Help Ensure Quality Throughout the Entire Cycle
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Introduction

As a leader in the imaging equipment industry, Canon designs its products to help you achieve your goals. While our devices may have changed over time, the one constant through it all is Canon quality.

Canon has invested much of its knowledge into developing toner, parts, and supplies to help ensure productivity and efficiency when using your Canon devices.

This guide will help you understand the technology behind Canon GENUINE supplies and how they help you achieve high performance from your Canon device.
Why Use GENUINE?

Canon GENUINE supplies are designed by Canon engineers and manufactured in Canon facilities. They’re developed utilizing precise specifications, so you can be confident that your Canon device will produce high-quality results, time and time again.

Toner, parts, and supplies are key ingredients for successful printing. Canon GENUINE supplies give you confidence that you’ll have high quality throughout the entire printing process, delivering efficiency and minimal downtime for your machine!

How to Recognize GENUINE

Canon makes it easy to recognize GENUINE supplies. Always look for the Canon logo and GENUINE logo on all your supplies.

In order to help protect consumers from counterfeit toner, Canon GENUINE toner, cartridges, and large-format ink contain a security seal that shows consumers they’ve received Canon GENUINE supplies. In addition, each toner box contains a statement about why consumers should use GENUINE supplies and directs them to a Web site to learn how to detect counterfeit products. Canon is dedicated to helping you protect your investment.
Canon Research and Development

Much of Canon’s success can be attributed to innovation and technology. Canon has maintained a global ranking for patents granted within the top five for the last 20 years. Dating to 2007, Canon Inc. has been granted approximately 25,000 patents in its 70-year history. Canon Inc. continually invests approximately 10% of its net sales in Research and Development in order to continue innovation.

Canon Inc. has numerous patents for its toner bottles, cartridges, drums, parts, and toner. Many of these patents help to improve usability and make it easier for users to insert toner, while others help to ensure high-quality output and functionality. This is an example of how Canon GENUINE toner, parts, and supplies are designed and developed specifically for Canon devices and help to improve the user’s experience.

Canon GENUINE Supplies and the Environment

Canon operates under the philosophy of Kyosei, which means “all people, regardless of race, religion or culture, harmoniously living and working together into the future.” Sustainable environmental activities help Canon adhere to this belief.

Toner Cartridge Recycling Program

In 1990, Canon became the first company to launch a cartridge recycling program. Through 2008, Canon has globally collected 212,000 tons of cartridges. Canon all-in-one cartridges are made up of multiple components, many of which can be used again. They are collected and sorted, and parts are then reused, recycled, or put through the energy recovery process. This process produces plastics, metals, and reconditioned parts that can be used in the manufacturing of new cartridges and other products.

Toner Container Collection Program

Unlike Canon’s all-in-one cartridges, its plastic toner containers are made mainly of plastic materials. Canon has engraved a resin code on all its plastic containers to make it easier for consumers to recycle locally. Canon toner particles and plastic toner containers are safe for local recycling and energy recovery facilities. If local options are not available, however, Canon has implemented a toner container collection program.

Fusing Technology

Canon’s RAPID Fusing System was developed to improve energy consumption. This technology uses a ceramic heater that heats quickly and a fixing film that transfers heat effectively. This process helps reduce electricity use, thus helping to achieve power savings.
Understanding the electrophotographic process illustrates the importance of using Canon GENUINE supplies in achieving desired quality throughout the entire printing process. Canon continues to be an innovative leader in its field, designing and developing not only its devices, but also the supplies for these devices, thereby helping to create seamless synergy. The technology behind Canon devices—as well as their parts and consumables—combine to produce high-quality, consistent results you can count on!

The Electrophotographic Process

1. **Electrical Charge**: The surface of the photosensitive drum is charged at the beginning of the printing process.

2. **Exposure**: Laser beams scan the surface of the drum and “draw” images and text onto the surface by discharging static electricity.

3. **Developing**: Toner, which contains a charge, affixes itself to the discharged areas on the drum.

4. **Transfer**: The paper is fed through the printer to the drum. A charge is attached to the paper so that the toner will affix itself to it.

5. **Fusing**: Heat and pressure are applied by two rollers that fix the toner to the paper, creating your output.

6. **Cleaning**: The cleaning blade removes excess toner particles from the drum so that it’s ready to make the next print.
Toner Technology

Canon has used its advanced research and development to create different types of toner to fit the needs of different markets. With Canon GENUINE toner, you can be sure that your device is using the toner that best fits your applications!

**Vivid Toner (V Toner)**
*For use with Canon color digital presses*

Canon Vivid Toner was designed to create high-quality, professional output. These toner particles are consistent in size averaging 5.5 microns, and they help to deliver vivid, detailed images. In addition, the toner gloss is designed to match your media, allowing you to maintain the gloss or matte finish on your media type.

**Vivid Toner Clear (V Toner Clear)**
*For use with select Canon color digital presses*

Canon Vivid Toner Clear is an innovative toner that adds tremendous value to output. Clear toner allows for spot coating, which helps create elegant designs and also allows the user to create watermarks for extra security. Clear toner can be used for flood matte coating to enhance the glossy images printed with V Toner.

**Spherical and Synergy Toner (S Toner)**
*For use with Canon office color copiers*

S Toner has been creating high-quality color copies for the office environment since it first went on the global market in 1998. It’s a chemically produced, polymerized toner. Since the toner is chemically made, all particles are uniform in shape and size, helping to create high-quality documents with clean lines. S Toner particles are created by inserting a ball of wax into the center of the toner particle to help create optimum gloss for business color documents.

**Teaspoon of Toner**

28 billion reasons why Canon toner is exceptional

Our S Toner is so fine that approximately 28 billion particles fit on this teaspoon!
Pure Quality Color Toner (pQ Toner)
For use with Canon office and light production color copiers
Canon pQ Toner was developed for light production and office environments. This toner achieves truly balanced color reproductions as well as consistent image quality and high productivity. pQ Toner includes wax within the toner particle, allowing for oil-less fusing. It also contains a new resin formula within the particle to help enhance fusing performance, productivity, and gloss quality. Use of this toner with your Canon device also allows for energy savings due to improved fusing performance.

Exact Black Toner (eB Toner)
For use with Canon black-and-white digital presses
High-end black-and-white digital presses demand high quality and reliability. Canon eB Toner is designed with optimum pigment that’s well dispersed within each toner particle. This aids in producing rich, exact black images and text, which are extremely important for on-demand environments. New resin technology is utilized in eB Toner, helping to improve fusing performance and achieve high productivity.

High-Reliability Toner (HR Toner)
For use with Canon high-speed black-and-white copiers
Canon HR Toner was designed specifically for high-speed black-and-white copiers, which demand excellent stability and consistency. This toner utilizes binder resin technology, resulting in accurate developing performance. It also ensures that the last copy of your print job will be the same high quality as your first copy!

Quick Fixing Toner (QF Toner)
For use with Canon mid-speed black-and-white and business color copiers
QF Toners have enhanced melting characteristics that contribute to the success of the RAPID Fusing System. RAPID Fusing and QF Toner technology allow for toner to fuse to the paper using less heat energy. Users experience high-quality output while devices use lower pressure and less heat energy, which saves power consumption. RAPID Fusing Systems take less time to heat up; therefore, the devices have a quick starting system, making it extremely convenient for office environments.
Cartridge Technology

In 1982, Canon developed the world’s first all-in-one cartridge for copy machines. Each cartridge contains:

- Photosensitive Drum
- Charging Unit
- Cleaning Unit
- Developing Unit
- Toner Hopper

This technology makes it easy and convenient for users to change multiple components and replace toner and parts, all in one easy step!

Besides being user-friendly, these cartridges are environmentally conscious, thanks to the implementation of the Toner Cartridge Recycling Program. Canon incorporates environmental practices throughout the life cycle of all-in-one cartridges.

GENUINE Parts

Canon GENUINE parts are stringently tested using state-of-the-art equipment under many different conditions. Some of the integral parts of a Canon device include fixing and pressure rollers, cleaning blades, cleaning rollers, separation claws, and pick-up rollers. Canon also offers Quality Assurance (QA) kits that are carefully designed for preventative maintenance and to help avoid downtime. These parts are just a few of the components that help to ensure quality throughout the life of your device.

Ask your dealer if they’re using Canon GENUINE parts when servicing your machine. Using GENUINE parts can help achieve high yields, reliable performance, and high-quality output, and minimizes jamming and malfunctioning.
Drum Technology

Drums are metal cylinders coated with a thin photoconductive film and are directly involved with many of the steps within the printing process. The surface of the drum becomes electrically charged and then, during exposure, laser beams “draw” the image onto the drum by discharging static electricity. Toner affixes to the drum during the developing process, which is followed by the transfer of the toner from the drum to the paper. Canon GENUINE drums are designed to enhance all the areas in which they’re involved.

a-Si Drum

Canon’s advanced technology allowed for the development of its amorphous silicon (a-Si) drums in 1984. The a-Si drum was designed for high-speed copiers by forming a uniform a-Si film over the surface of the drum. This film greatly increases the drum’s hardness and durability.

a-Si Imaging Assembly

The a-Si Imaging Assembly was developed for high-speed Canon print systems. This drum assembly is combined with many different parts, decreasing the time needed for cleaning and adjustments. It has been designed for high-production environments, providing customers with high quality, stability, durability, and reliability.

E-Drum

The Canon Excellent Drum (E-Drum) was designed specifically for Canon print systems. It has an additional overcoat layer that aids in improving stability and productivity, and helps to achieve a longer drum life and greater efficiency in both the production and office markets.

OPC Drum

Canon GENUINE Organophotoconductor (OPC) drums are designed to have exceptional charging characteristics, light responsiveness, charge storage, wear resistance, and durability. They’re designed to meet the needs of the mid- to low-speed copier market.
imagePROGRAF Ink and Print-Heads

Canon imagePROGRAF Ink

Canon LUCIA Inks

Canon’s LUCIA pigment inks were developed to meet the demanding needs of graphic, fine-art, and photographic professionals. By targeting the key requirements of an exceptional fine art image, LUCIA pigment inks were designed to produce images with accurate color reproduction, smooth gradations, and sharp details. These inks have been formulated to improve image quality by reducing graininess and bronzing, so prints look great from every angle. The LUCIA ink formulation provides end-users the high-quality, archival output they desire from the imagePROGRAF Graphic Arts print devices.

Canon Reactive Ink

Reactive Ink was formulated for the imagePROGRAF five-color large-format devices to print highly accurate, detailed AEC/CAD/GIS documents. By utilizing Canon’s proprietary Reactive Ink Technology, which incorporates dye and pigment ink, ink adhesion to the media is maximized. This combination not only enables color output with clear fine lines and details, but it also increases the durability of the print.

The Ink-jet Process

High-Capacity Ink Tanks

High-capacity tanks supply ink to the print-head via tubes.

Carriage

Transports the print-head horizontally. Incorporates the print-head and a sensor to read print results, plus a cutter.

Operation Panel

A large LCD panel graphically indicates printer status and provides operational guidance.

Print-Head

Ejects ink to form an image. The imagePROGRAF one-inch-wide print-head has 15,360 nozzles.

Platen (Document Table)

Multiple holes on the surface facilitate a suction system to ensure that paper is held firmly in place during printing.

Roll Paper
Summary

Remember, each Canon supply and part is designed and formulated for a specific Canon device, so make sure to look for the Canon logo and the GENUINE logo on all packaging. If you see them, then you know the product you’re about to use has been optimized to help ensure quality throughout the entire printing process. If you’re unsure about the authenticity of the products you’re using, please contact your Authorized Canon Dealer and request that only Canon GENUINE parts and supplies be used with your device!