

## **Cartridge Terminology**

An empty cartridge is designated as virgin if it has never been refilled, or non-virgin after its first refill. In the industry, there are three types of cartridges: OEM, compatible and remanufactured.

### **Original Equipment Manufacturer (OEM or Branded)**

This is the cartridge produced by the printer manufacturer and, for most manufacturers, it is the primary source of revenue. The cost of new OEM color cartridges is high – our customers' typical savings are 40% to 60% off the price of a new cartridge. (They make very little, if any, on the printers themselves.)

### **Compatible**

A cartridge that is newly manufactured but will replace the OEM cartridge is considered a compatible. For instance, most Canon ink cartridges just contain ink and a small circuit to identify itself to the printer (the print heads are permanently located in the printer). It is far cheaper to create a new cartridge than refill it in this case and does not violate intellectual property (IP), or patent rights for the device.

### **Remanufactured (Reman)**

These are the reused or recycled products. Either ink or toner based, these products are rebuilt because of IP or patent reasons. The difference between remanufactured and refilled products is the extent of the processing that occurs. Below are details on this process for both ink and toner products.

### **Inkjet cartridges**

The ink cartridge remanufacturing is done at approved vendors, rigorously following manufacturing guidelines and using a variety of techniques not practical in an individual store or user refill station. These include using hot steam and/or ultrasound and a centrifuge, as well as vacuum filling. These techniques loosen dried ink, and then warm water washes the particles away. Sponges and screens are replaced as needed. The final cartridges are weighed to ensure they are full and tested before being packaged in a box.

Most HP, Lexmark and Dell inks are remanufactured because they have built-in print heads and flexible circuits as part of the cartridge.

## **Laser cartridges**

Laser cartridges use toner, a very fine synthetic powder. When a thin layer of toner is placed on a sheet of paper and heated, it fuses with the paper to form an image. Most laser cartridge models contain from 150 to about 600 grams of toner.

With most laser cartridges, it is recommended that the internal drum and blades are either replaced or refurbished, along with refilling the toner, replacing the inside components, and lubricating appropriate shafts. (The refillers do not typically do these steps.)