

Remanufactured Toner Cartridges in Alameda County



STOPWASTE
Fact Sheet



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Buying 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.

1. QUALITY, COST AND ENVIRONMENTAL BENEFITS

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.

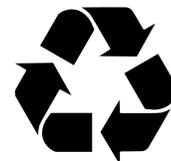
COST

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.



2. 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.

3. COMPATIBLES VS REMANUFACTURED?

“Compatible” toner cartridges often simply means just this: a new toner cartridge manufactured by a third party and not the original equipment manufacturer. These cartridges can be of comparable quality and will generally cost less. However, they are not likely to be made of any recycled parts and are most often made outside the USA.

A remanufactured toner cartridge is made from new and recycled components and is compatible with the original cartridge from your printer’s manufacturer. A remanufactured compatible printer cartridge retains as many of the original components as possible while meeting the standards referenced in the Sample Specifications in this Fact Sheet (Standardized Test Methods Committee (STMC), the American Society for Testing and Materials (ASTM) and the International Safe Transit Association (ISTA)).

 **If your supplier offers “compatible” toner cartridges, ask for a “remanufactured compatible” instead of a “new compatible” printer cartridge.**

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

4. CASE STUDIES

- **Alameda County**

As part of contract implementation, the General Services Agency analyzed contract pricing data for the 27 cartridges most frequently purchased by the County and identified cost savings ranging from 20 to 70% for purchasing environmentally preferable remanufactured and/or high yield cartridges. These savings, as well as the inherent environmental benefits of a longer cartridge lifecycle, are promoted to departments to encourage them to switch to remanufactured or high yield cartridges.

- **King County, Washington**

Since 1991, King County has successfully used remanufactured toner cartridges in all departments. In 2015, King County purchased 1,458 remanufactured toner cartridges and saved an estimated \$104,000. The cost of recycled cartridges varies, but they find it is usually 30 to 50% less than the cost of new 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 10 years with great success. Cost savings range from 25% to 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.

5. 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.

6. SAMPLE REMANUFACTURED TONER CARTRIDGE BID SPECIFICATIONS

TECHNICAL SPECIFICATIONS

Contractor Qualifications

- A. The Contractor shall have prior successful experience providing remanufactured toner and ink cartridges for at least one (1) year at a minimum rate of at least two hundred (200) cartridges per month, split between toner and ink (references to be provided).
- B. It is the intent of the Buyer to procure the most environmentally preferable products with equivalent or higher performance than original equipment manufacturer (OEM) products.
- C. The Contractor shall warrant that the use of the remanufactured ink or toner cartridges will not void any manufacturer's warranty on the copiers, printers or faxes. The Contractor shall provide a one (1) year warranty on workmanship for remanufactured ink or toner cartridges.
- D. The Contractor shall be required to maintain sufficient stock of items listed on the price sheet to ensure prompt delivery of the items ordered.
- E. The Contractor shall have employees who have completed training in the Standardized Test Methods Committee (STMC) Guidelines. This includes the standardized testing certification for ASTM F 1856, ASTM F 2036, and ISTA 1A and shall provide verification upon request by the Buyer.
- F. The Contractor shall have facilities, skilled personnel, equipment and parts available to completely service and repair (within twenty-four hours), all brands of printers that are associated with the brand of ink or toner cartridges in this solicitation.
- G. The Contractor shall have testing equipment available on-site to perform ink and toner testing of the cartridge and density or have testing equipment and applicable operating procedures. The Contractor shall provide detailed information regarding its (or the remanufacturer's) on-site ink/toner cartridge testing methods upon request by the Buyer.

Introduction Of Specifications

- A. The Contractor shall furnish remanufactured ink/ toner cartridges that have been fully remanufactured to specifications equal to, or exceeding original equipment manufacturers (OEM) cartridge standards of quality and performance and approved remanufactured ink/toner cartridge industry standards. Cartridges furnished to the Buyer shall meet or exceed the latest remanufactured ink/ toner cartridge standards, or the guidelines adopted by the Standardized Test Methods Committee (STMC), the American Society for Testing and Materials (ASTM) and International Safe Transit Association (ISTA), including the ASTM F1856 Standards, ASTM F335 and F2036 Standards and ISTA – Integrity Procedure 1A Standards (ISTA 1A).
- B. The Contractor shall not provide Refilled “drill and fill cartridges” or “Split hopper” cartridges.

Cartridge Remanufacturing Process

A. Toner cartridge remanufacturing process shall, at a minimum, include:

1. The term “Remanufactured” is defined as a cartridge which has been completely disassembled and cleaned, replacing with a new long-life optical photo-conductive (ORC) drum with a minimum rating 30,000 page lifespan and with all brand new parts except using the existing casing. The cartridge cases shall be capable for use in the remanufacturing process set forth by the remanufactured standards.
2. The Contractor shall make an assessment to determine if the toner cartridge can be remanufactured.
3. 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.
4. 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, Contractor shall inspect it, clean it, or replace it with a new extended-life drum or new aftermarket drum.
5. Replacement of all seals with an OEM-type heat seal, card seal, or pressure sensitive seal.
6. Replacement of the primary charge roller (PCR) with a re-coated or new PCR and proper measurement of roller clearance.
7. 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.
8. Replacement of any parts that do not meet OEM specifications or the most recent remanufactured toner cartridge industry standards adopted by the STMC or the latest guidelines adopted by ASTM for remanufactured toner cartridges.
9. Filling of toner cartridge meeting OEM specifications or the most recent remanufactured toner cartridge industry standards adopted by the STMC or the latest guidelines adopted by ASTM for remanufactured toner cartridges.
10. Chemically cleaning or replacing the corona wire assembly (where applicable).
11. One fuser wand (where applicable) with high temperature resistant felt wiper and one cotton swab shall be provided with each toner cartridge.
12. Completely fill the hopper to capacity with new toner meeting or exceeding OEM standards.
13. A toner hopper seal/separator that meets or exceeds OEM standards shall be inserted to prevent spillage of toner during shipping.
14. Thoroughly clean exterior surfaces and completely remove all traces of old labels and toner.
15. The Contractor shall provide with each remanufactured toner cartridge a copy of a test page by installing the cartridge in an applicable printer, running and inspecting test copies.

B. Ink cartridge remanufacturing process shall, at a minimum, include:

1. Shall adhere to specifications equal to or exceeding OEM cartridge specifications.
2. Assessment to determine if the cartridge can be remanufactured.
3. Disassembled cartridge/components shall be cleaned and checked against the original manufacturer's specifications. Worn, damaged or end of life cycle components shall be replaced.
4. Replacement of the following: print head (if damaged or does not perform equivalent to OEM), smart or kill chip (resetting is also acceptable if applicable), sponge (if applicable).
5. Filling all cartridges with ink that meets or exceeds OEM ink performance.
6. Print head seal tape after assembly and fill.
7. Other components may be replaced based upon component part or longevity standards.

Cartridge Packaging

A. The term "cartridge packaging" includes, at a minimum, the following:

1. The Contractor shall clearly label each cartridge with the manufacturer's/supplier's name and cartridge model number.
2. Each cartridge shall be packaged in a moisture proof bag and either heat-sealed or zip-locked, meeting or exceeding OEM standards. Toner cartridge bag shall additionally be anti-static. Toner shall be placed in a protective cradle prior to being packaged in an external carton.
3. The external carton and packaging shall protect the cartridge from damage during shipping.
4. Packaging for the cartridges shall be constructed to permit users to re-package spent cartridges for return to the Contractor. All corrugated packaging shall 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.
5. The external carton or an internal shipping invoice shall identify cartridge type (make and model), the Contractor's name, address and telephone 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.

B. For Toner Cartridges include one (1) fuser wand with high temperature resistant felt wiper and one (1) cotton swab (when applicable).

Defective Cartridges

- A. If a problem arises with a cartridge, the Contractor's representative shall resolve the issue by conducting a site visit to the Department using the cartridge within two (2) business days after notification.
- B. Any cartridge found defective, shall be replaced free of charge regardless of the amount of ink/toner remaining in the cartridge. Defective cartridges shall be replaced within three (3) business days after the Contractor is notified. Replacement cartridges shall be properly marked as replacements and identified by the purchase order number, or by online order information.

- C. If problems occur with printers' due to the Contractor's defective cartridge, the Contractor shall provide a competent factory-trained authorized service technician to repair the copier/ printer/ fax within two (2) working days. If the equipment is not repaired the Buyer may elect to have an outside firm repair the unit, and the Contractor shall reimburse Buyer for any equipment service performed due to the Contractor's defective cartridge.
- D. If the defective cartridge causes damage that cannot be reasonably repaired, the Contractor shall be responsible for replacement of the equipment.
- E. All defective cartridges will be returned to the Contractor at the Contractor's expense (per Subsection: Empty Cartridge Return A.) or Contractor may pick up defective cartridge at delivery location.
- F. A diagnostic analysis shall be performed to determine the cause of the problem for any cartridge returned by Buyer.
- G. The diagnostic analysis report shall be delivered to Buyer within ten (10) business days.
- H. If Buyer has continued uncorrected problems with a particular cartridge, or if there are page yields consistently below OEM standards or approved manufactured cartridge industry standards, Buyer may cancel the cartridge model from the contract.
- I. If the overall cartridge defect rate exceeds two (2%) percent of all cartridges used within any six-month period, Buyer reserves the right to cancel the contract in accordance with stated provisions.

Empty Cartridge Return, Recycling of Components, Final Disposal

- A. **Return:** The Contractor shall provide at no additional cost a pre-paid shipping/ mailing label with each ink/ toner delivery for returning each empty cartridge, or provide a toll-free contact phone number to request pick-up of all empty cartridges. Cartridges for recycling shall be picked up within five (5) business days of request by the Buyer.
- B. **Recycle:** The Contractor shall recycle end-of-life ink/toner cartridges and provide Buyer with details of its recycling program upon request. Consistent with the waste management hierarchy of a) reduce, b) reuse, & c) recycle, the Contractor shall provide a collection system that will encourage recovery and reuse of used ink/toner cartridges that complies with all environmental and human health and safety laws.
- C. **Disposal:** If the cartridges cannot be recycled or reused then the Contractor shall ensure proper end-of-life management for ink/toner cartridges that can no longer be reused for their original intended purpose. Any remaining ink/toner in spent cartridges, casings, and parts not remanufactured or used to create a remanufactured cartridge shall be recycled or disposed of in a manner that complies with all federal and state environmental and human health and safety laws and regulations. At Buyer's request, the Contractor shall provide manifests and any other documentation needed to confirm the proper disposal of material.

Customer Support

- A. The Contractor shall provide onsite customer support to Buyer's various agencies, department and division personnel as requested. The Contractor shall be able to respond to a warranty call within two hours of receiving a call from a Buyer agency during normal business hours of 8:00 A.M. to 5:00 P.M. Monday through Friday.

Special Provisions

- A. A Material Safety Data Sheet (MSDS) shall be provided in each container. At the request of Buyer agencies, a copy of the original MSDS shall be provided on remanufactured toners.
- B. Each shipping container shall have a label which clearly states “IMPORTANT: SAVE THIS BOX AND ALL INTERNAL PACKAGING FOR RETURN OF THE EMPTY CARTRIDGE.” The label shall be placed along the length of the shipping container.
- C. Each cartridge shall be provided with complete instructions for installation and maintenance of the cartridges to optimize the performance and life of the cartridge.
- D. Yield of Cartridges (ink and toner): High yield cartridges are cartridges that are expected to produce approximately two (2) times more printed pages than standard cartridges. Bidders shall provide description and pricing on all available remanufactured high yield cartridges as part of the Price Sheet. High yield is usually indicated with an “X” or “XT” or “XD”.

FOR MORE INFORMATION

These sample specifications are based on those used by King County, Washington. King County has purchased remanufactured toner cartridges for laser printers, fax machines and ink-jets since 1991. Cost savings range from 30 to 50% less than new cartridges. All cartridges are guaranteed to perform like new.

www.kingcounty.gov/~media/depts/finance/procurement/Documents/Environmental/EP_Products_Toner.ashx

Similar specifications have been used by Alameda County and the City and County of San Francisco:

- **Alameda County:**

Alameda County issued two bids concurrently for the procurement of Original Equipment Manufacturer (OEM) and Remanufactured (Reman) Toner and Ink Cartridges. Each bid has identical requirements regarding product warranty and replacement in the case of a faulty cartridge, as well as service and repair of equipment if a faulty cartridge causes printer damage. In addition, the bid for remanufactured cartridges has stringent requirements that seek to ensure that the County receives high quality remanufactured products that meet or exceed OEM quality.

Cost savings range from 20 to 70% for purchasing environmentally preferable remanufactured and/or high yield cartridges.

www.acgov.org/sustain/documents/remantonerbid_excerpt.pdf

- **City and County of San Francisco:**

San Francisco requires that remanufactured toner cartridges be fully remanufactured to specifications equal to, or exceeding original equipment manufacturer (OEM) cartridge standards of quality and performance and approved remanufactured toner cartridge industry standards.

They find that a remanufactured toner cartridge costs about 50% less than a new cartridge.

www.sfapproved.org/remanufactured-toner-cartridges

7. 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.

8. 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** offers technical assistance to Alameda County public agencies and businesses for purchasing environmentally preferable products. Resources such as additional fact sheets, guides and links to other helpful environmental purchasing websites and documents can be found at www.StopWaste.org/EPP.

To find out how and where to recycle any type of recyclable item in Alameda County, check out the online search tool “RecycleWhere?” at www.StopWaste.org/recycle.

- **Alameda County and the General Services Agency** are committed to sharing their resources and experiences to promote green purchasing in public agencies. Policies, success stories, bids, specifications and other resources are available at www.acsustain.org.
- **The California Department of General Services Environmentally Preferable Purchasing Program** provides information on how the State is succeeding in buying environmentally sustainable products and services. Click on the “Buyers Guide” tab at www.dgs.ca.gov/BuyingGreen to find detailed information on State contracts and recommendations for greening commercial products and services.

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. StopWaste provides it as a public service in an attempt to provide environmental benefits and reduce costs. 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 is the Alameda County Waste Management Authority, the Alameda County Source Reduction and Recycling Board, and the Energy Council operating as one public agency.

This Fact Sheet was last updated by Kies Strategies & StopWaste in August 2017.

APPENDIX A: SAMPLE LIST OF REMANUFACTURED TONER CARTRIDGE SUPPLIERS

The companies listed below will supply remanufactured toner cartridges to buyers in Alameda County and have stated they offer toner cartridges that meet the bid specifications contained on the previous pages. However, each of these companies offer a wide range of products and not all products within brands will comply.

Remanufactured Toner Cartridge Local Suppliers

Company/Location	Contact	Website	Recycle Used Cartridges	Notes
Arista Business Imaging Solutions 5153 Commercial Circle Concord, CA 94520	Kathy Martin (925) 825-8400 or 800-888-1718 kmartin@aristadoes.com	www.aristadoes.com	Yes (selected brands)	
Blaisdell's Business Products 474 Roland Way Oakland, CA 94621	(510) 483-3600 or 888-483-3604 support@blaisdells.com	www.blaisdells.com	Yes	Phone and online orders. Certified Small, Local and Emerging Business (SLEB) in Alameda County.* Bay Area Green Business.**
Laser Printer Resource 2977 Ygnacio Valley Rd. Walnut Creek, CA 94598	Andy Halperin (925) 933-3366 or 877-933-3366 Andy@lpresource.com	www.Lpresource.com	Yes, pick-up or return	Phone and online orders.
Laserlink International Inc. 1310 63rd St. Emeryville, CA 94608	Kiki Singh (510) 652-8000 or 888-995-2737 sales@laserlinkintl.com	www.laserlinkintl.com	Yes, pick-up or return	Phone and online orders. Certified Small, Local and Emerging Business (SLEB) in Alameda County.*
Pacific Copier & Computer PO Box 1433 Sacramento, CA 95812-1433	Lynn Dietz (916) 454-3599 paccopier@aol.com	www.pacificcopier.com	Yes	Phone and online ordering with headquarters in Sacramento and sales office in Fairfield.
Uptime Resources 32900 Alvarado-Niles Road Union City, CA 94587	(415) 348-9900 or 888-291-2900 support@uptimeresources.net	uptimeresources.com	Yes, any brand, for active customers	

* To confirm current SLEB status, visit the Alameda County Small, Local & Emerging Business program website: acgov.org/auditor/sleb

** To confirm current Green Business status, visit the Bay Area Green Business Program: www.greenbiz.ca.gov

Notes:

- It is recommended that suppliers be contacted for further product inquiries and to verify that your product choice meets your environmental, performance and cost criteria.
- Major national office supply stores, such as Office Depot/Office Max, Staples 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.