangzhou Aumes Digital Technology, Guangzhou Cetron Office Equipment, Guangzhou Shuangyi Sci-technology, Guangzhou VIVID Print Material, Guizhou Brothers Union Technology, Handan Hanguang OA Toner, Hubei Dinglong, Hubei East Toner New Materials, Hubei Sincore Toner Digital Technology, Hubei Yilong, Huinon Toner Industrial, HYB Toner, ICMI China, Meishan JSY Technology Material, Nanjing Teshine Imaging Technologies (Wuxi Tianxing Office Consumable Materials), Real Color Corporation, Tianjin Synthetic Material Research Institute (Guangzhou Comet Chemical), Tianjin Zhonghuan TCOA Electronics, Wuhan Pointrole Information Technology, Wuhan Zongxiang Imaging, Wuxi Jiateng Magnetic Powder, Wuxi Meiling Digital Science and Technology, Xin Printing, Yvian Technology (Zhuhai), Zhongshan Rainmiu Office Technology, Zhuhai Guocai Technology
	Malaysia	Jadi Imaging Technologies
	India	Indian Toners and Developers, Pure Toners&Developers
	Iran	Naghsh Ayandegan Abyaneh

## **3. List of Production Bases of Overseas Makers**

- 1) North and South American region 2) European region 3) Asian region

### **C. Resin Market**

#### **1. Worldwide Trend of Resin Production**

- 1) Changes in production volume by Japanese and overseas maker (2020-2026) 2) Market outlook

#### **2. Production Trend of Japanese Makers**

- 1) Changes in production volume and value by region and type (2020-2026)  
 2) Production trend by maker (2020-2026)  
 (1) Overall (2) Styrene-acrylic-based type  
 (3) Polyester-based type (for pulverized toner and chemically prepared toner)

- (4) Crystalline polyester (5) Others
- 3) Production trend by type and region (2020-2026)
  - (1) Styrene-acrylic-based type (2) Polyester-based type (3) Others
- 4) List of supply volume from resin makers to toner makers (2021 results)
  - \*Actual supply volume in Japan and overseas
  - (1) Styrene-acrylic-based type (2) Polyester-based type (3) Others
- 5) Response to chemically prepared toner makers
- 6) Response to low-temperature fusing toner
- 7) Outline of production bases of resin makers
  - (1) List of production bases in Japan (2) Outline of overseas production bases
- 8) Changes in facility investments and R&D spending

### **3. Individual Makers' Trend**

<<Items common among makers>>

Changes in production volume and value by region and type / Supply volume to toner makers in Japan and overseas by type of resin / Volume for OEM and third parties / Response to chemically prepared toner / Production bases (Japan and overseas) / R&D trend / Changes in facility investments and R&D spending / Corporate profile

- 1) Sanyo Chemical Industries 2) Fujikura Kasei 3) Mitsui Chemicals 4) Mitsubishi Chemical
- 5) DIC 6) Kao 7) Seiko PMC 8) Other makers (12 companies: 1 from Japan, 2 from South Korea, 8 from China, and 1 from India)

## **D. Related Material Market**

### **1. Carrier Market**

- 1) Production volume and value by maker (2020-2026)
  - ① Production trend by region (Japan, U.S.A., and Europe) ② Production base
  - ③ Market share
- 2) Changes in production volume by type and maker (2020-2026)
  - (1) Magnetic oxide carrier (2) Ferrite carrier (3) Magnetite carrier (4) Resin carrier
- 3) Changes in production volume and value by application and type (2020-2026)
- 4) Changes in production volume by type and particle size (2020-2026)
  - (1) Less than 50  $\mu$  m (2) 50-80  $\mu$  m (3) 80-100  $\mu$  m (4) 100  $\mu$  m or larger
- 5) Changes in production volume by coating material and non-coating treatment (2020-2026)
- 6) List of major supply relationships by carrier maker and material (2021 results)
- 7) Market and technological trend
- 8) List of production bases by maker
- 9) Trend of individual makers

<<Items common among makers>>

Production volume and value by application and type / Production volume by type and particle size / Production volume by coating material / Environmental friendliness and smaller-sized toner / Volume for OEM and third parties / Environmentally-friendly carrier / Major users of carriers by type / Production bases / Changes in facility investments and R&D spending / Corporate profile

- (1) Powdertech (2) Kanto Denka Kogyo (3) Dowa Electronics Materials (4) Toda Kogyo

## **2. Magnetic Oxide Market**

- 1) Changes in production volume by maker (2020-2026)  
Production trend and market share
- 2) Changes in supply value by maker (2020-2026)
- 3) Major supply relationships by maker (2021 results)
- 4) List of production bases by maker
- 5) Trend of individual makers (2020-2026)

—— <<Items common among makers>> ——

Production volume / Supply value / Volume for OEM and third parties / Users / Production bases / Changes in facility investments and R&D spending / Corporate profile

- (1) Toda Kogyo (2) Kanto Denka Kogyo (3) Mitsui Mining & Smelting (production ended in 2020)

## **3. Charge Control Agents (CCA) Market**

- 1) Changes in production volume and value by type and maker (2020-2026)
  - ① Production trend by positive charge (nigrosine, colorless / white, resin) and negative charge (colored, colorless / white, resin)
  - ② Production bases
  - ③ Market share
- 2) Latest trend of technology
  - (1) Response to color applications
  - (2) Environmental friendliness
- 3) Price trend
- 4) List of major supply relationships of CCA makers (2021 results)
- 5) List of production bases by maker
- 6) Trend of individual makers (2020-2026)

—— <<Items common among makers>> ——

Production volume and value by type / Response to color applications / Prices / Volume for OEM and third parties / Major users / Production bases / Changes in facility investments and R&D spending / Corporate profile

- (1) Orient Chemical Industries (2) Hodogaya Chemical (3) Clariant (4) Fujikura Kasei (CCR or Charge Control Resin) (5) Japan Carlit (6) Chuo Synthetic Chemical (7) Hubei Dinglong

## **4. Market of Colorants (Y.M.C) for Color Toner**

- 1) Changes in production volume and value by color (2020-2026)
  - ① Production trend in Japan and overseas
  - ② Production bases
  - ③ Market share
- 2) Latest trend in colorants and prices
- 3) Volume of additives
- 4) Changes in production trend by maker and type (2020-2026)
- 5) Supply volume for pulverized toner and chemically prepared toner
- 6) List of supply relationships by maker (2021 results)
- 7) Trend of individual makers

—— <<Items common among makers>> ——

Production volume and value by color / Major products and prices / Volume for OEM and third parties / Major users / Production bases / Changes in facility investments and R&D spending / Corporate profile



- (1) Dainichiseika Color & Chemicals Mfg. (2) DIC (3) Clariant (4) Toyo Color (5) Sanyo Color Works (6) Others (BASF / Fuji Pigment / Tokyo Shikizai Industry / Daido Chemical Industry)

#### **5. External Additives (Silica, Titanium Dioxide, Organic Fine Particles and others) Market**

- 1) Changes in production volume and value by type (2020-2026)
- 2) Trend in toner's external additives by type
- 3) Product properties by maker
- 4) Major products and prices
- 5) Changes in production trend by maker and type (2020-2026)
- 6) List of supply relationships by maker
- 7) Trend of new makers
- 8) Trend of major makers

— <<Items common among makers>> —

Production volume and value by type / Volume for OEM and third parties / Response to environmental regulations in Europe / Volume of additives / Purpose of use / Users / Production bases / Changes in facility investments and R&D spending / Corporate profile

- (1) Evonik (2) Cabot (3) Wacker Chemie AG (4) Titan Kogyo (5) Tayca (6) Tokuyama (7) Shin-Etsu Chemical (8) Others (7 makers: 6 from Japan and 1 from South Korea)

#### **6. Carbon Black Market**

- 1) Changes in production volume and value (2020-2026)
  - ① Production trend by pulverized toner and chemically prepared toner
  - ② Production bases ③ Market share
- 2) Product properties
- 3) Volume of additives
- 4) Makers' trend
  - (1) Mitsubishi Chemical (2) Cabot (3) Orion
- 5) Development trend, facility investments, and R&D spending

#### **7. Toner Wax Market**

- 1) Changes in production volume and value (2020-2026)
  - ① Production trend ② Production bases
- 2) Wax type
 

Polypropylene / Polyethylene / Paraffin / Ester / Carnauba
- 3) Melting points by type
- 4) Prices by type
- 5) Response to chemically prepared toner
- 6) Changes in facility investments and R&D spending
- 7) Makers' trend
  - (1) Sanyo Chemical Industries (2) Mitsui Chemicals (3) Nippon Seiro (4) NuCera Solutions (TOYOCEM) (5) Clariant (6) NOF (7) Others

\*Tables are filled with figures and comments in the full version.

### Comprehensive Analysis

7) Changes in production volume by manufacturing method and type (2019-2025)

		Year							Unit: ton		
		2019	2020	2021 (estimate)	2022 (forecast)	2023 (forecast)	2024 (forecast)	2025 (forecast)			
		%	%	%	%	%	%	%			
Pulverized toner	Dual component	Monochrome									
		Color									
		Total									
	Non-magnetic mono component	Monochrome									
		Color									
		Total									
	Magnetic mono component	Monochrome									
		Color									
	Total	Monochrome									
		Color									
		%									
Chemically prepared toner	Dual component	Monochrome									
		Color									
		Total									
	Non-magnetic mono component	Monochrome									
		Color									
		Total									
	Magnetic mono component	Monochrome									
		Color									
	Total	Monochrome									
		Color									
		%									
Total	Dual component	Monochrome									
		Color									
		Total									
	Non-magnetic mono component	Monochrome									
		Color									
		Total									
	Magnetic mono component	Monochrome									
		Color									
	Total	Monochrome									
		Color									
		%									

### Comprehensive Analysis

A. Comprehensive Analysis

1. Worldwide trend of toner production

1) Changes in overall production volume by Japanese and overseas makers (2019-2025)

		Year							Unit: ton	
		2019	2020	2021 (estimate)	2022 (forecast)	2023 (forecast)	2024 (forecast)	2025 (forecast)		
		%	%	%	%	%	%	%		
Production volume by overseas makers										
Production volume by Japanese makers										
Total										
		%								

		Year							Unit: ton	
		2019	2020	2021 (estimate)	2022 (forecast)	2023 (forecast)	2024 (forecast)	2025 (forecast)		
		%	%	%	%	%	%	%		
Production value by overseas makers										
Production value by Japanese makers										
Total										
		%								

2020

Chemically prepared toner: 48,310 (33.2%)

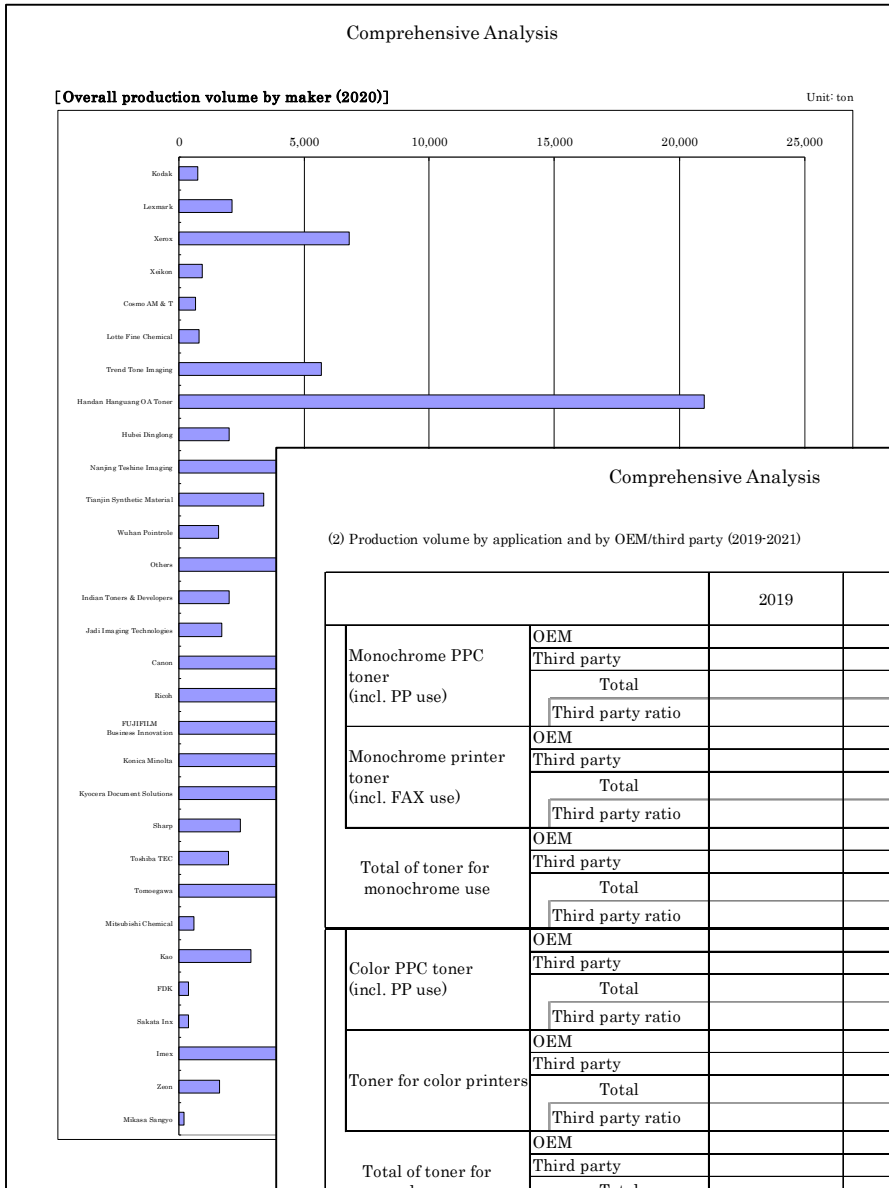
Pulverized toner: 97,243 (66.8%)

The 2020 worldwide toner production volume was 81.3% from a year earlier, or 145,553 tons, and the production value was 142.01 billion yen. The year was affected by COVID-19 forcing many Chinese makers to suspend operations from January to March, while major Western cities implemented lockdowns from April. As a result, Japanese and U.S. makers had to adjust productions. The overall market began to recover in October but suffered an unprecedentedly significant total loss at the end of the year.

In general, toner production volume has been on a recovery track for the first half of 2021. However, print volumes in European and US offices are still recovering, so the total annual production volume will be far from 2019 levels (91.1% of the 2019 level). Even after 2022, when the pandemic is expected to subside, many companies in developed countries are likely to maintain hybrid workstyles between office and telework to some degree, in which case, toner demand will continue to stay unchanged or decline moderately, even if there is a small increase in the professional print volume.

Amid the shrinking market, it is becoming extremely difficult for toner makers to maintain stable production activities at their sites while keeping up with increasingly demanding environmental regulations. They will take more seriously the option of selling their own toner to rival companies. The key to survival in the toner market will be found in developing strategies that are not bound by past examples or practices, but rather actively engaging in markets such as used machines where strong toner demands exist.

\*Tables are filled with figures and comments in the full version.



Comprehensive Analysis

(2) Production volume by application and by OEM/third party (2019-2021) Unit: ton

		2019	2020	2021 (estimate)
Monochrome PPC toner (incl. PP use)	OEM			
	Third party			
	Total			
	Third party ratio			
Monochrome printer toner (incl. FAX use)	OEM			
	Third party			
	Total			
	Third party ratio			
Total of toner for monochrome use	OEM			
	Third party			
	Total			
	Third party ratio			
Color PPC toner (incl. PP use)	OEM			
	Third party			
	Total			
	Third party ratio			
Toner for color printers	OEM			
	Third party			
	Total			
	Third party ratio			
Total of toner for color use	OEM			
	Third party			
	Total			
	Third party ratio			
<b>Total</b>	OEM			
	Third party			
	Total			
	Third party ratio			

\*Color toner in the table includes black toner for color machines, in addition to Y/M/C toners. The definition of the color toner on page two and others are Y/M/C toners only.

The third-party ratio of toner by application was as follows in 2020: 57.4% for monochrome machines (42.2% for monochrome PPC and 64.2% for monochrome printers) and 13.2% for color machines (5.5% for color PPC and 32.8% for color printers).

Demand of toner for monochrome machines is mainly created in China, Southeast Asia, Eastern Europe, Russia, the Middle East, Africa, and South America, where the third-party ratio is extremely high as their (compatible) products are widely distributed at affordable prices.

In contrast, most color machines are sold in developed markets such as Japan, North America, and Western Europe. Third-party products including remanufactured machines are also distributed in these regions, but the third-party ratio is still low; only about 5.5% for color PPC and color PP. But the market is seen to have the large potential for future growth in the medium to long term as used color machines are widely sold in China and elsewhere.

\*Tables are filled with figures and comments in the full version.

### Resin Market

3. List of resin supply to toner makers (2020)

1) Overall ton / year

Toner maker	Resin maker	Sanyo Chemical Industries	Fujikura Kasei	Mitsui Chemicals	Image Polymers (U.S.A.-U.K.)	Mitsubishi Chemical	Diamal America (U.S.A.)	DIC	Kao	Kao (U.S.A. + Spain)	Seiko PMC	Sub total	unknown	Total
	Canon													
	Ricoh													
	FUJIFILM Business Innovation													
	Konica Minolta													
	Kyocera Document Solutions													
	Sharp													
	Toshiba TEC													
	Tomoeagawa													
	Mitsubishi Chemical													
	Kao													
	FDK													
	Sakata Inx													
	Imex													
	Mikasa Sangyo													
	Others													
	<b>Total</b>													
	<b>Total by site</b>													
	<b>Total</b>													

### Toner market

[3] Hubei Dinglong (China)  
D Changes in production volume by application and component

Unit: ton

Application / Toner Type	2019	2020	2021 (estimate)	2022 (forecast)	2023 (forecast)	2024 (forecast)	2025 (forecast)
	%	%	%	%	%	%	%
Monochrome	PP						
	Dual component						
	Non-magnetic mono component						
	Magnetic mono component						
	Total						
	%						
	PPC						
	Dual component						
	Non-magnetic mono component						
	Magnetic mono component						
	Total						
	%						
Printer							
FAX							
Dual component							
Non-magnetic mono component							
Magnetic mono component							
Total							
%							
Total							
%							
Color	PP						
	Dual component						
	Non-magnetic mono component						
	Magnetic mono component						
	Total						
	%						
	PPC						
	Dual component						
	Non-magnetic mono component						
	Magnetic mono component						
	Total						
	%						
Printer							
FAX							
Dual component							
Non-magnetic mono component							
Magnetic mono component							
Total							
%							
Total							
%							
Total	PP						
	Dual component						
	Non-magnetic mono component						
	Magnetic mono component						
	Total						
	%						
	PPC						
	Dual component						
	Non-magnetic mono component						
	Magnetic mono component						
	Total						
	%						
Printer							
FAX							
Dual component							
Non-magnetic mono component							
Magnetic mono component							
Total							
%							
Total							
%							

\*Tables are filled with figures and comments in the full version.

External additives market								
9) Supply relationships of external additives								
	Silica					Titanium dioxide		
	Evonik	Cabot	Shin-Etsu Chemical	Tokuyama	Wacker	Titan Kogyo	Tayca	
Canon								
Ricoh								
FUJIFILM Business Innovation								
Konica Minolta								
Kyocera Document Solutions								
Sharp								
Toshiba TEC								
Tomoe-gawa								
Mitsubishi Chemical								
Kao								
FDK								
Zeon								
Sakata Inx								
Imex								
Kodak								
Xerox								
Lotte Fine Chemical (formerly known as Samsung Electronics)								
Others								

Colorant market									
(3) Supply relationships of colorant makers									
	Dainichi seika Color & Chemicals Mfg.	Clariant	Sanyo Color Works	Toyo Color	DIC	BASF	Fuji Pigment	Tokyo Shikizai Industry	Daido Chemical Industry
Canon									
Ricoh									
FUJIFILM Business Innovation									
Konica Minolta									
Kyocera Document Solutions									
Sharp									
Toshiba TEC									
Tomoe-gawa									
Mitsubishi Chemical									
Kao									
FDK									
Zeon									
Sakata Inx									
Imex									
Kodak									
Xerox									
Lotte Fine Chemical (formerly known as Samsung Electronics)									
Others									

① Evonik: Japan Aerosil sells products  
 ② Following Evonik, Shin-Etsu Chemical  
 ③ Wacker: Clariant Japan sells products  
 ④ Titanium dioxide supplied to FUJIFILM providing EA-Eco toner.

(3)-1. Overall  
 ① The top OEM maker, Dainichiseika Color & Chemicals delivers three colorants: yellow, magenta, and cyan to most manufacturers. Supply to all its users decreased in 2020, but the contraction with FUJIFILM Business Innovation was small.  
 ② Clariant's core lineup is comprised of magenta colorant 122 and yellow colorant 180 and 74. Supply to its users decreased in 2020, but it is quickly recovering with Imex and Sakata Inx in 2021.  
 ③ Sanyo Color Works' supply to all its users decreased in 2020, but it has been recovering quickly with Tomoe-gawa and Sakata Inx since April 2021.  
 Canon is the only user that sources cyan colorants only for its pulverized toner. Ricoh, Mitsubishi Chemical, Zeon, and Lotte Fine Chemical only source magenta colorants for their chemically prepared toner. Users that only source yellow colorants are Konica Minolta and Imex. Three colorants are supplied to Kyocera DS, Sharp, Tomoe-gawa, Sakata Inx, and a Taiwanese manufacturer (TTI).  
 ④ Toyo Color only supplies cyan colorants to Konica Minolta. Yellow and magenta colorants are supplied to Ricoh.  
 ⑤ DIC has seven users. Acquisition of BASF's pigment business is set to be completed in late June 2021.  
 ⑥ Tokyo Shikizai only supplies magenta colorants.  
 ⑦ Daido Chemical only supplies magenta colorants.

(3)-2. Supply form  
 Colorants are supplied either as raw powdered pigments or modified pigments (water-based and processed pigments for chemically prepared toner and non-water-based, processed pigments for pulverized toner). Ricoh and Canon without inhouse processing equipment purchase modified pigments, but FUJIFILM Business Innovation and Konica Minolta only purchase raw pigments.

**\* Back numbers of Toner Market Forecast \***

Title	Published date
1. "Future Aspects of Toner for High-speed Printers and POD, and Related Materials"	August, 2007
2. "Structure Analysis of Toner Market Transformed by Newly Introduced Chemically Prepared Toner"	August, 2008
3. "Structure Analysis of Toner And Related Market Facing an Emergence of Major CPT Manufacturers"	August, 2009
4. "Amid Dwindling Specialized Toner Manufacturers: Comprehensive Breakdown of Toner and Related Markets"	August, 2010
5. "Recovery from 3.11 on the Toner Industry Long Time Forecast for Toner and Related Market"	August, 2011
6. "Strategy of the Toner Industry in a Slow-growth Market"	August, 2012
7. "Forecast of the Toner Industry that Counts on Newly Emerging Countries"	August, 2013
8. "Forecast of the Toner Industry Lead by Ultrafine Particle Toner"	August, 2014
9. "Toner Industry Revitalizes the Market through the Provision of Value-added Toners"	August, 2015
10. "Outlook for the Toner Industry that Will Continue to Strive for Excellence in High-quality Toner Products"	August, 2016
11. "Future Prospects of the Toner Industry: A Call for Cost Competitiveness to Recreate the Market"	October, 2017
12. "The Future of the Toner Industry Challenged by Environmental Issues"	October, 2018
13. "The Future of the Toner Industry: The Safe and Sound Operation Required"	October, 2019
14. "Toner Business Outlook: Toner as the Heart of the Office Equipment"	October, 2020
15. "Latest Trend of the Changing Toner Market in Association with Diversifying Workstyles"	August, 2021