

## Remanufactured Toner Cartridges in Alameda County

**B**uying remanufactured toner cartridges and recycling empty cartridges are easy ways to reduce the environmental impact of these products while saving substantial amounts of money. Any office equipment that uses a toner cartridge, rather than requiring toner to be added to the machine, should be able to use a remanufactured toner cartridge. Many toner cartridge remanufacturers both supply customers with remanufactured toner cartridges and collect spent cartridges.

**This Fact Sheet provides important information for those wishing to purchase remanufactured toner cartridges. Read and learn about:**

- ❖ General information on remanufactured toner cartridges (including their environmental and economic benefits)
- ❖ Case studies of organizations that have reduced costs by purchasing remanufactured toner cartridges
- ❖ Tips on evaluating remanufacturers
- ❖ How to get the best performance from your toner cartridges
- ❖ Sample bid specifications
- ❖ Steps for success
- ❖ Additional helpful resources
- ❖ A list of local suppliers of remanufactured toner cartridges

### Remanufactured Toner Cartridges — General Information

#### Quality

When remanufactured by reputable companies exercising good quality control, remanufactured toner cartridges will perform as well as, or better than, new cartridges. Almost all suppliers will guarantee that the quality of their remanufactured toner cartridges will match or exceed that of an original equipment manufacturer (OEM).



Remanufactured toner cartridges should not damage the copy machine or printer. Printer damage resulting from a defective toner cartridge is rare and usually very minor. A properly remanufactured cartridge is no more likely to cause damage to a machine than a new cartridge. Additionally, antitrust legislation prohibits copier and printer manufacturers from voiding their warranties when remanufactured toner cartridges are used in their machines.

## The Remanufacturing Process

In general, used cartridges undergoing remanufacturing are first disassembled and the parts inspected. Key parts include the drum, corona wire assembly, wiper blade, and roller. Worn or defective parts are replaced, and the cartridge is cleaned, refilled, and reassembled. Toner cartridges can be remanufactured several times.

## Cost

Remanufactured toner cartridges save money. Typically, remanufactured cartridges cost 30% to 60% less on a per copy basis than non-remanufactured cartridges. Some cartridge remanufacturers will accept used cartridges at no cost, or even buy them back or provide a credit, depending on the model, therefore saving you even more money.

## Environmental Benefits

### ✓ 97% Recyclable



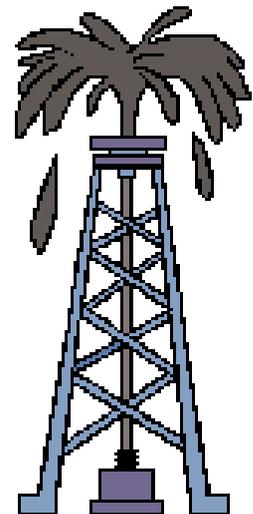
The typical used toner cartridge weighs about 3 pounds and is composed of 40% plastic, 40% metal, and smaller percentages of rubber, paper, foam, and toner. The plastic is made of engineering-grade polymers and takes at least 1,000 years to decompose. However, approximately 97% of these combined components can be recycled and reused.

### ✓ Conserves Resources

Accordingly, using remanufactured toner cartridges reduces pollution and waste by minimizing the amount of materials, such as plastic, steel, aluminum, and rubber, disposed of in landfills. It also conserves natural resources by eliminating the need for virgin materials used to make new cartridges. For each pound of new material used in remanufacturing, 5 to 9 pounds of virgin materials are conserved.

### ✓ Saves Energy

Using remanufactured toner cartridges also saves energy. Approximately 3 quarts of oil are burned in the production of a single new toner cartridge. A used toner cartridge can be remanufactured up to four times, depending on its type and condition, thus potentially saving up to 12 quarts of fuel.



## Evaluating Remanufacturers

Most remanufacturers are reliable and provide quality toner cartridges that meet or exceed OEM standards. Some companies, however, simply drill a hole in the side of the cartridge and refill it with toner, failing to clean and repair broken parts. These “drill and fill” operations do not produce quality remanufactured toner cartridges.

A “split-hopper” cartridge is another type of remanufactured toner cartridge that may not provide consistent performance. When the toner hopper is split during the remanufacturing process, clips must be installed to secure the halves back together. Clips may become loose or fall off when the cartridge is in use causing the printer to jam or result in other problems. Also be aware that some products perform better than others.

It is important to get references from suppliers and test several products before purchasing significant quantities of any model or brand.

## Compatibles vs Remanufactured?

You may hear or see the term "compatible" toner cartridges. Compatible cartridges, according to one vendor's website, are manufactured by third party companies (companies other than the original maker of your equipment) which specialize in after-market products. Compatible toner cartridges use new or mostly new parts but beyond that, the definition is unclear. Some vendors believe compatibles are the same as remanufactured. Others believe compatibles are not the same as remanufactured asserting they contain all new parts (though not OEM parts), except perhaps to reuse the plastic case. Since there is no consensus on this term, clarify with your vendor how their toner cartridges are made to ensure you are getting what you want.

**See Appendix A at the end of this Fact Sheet for a listing of remanufactured toner cartridge suppliers.**

### Case Studies

#### City and County of San Francisco

Each year, various departments in the City and County of San Francisco purchase thousands of compatible or remanufactured toner cartridges from a number of sources. The Department of Human Resources employs about 200 people. They have had very good results for many years with the compatible toner cartridges from Uptime Resources. “Without fail, they are pleasant, upbeat, and their service is excellent. The product is good.”

The Department of Public Health spends about \$500,000 per year on many types and brands of remanufactured ink and toner cartridges from Laserlink International Inc. in Emeryville, CA. Remanufactured cartridges account for about 90% of the Department’s ink and toner cartridge purchases. “The company has great customer service and is very responsive. Our failure rate is less than 1% and the company will replace them quickly if there is a failure”.

### **King County, Washington**

Since 1991, King County has successfully used remanufactured toner cartridges in all departments. In 2008, King County purchased 3,400 remanufactured toner cartridges at a cost of approximately \$165,000. These purchases saved the county an estimated \$250,000 in that year alone, as the cost of new cartridges is, on average, 2.5 times more than remanufactured cartridges.

### **TriNet, San Leandro**

TriNet is the country's largest private provider of human resources outsourcing solutions to small businesses. In the last year, the company has purchased more than 200 remanufactured toner cartridges from their supplier, Blaisdell's Business Products, an Alameda County Green Business. TriNet has been purchasing remanufactured toner cartridges for over 5 years with great success. Cost savings range from 25% - 60% over the price of new cartridges.

### **West Contra Costa Unified School District, Richmond, California**

The West Contra Costa Unified School District purchases at least 30 remanufactured cartridges each month. They purchase a wide variety of brands and have not experienced any failures, have no complaints and are saving money by not buying new cartridges.

### **University of California, Berkeley**

For the last several years, one computer lab department has successfully used over 1,000 remanufactured toner cartridges. They have been pleased with their vendor's products as well as their customer service.

## **Toner Cartridge Tips**

Printing problems are generally caused by either a printer malfunction or a toner cartridge malfunction. The following tips can ensure good toner cartridge performance or help determine the cause when a problem arises.

- ◆ **Troubleshooting:** The best way to determine whether a problem is caused by the toner cartridge or the machine is to replace the cartridge with one that you know is working well. Or you can switch the cartridge to another machine. If changing the toner cartridge corrects the problem or the problem follows the cartridge to another printer, then the cartridge is most likely defective.
- ◆ **Maintain Equipment:** Clean copy machines and printers frequently according to the instructions on your equipment.
- ◆ **Use dry paper:** Since paper absorbs moisture, try replacing the copier paper with clean, dry paper.
- ◆ **Keep packaged until use:** Do not remove the toner cartridge from its package until you are ready to use it. The shelf life of a cartridge in an unopened package is approximately 2.5 years. The shelf life of a cartridge in an opened package is approximately six months.
- ◆ **Handling:** When handling a toner cartridge, never touch the drum surface and always protect it from light. Place empty cartridges back in the protective foil bag.
- ◆ **Storage:** Do not expose cartridges to cold or hot temperatures or extreme humidity.

# Sample Remanufactured Toner Cartridge Bid Specifications

## QUALIFICATION

- ◆ To be eligible for award, all bidders shall have prior successful experience providing remanufactured toner cartridges for at least one (1) year at a rate of at least two hundred (200) cartridges per month. Samples may be required prior to bid award.
- ◆ The Bidder shall warrant that the use of the remanufactured cartridges will not void any manufacturer's warranty on the printers or faxes.
- ◆ The Bidder shall provide one (1) year warranty on workmanship in the bid documentation.
- ◆ It is the intent of buyer to purchase goods, equipment and services having the least environmental impact within the constraints of statutory purchasing requirements, departmental needs, availability, and sound economical considerations. Suggested changes and environmental enhancements for possible inclusion in future revisions of this specification are encouraged.

## TECHNICAL SPECIFICATIONS

### GENERAL REQUIREMENTS

- ◆ Bidder shall furnish remanufactured toner cartridges that have been fully remanufactured to specifications equal to, or exceeding original equipment manufacturer's (OEM) cartridge standards of quality and performance and approved remanufactured toner cartridge industry standards. Toner cartridges furnished to this specification shall meet or exceed the latest remanufactured toner cartridge standards, or the guidelines adopted by the Standardized Test Methods Committee (STMC), the American Society for Testing and Materials (ASTM) and the International Safe Transit Association (ISTA), including the ASTM F 1856 Standards, ASTM F 335 and F 2036 Standards and ISTA – Integrity Procedure IA Standards (ISTA IA).
- ◆ Cartridges that are merely refilled “drill and fill” cartridges will not be considered. “Split hopper” cartridges will not be considered unless there is no alternative method of remanufacturing them.
- ◆ Bidder shall certify that its remanufactured toner cartridges have been tested in accordance with the above standards and guidelines and that its cartridges have met or exceeded those tests.
- ◆ Bidder shall furnish documentation with this bid stating the number of company personnel who have completed the training for the STMC Guidelines. This includes the standardized testing certification for ASTM F 1856-98, ASTM F 2036, and ISTA IA VERSION-99.
- ◆ Bidders shall have facilities, skilled personnel, equipment and parts available to completely service, maintain, overhaul and repair all brands of printers that are associated with the brand of toner cartridges listed in this solicitation.
- ◆ Bidders shall furnish documentation with this bid demonstrating that service personnel have completed training sufficient to completely service, maintain, overhaul and repair all brands of printers that are associated with the brand of toner cartridges listed in this solicitation.
- ◆ Bidders shall provide verification that the company (or the remanufacturing company) has a densitometer, test printers and applicable operation procedures to perform on-site toner cartridge testing. If bidder does not have a densitometer, test printers and applicable operating procedures, bidder shall provide detailed information regarding its (or the remanufacturer's) on-site toner cartridge testing.
- ◆ To be eligible for awards, bidders must include bids for all toner cartridges listed in this solicitation.
- ◆ Bidders shall furnish documentation with this bid indicating the current and expected failure rate of toner cartridges supplied under this contract.

### CARTRIDGE REMANUFACTURING PROCESS

- ◆ As used in this standard procurement, the term “Remanufactured” is defined as a cartridge which has been completely disassembled and cleaned, replacing with a new long-life optical photo conductive (OPC) drum with a minimum rating of 30,000 page lifespan and with all brand new parts except using the existing casing.
- ◆ The term "remanufactured" includes, at a minimum, the following:
- ◆ Assessment to determine if the toner cartridge can be remanufactured.

- ◆ Complete disassembly of toner cartridge to thoroughly clean and check all internal and external components against the original manufacturer's specifications. Worn, damaged, or end of life-cycle components should be replaced.
- ◆ Replacement of the original OEM drum with a new drum (which may include an extended life-drum). If the returned toner cartridge is equipped with an extended-life drum, bidder shall inspect it, clean, or replace it with a new extended-life drum or new aftermarket drum.
- ◆ Replacement of all seals with an OEM-type heat seal, card seal, or pressure sensitive seal.
- ◆ Replacement of the primary charge roller (PCR) with a re-coated or new PCR.
- ◆ Replacement of wiper blade meeting OEM specifications or the latest remanufactured toner cartridge industry standards adopted by the STMC or the latest guidelines adopted by ASTM for remanufactured toner cartridges.
- ◆ Replacement of any parts not meeting OEM specifications or the latest remanufactured toner cartridge industry standards adopted by the STMC or the latest guidelines adopted by ASTM for remanufactured toner cartridges.
- ◆ Filling of toner cartridge meeting OEM specifications or the latest remanufactured toner cartridge industry standards adopted by the STMC or the latest guidelines adopted by ASTM for remanufactured toner cartridges.
- ◆ Chemically cleaning or replacing the corona wire assembly (where applicable).
- ◆ One fuser wand (where applicable) with high temperature resistant felt wiper and one cotton swab shall be provided with each toner cartridge.
- ◆ The hopper shall be filled to capacity with new toner meeting or exceeding OEM standards. Bidder shall indicate in this bid the original manufacturer(s) and part number(s) of toner supplied.
- ◆ A toner hopper seal/separator meeting or exceeding OEM standards shall be inserted to prevent spillage of toner during shipping.
- ◆ Print yield shall be equal to or exceed OEM rating for each cartridge. Yield shall be determined by the use of a standard pattern that features 5 percent coverage.
- ◆ Exterior surfaces shall be thoroughly cleaned, with all traces of old labels and toner removed entirely.

#### **CARTRIDGE PACKAGING AND LABELING**

- ◆ Bidder shall clearly label each toner cartridge with the manufacturer's/supplier's name and telephone number and cartridge model number.
- ◆ Each toner cartridge shall be packaged in an anti-static moisture proof bag and either heat-sealed or zip-locked, meeting or exceeding OEM standards. The cartridge shall then be placed in a protective cradle prior to being packaged in an external carton.
- ◆ The external carton and packaging of the toner cartridge shall protect the cartridge from damage during shipping.
- ◆ Packaging for the toner cartridges shall be constructed to permit users to re-package spent cartridges for return to bidder. It is desirable that all corrugated packaging contain a minimum of 35% post-consumer recycled content and provide certification from the carton manufacturer/supplier to verify the actual percentage of recycled content.
- ◆ The external carton or an internal shipping invoice shall identify toner cartridge type (make and model), the bidder's name, address and telephone number, and the purchase order number. All cartridge boxes or internal shipping invoices will also bear the date of remanufacture and use by date for shelf life and inventory purposes. Included in the cartridge packaging shall be a copy of the test print page, installation instructions, a copy of the warranty including the Bidder's contact number, and instructions and supplies necessary for the return of empty cartridges as agreed upon between the Bidder and the Buyer.

#### **CARTRIDGE TESTING**

- ◆ All cartridges are to be tested after remanufacturing by installing the cartridge in an applicable printer, running and inspecting test copies. It is required that a copy of a test page be included with the finished product.
- ◆ Bidders shall also provide to buyer at least five cartridges from the items listed in this solicitation for testing and evaluation by buyer, at the request of buyer.

#### **DEFECTIVE CARTRIDGES**

- ◆ All defective toner cartridges will be returned to the bidder at bidder's expense. Bidder shall supply pre-paid mailing labels, or shall pick up defective cartridge(s) at the buyer's location.
- ◆ Defective or damaged cartridges shall be replaced within two (2) business days of initial notification to the Bidder by the Buyer and shall be provided at no cost to the Buyer.

- ◆ Replacement cartridges shall be properly marked as replacements and identified by the purchase order number.
- ◆ A diagnostic analysis shall be performed to determine the cause of the problem for any toner cartridge returned by the buyer.
- ◆ The diagnostic analysis report shall be delivered to the buyer within ten (10) business days.
- ◆ If the buyer has continued uncorrected problems with a particular model, or if there are page yields consistently below OEM standards or approved manufactured toner cartridge industry standards, the buyer may cancel the cartridge model from the contract.
- ◆ If the toner cartridge defect rate exceeds two (2%) percent of all cartridges utilized within any six-month period, the buyer reserves the right to cancel the contract.

## **WARRANTY**

- ◆ The bidder shall warrant the remanufactured toner cartridges against defects in material and workmanship for a minimum of one (1) year from the date of manufacture.
- ◆ If problems occur with printers due to a bidder's defective remanufactured toner cartridge, bidder shall provide: (1) a competent factory-trained authorized service technician to repair printer within one (1) business day, or (2) shall reimburse the buyer for any printer service performed due to the bidder's defective cartridge. If the printer cannot be repaired or restored to its previous condition, Bidder shall replace the printer at no cost to the Buyer.
- ◆ The Bidder shall warrant that the use of remanufactured cartridges will not void any manufacturer's warranty on the printers. All cartridges supplied under the contract shall have a 100% replacement warranty. This warranty shall be provided with each cartridge and shall cover defects in the cartridge, material used in the cartridge, workmanship and damage during shipment.

## **USED CARTRIDGE RECYCLING COLLECTION**

- ◆ Bidder shall provide in-person or third party collection of all used and empty toner cartridges or provide a prepaid shipping/mailling label for returning each empty toner cartridge.
- ◆ Toner cartridges for recycling shall be picked up within five (5) business days of request. Cartridge packaging must be designed to be conducive to repackaging empty cartridges.
- ◆ Bidder shall recycle end-of-life toner cartridges and provide buyer with details of its recycling program upon request.

## **WASTE TONER RECYCLING OR DISPOSAL**

- ◆ The bidder shall ensure that remaining toner in used cartridges is recycled or disposed of in a manner that complies with all environmental and human health and safety laws.
- ◆ At buyer's request, bidder shall provide manifests and any other documentation needed to confirm the proper disposal of material.

## **CUSTOMER SUPPORT**

- ◆ The bidder shall provide one-on-one customer support to buyer's personnel as required. Bidder shall provide a toll-free number for ordering and problem reporting.

## **SPECIAL PROVISIONS**

- ◆ A Material Safety Data Sheet (MSDS) shall be provided in each container. A copy of the original MSDS furnished with the bid can be provided as long as the chemical composition has not changed.
- ◆ Each shipping container shall have, on at least one of the long sides, a label which clearly states: "IMPORTANT: SAVE THIS BOX AND ALL INTERNAL PACKAGING FOR RETURN OF THE EMPTY CARTRIDGE."
- ◆ Each cartridge shall be provided with complete instructions for installation and maintenance of the cartridge to optimize the performance and life of the cartridge.

## **REFERENCES**

- ◆ Bidder shall submit, with its response, the name, address, telephone number, and point-of-contact of at least three (3) entities (i.e., companies, government agencies or other institutions) in which the bidder has provided remanufactured toner cartridges. References will be checked prior to award. Any negative responses received may result in disqualification of the response.

## Steps for Success



Changing to new products and purchasing practices can take time. Businesses and governments that have successfully made the transition to buying more environmentally friendly products have identified two strategies for making the switch easier:

1. Include people who actually use the products being purchased in the decision-making process.
2. Be willing to retest your products as new brands and types become available.

**Remember, when you take environmental attributes into account in your purchasing decisions, you are helping to save money, create a safer and healthier environment and workplace, and close the recycling loop by buying products made from remanufactured materials.**

## Additional Resources

There are many resources available to help identify products and their performance, see sample bids and specifications, and read case studies of successful programs.

- ◆ **StopWaste.Org** offers technical assistance and grant funding for applicable recycled content product purchasing. See [www.StopWaste.Org/EPP](http://www.StopWaste.Org/EPP) for an annotated list of resources and links to other environmental purchasing websites and documents.
- ◆ Alameda County businesses can contact **Rachel Balsley** at [rbalsley@stopwaste.org](mailto:rbalsley@stopwaste.org) for information about the StopWaste Partnership for technical assistance and funding. See also [www.StopWastePartnership.org](http://www.StopWastePartnership.org).
- ◆ Local governments in Alameda County can contact **Debra Kaufman** at [dkaufman@stopwaste.org](mailto:dkaufman@stopwaste.org) or **Rachel Balsley** at [rbalsley@stopwaste.org](mailto:rbalsley@stopwaste.org) for information about environmental purchasing technical and financial assistance.
- ◆ Contact the **Alameda County Recycling Hotline**, toll-free at **1-877-STOPWASTE (786-7927)** for information about recycling and waste prevention opportunities in Alameda County.

### Disclaimer

The information provided in this Fact Sheet should be considered by public agency and business purchasers who are interested in buying environmentally preferable products. It is provided as a public service by StopWaste.Org in an attempt to provide environmental benefits and reduce costs. The information on products listed is supplied by the manufacturers. Listing in this Fact Sheet is not a recommendation or an endorsement. This Fact Sheet is not a substitute for the exercise of sound judgment in particular circumstances and is not intended as recommendations for particular products or processes. StopWaste.Org is the Alameda County Waste Management Authority and the Alameda County Source Reduction and Recycling Board operating as one public agency.

This Fact Sheet was last updated in March 2011 by Kies Strategies and Tabor Consulting Group, on behalf of StopWaste.Org.

## Appendix A: Sample of Remanufactured Toner Cartridge Suppliers

The companies listed below will supply remanufactured toner cartridges to buyers in Alameda County and have stated that they meet the bid specifications contained on the previous pages. It is recommended that buyers check references of these suppliers to assure quality.

### **Arista Business Imaging Solutions**

5153 Commercial Circle, Suite A  
Concord, CA 94520  
[www.aristadoes.com](http://www.aristadoes.com)  
Contact: Kathy Martin, (925) 825-8400 x112  
or 800-888-1718  
Email: kmartin@aristadoes.com

### **Astro Business Products**

7500 National Dr.  
Livermore, CA 94551  
[www.astrobt.com](http://www.astrobt.com)  
Contact: Christine Story, (925) 245-6880  
Email: cstory@astrobt.com

### **Blaisdell's Office Supply**

1645 Alvarado St.  
San Leandro, CA 94577  
[www.blaisdells.com](http://www.blaisdells.com)  
Contact: Margee Witt, (510) 484-3600  
Email: mwitt@blaisdells.com

### **LaserCare**

3375 Robertson Pl.  
Los Angeles, CA 90034  
[www.lasercare.com](http://www.lasercare.com)  
Contact: Paul Wilhelm, (310) 202-4200 x202  
or Alexis Smith, (310) 202-4200 x206  
Email: asmith@lasercare.com

### **Laserlink International Inc.**

1310, 63rd Street  
Emeryville, CA 94608  
[www.laserlinkintl.com](http://www.laserlinkintl.com)  
Contact: Kiki Singh, Pradeep Singh or Henry Singh,  
(510) 652-8000  
Fax: (510) 652-1541  
Toll Free: 1-888-995-2737  
E-Mail: mylaserlink@yahoo.com

### **Laser Printer Resource**

2977 Ygnacio Valley Rd.  
Walnut Creek, CA 94598  
[www.Lpresource.com](http://www.Lpresource.com)  
Contact: Andy Halperin, (925) 933-3366  
Email: Andy@lpresource.com

### **Pacific Copier & Computer**

PO Box 1433  
Sacramento, CA 95812-1433  
Contact: Lynn Dietz, (916) 454-3599  
Email: paccopier@aol.com

### **Toner Zone**

IJSS Inc.  
5660 Bandini Blvd  
Bell, CA 90201  
[www.tonerzone.com](http://www.tonerzone.com)  
Contact: Joy Go, (800) 808-6637 x11 direct line, (323)  
454-2432  
Email: joy@ijssinc.com

### **Uptime Resources**

497 Carolina St.  
San Francisco, CA 94107  
[www.uptimeresources.com](http://www.uptimeresources.com)  
Contact: Doug Mount, (415) 348-9900 x225  
Email: dmount@uptimeresources.net

*Major national office supply stores, such as Office Depot, Boise Cascade and Give Something Back, are not listed but readily provide remanufactured toner cartridges from a variety of suppliers.*

*Purchasers should consider requesting more information from their office supply stores regarding maintenance, quality, and other terms of the bid specifications.*