

# Monochrome Toner Cartridges

## Covered Products:

Monochrome toner cartridges.

## Definitions:

**“Clone” or “Compatible” Toner Cartridges** (also referred to as “new builds”) – a new cartridge built using 100% new parts, not produced by the OEM but by a third party, and sold under a third party brand name.

**“Compatible with”** – remanufacturers may refer to their toner cartridges as “compatible with” certain OEM imaging devices. This is different than compatible toner cartridges.

**High-yield Cartridge** – a cartridge filled to obtain a maximum number of copies of printed material.

**International Safe Transit Association (ISTA)** – a testing and standard setting organization for packaging used for shipping goods.

**OEM** - original equipment manufacturer.

**OEM Cartridge** – a new cartridge produced by the OEM and sold under the brand name.

**Remanufactured Toner Cartridge** – a used OEM cartridge which has been restored to its original OEM performance and function and is thereby diverted from the solid waste stream, and which has been disassembled and cleaned, retaining, to the extent practicable, components that have been through at least one life cycle, and replacing any worn, damaged or end of life components. All components used in the construction of remanufactured cartridges must equal OEM performance and function.

**Remanufacturer** – a company that disassembles previously used toner cartridges into components, assembles the reusable parts into functioning printing cartridges, and introduces new or aftermarket parts or components only where expressly required (i.e., new toner).

**Standard Cartridge** – a cartridge that is partially full with ink or toner.

## Standard Setting and Certification Programs:

**American Society for Testing Materials (ASTM)** – is one of largest voluntary standards development organizations in the world, and a trusted source for technical standards for materials, products, systems and services.

**Standardized Test Methods Committee (STMC)** – is a global committee, created by the International Imaging Technology Council, to promote standardized test methods for the printer cartridge industry. The STMC certification for remanufactured toner cartridge vendors signifies that the vendor’s employees are trained in and use STMC test methods.

**UL EcoLogo** – is an independent, third party standard setting and certification program that follows the Guiding Principles and Procedures for North American Type I Environmental Labeling adopted by the International Organization for Standardization (ISO 14024). Since its establishment in 1988, EcoLogo has been recognized or referenced in more than 350 specifications and standards.

**Guidance:**

It is recommended that prior to creating vendor bid documents affected entities should:

1. Inventory all imaging equipment and record toner cartridge needs, and
2. Determine the type of toner cartridges (for what type of machine and model number) have the highest volume of usage.

**Specifications:**

All affected entities are strongly encouraged to purchase high yield remanufactured toner cartridges as defined in this specification that meet the requirements recommended below, from vendors and manufacturers who meet the requirements recommended below.

**A. Priority List:**

The order of desirability for toner cartridge purchases among different types of monochrome toner cartridges is as follows:

- Priority 1 - Remanufactured High-yield Cartridges
- Priority 2 - High-yield Original Equipment Manufacturer (OEM) Cartridges
- Priority 3 - Remanufactured Standard Cartridges

Note: The purchase of “clone” or “compatible” toner cartridges as defined in this specification is discouraged.

**B. Recommended Product Quality Requirements:**

1. All components used in the construction of remanufactured cartridges should be dismantled and examined for damage and/or excessive wear, and all remanufactured toner cartridges should meet or exceed OEM cartridge standards for

quality and performance and meet approved remanufactured toner cartridge industry standards. All remanufactured toner cartridges should meet or exceed:

- The latest ASTM remanufactured toner cartridge standards;
  - The guidelines of UL EcoLogo CCD-039, Blue Angel, Nordic Swan, or equivalent Eco label; or
  - The results of third party performance testing by the Rochester Institute of Technology Imaging Products Laboratory (RIT), Buyers Lab, or equivalent independent laboratory.
2. Vendors should provide a separate declaration of the standards or guidelines being met, as described above, for the highest quantity purchased toner cartridges, including SKU numbers.
  3. Exterior surfaces shall be thoroughly cleaned, with all traces of old labels, and toner removed entirely.
  4. Remanufactured toner cartridges should not be manufactured or remanufactured with, or contain intentionally added mercury, lead, cadmium or chromium (VI) as constituents of the toner or toner cartridge. Vendors should provide documentation, with each shipment, that attests to compliance with this requirement.
  5. Remanufactured toner cartridges should not be manufactured or remanufactured with, or contain any hazardous substances in concentrations that cause the toner or cartridge to be classified with any of the following risk phases according to Annex I of the European Union Directive 67/548/EEC:
    - a. Very toxic by inhalation (R 26)
    - b. Very toxic in contact with skin (R 27)
    - c. Limited evidence of a carcinogenic effect (R 40)
    - d. May cause sensitization by inhalation (R 42)
    - e. May cause cancer (R 45)
    - f. May cause heritable genetic damage (R 46)
    - g. Danger of serious damage to health by prolonged exposure (R 48)
    - h. May cause cancer by inhalation (R 49)
    - i. May impair fertility (R 60)
    - j. May cause harm to the unborn child (R 61)
    - k. Risk of impaired fertility (R 62)
    - l. Possible risk of harm to the unborn child (R 63)
    - m. May cause harm to breastfed babies (R 64)
    - n. Possible risk of irreversible effects (R 68)
  6. Remanufactured toner cartridges should not be manufactured or remanufactured with azo-colorants (dyes or pigments) that may contain carcinogenic aromatic amines, as defined in Underwriter's Laboratory (UL) 2785 *Standard for Sustainability for Printing Cartridges*.

7. Vendors should document that the highest quantity purchased remanufactured toner cartridges have been tested for performance and in accordance with the above standards and guidelines and that the cartridges have met or exceeded those tests with each shipment.
8. Vendors should provide documentation which confirms that the emissions testing results for each type of cartridge purchased meets the specified requirements for release of total volatile organic compounds (TVOC), benzene, styrene, and dust as defined in RAL-UZ55 for monochrome print cartridges and determined in accordance with The BlueAngel's Basic Criteria for Award of the Environmental Label – Office Equipment with Printing Function (Printers, Copiers, Multi-function Devices – RAL – UZ171. See Table 1 for the allowable emission rate values for each substance.

<b>Table 1: Permissible Test Values for Emission Rates As Determined According to Appendix S-M for Electrophotographic Devices – RAL UZ 171</b>		
<b>(All Values in mg/h, Except for Particle Emissions)</b>		<b>Monochrome Printing</b>
Pre-operating Phase	TVOC*	1 (Desktop Devices) 2 (Floor-mounted Devices, Device Volume >250 l)
Print Phase (= Pre-operating + Print Phase)	TVOC*	10
	Benzene	<0.05
	Styrene	1.0
	Unidentified Single Substances	0.9
	VOC	1.5
	Ozone	4.0
Print Phase	PER10PW [Particles/10 min]	3.5 * 10 <sup>11</sup>

\*Please see the list of volatile organic compounds which must be considered when measuring emissions from office equipment with printing function (see Appendix S-M, para. 4.5 VOCs).

### **C. Recommended Vendor Requirements:**

Vendors (i.e., retailers, distributors and remanufacturers) should be required to:

1. Offer only OEM or remanufactured toner cartridges for which the manufacturer, wholesaler, distributor, retailer, or remanufacturer does not place restrictions on the recycling or remanufacturing of the cartridge.
2. Inform purchasers of available products and indicate the level of the priority list on which the product falls.

3. Provide page counts for all OEM and remanufactured cartridges in its proposal.
4. Provide a link to the current Safety Data Sheet (SDS) for each product provided to the customer.
5. Provide training for the end-users on installation and maintenance of the cartridge to optimize the performance and life of the cartridge, upon request of the customer.
6. Warrant no more than a 2% failure rate of toner cartridges supplied, over a time period based on consumption rate or another time period agreed to by the purchasing entity.
7. Provide 100% replacement warranty for all cartridges supplied for a minimum of one (1) year from the date of purchase. 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.
8. If problems occur with imaging equipment due to a vendor's defective remanufactured toner cartridge:
  - a. Provide a competent factory-trained authorized service technician to repair the imaging equipment machine within one (1) business day, or
  - b. Reimburse the customer for any imaging equipment repair service performed due to the vendor's defective cartridge. If the imaging equipment cannot be repaired or restored to its previous condition, the vendor should pay for an equivalent replacement of the device at no cost to the customer.
9. Vendors are encouraged identify environmentally preferable product (EPP) items in their product catalogs along with prominent information about how the vendor defines EPP (e.g., if the vendor uses a symbol/icon to identify a "greener" product, provide information about what the symbol/icon represents). Any EPP symbols/icons displayed should be displayed along with EPP attribute details per product (e.g., a product with a recycled content symbol would also have in its product description details about the % total RC and % PCRC). EPP items should be easily found within online product catalogs through effective search tools, search filters, and related navigational tools.
10. Vendors are encouraged to provide EPP data by department, delivery location, or other demographic that is most applicable to the purchasing entity.
11. Vendors are encouraged to set up a plan with the purchasing entity whereby all toner cartridge purchases will be delivered on a certain day of the week or will identify another consolidation method. Vendors should document or illustrate how their delivery consolidation methods will reduce the purchasing entity and the vendor's carbon footprint (e.g., reduction in fossil fuel use, carbon emissions, packaging materials, and on-site vehicle traffic).

12. Vendors should use only delivery service companies that are participants in EPA's Smartway Program.

#### **D. Recommended Vendor Requirements on Remanufacturers**

1. Vendors should offer remanufactured products from product remanufacturers certified to the standards specified by STMC, ISO 9001 for Quality Management Systems, or ISO 14001 for Environmental Management Systems for having the test equipment, printers and trained personnel for testing to those standards' guidelines. The certification signifies that the company's employees are trained in and use approved test methods.
2. If the remanufacturer is certified under the ASTM Guidelines, the vendor should provide ASTM documentation on the number of the remanufacturer's personnel who have successfully completed the training for the Guidelines and demonstrate that they are still current with their qualification. This includes the standardized testing certification for ASTM F 1856-98, ASTM F 2036, and ISTA 1A VERSION-99.
3. Vendors should provide documentation on the remanufacturers facility(ies), skilled personnel, and equipment and parts available to service, maintain, overhaul and repair all brands of imaging equipment that are associated with the models of cartridges listed in the solicitation.
4. Vendors should provide documentation on the remanufacturer's verification of testing on all toner cartridges after remanufacturing by installing the cartridge in an applicable device and running and inspecting test copies. A test copy for each toner cartridge purchased will be provided with each purchase shipment, printed on 100% recycled content paper with a minimum of 50% post-consumer recycled content, and printed double-sided.
5. Vendors should provide documentation that the exterior cartridge surfaces have been thoroughly cleaned by the remanufacturer, with all traces of old labels entirely removed.

#### **E. Idling of Delivery Trucks:**

Vendors are encouraged to require all delivery drivers to turn off their engines upon stopping at the delivery location, or not allow an engine to idle at any location for more than 20 seconds, except in the following situations:

- The health and safety of employees, sub-contractors or the public is compromised by turning off the vehicle.
- The engine is required to power auxiliary equipment (e.g. hoist, lift platforms, hydraulic tools, inverters, compactors, medical equipment, specialized public safety radio communication and computer systems, etc.). Or,

- Vehicle/equipment manufacturer requires additional idle time for warm up or cool down for efficient and proper mechanical or functional operation of the unit.

#### **F. Take Back:**

Vendors should provide a viable method for the collection of spent cartridges for recycling or remanufacturing that does not create any waste or expense for the customer (e.g., by providing a pre-paid shipping/ mailing label to be used on the original box in which cartridges were received, or a collection container for pick up, etc.). Practices for take back should be reviewed and determined with the purchasing entity.

Vendors should recycle or remanufacture end-of-life cartridges and provide the buyer with the following details of its recycling/remanufacturing program in its annual report to the customer:

- The number of used toner/ink cartridges received from the customer, including the type of toner cartridge (OEM or remanufactured), the OEM's name, and the name of the department completing the return.
- The disposition of the returns, including the disposition of the remaining toner in used cartridges (e.g., remanufactured, sent to remanufacturer, recycled, etc.).

Vendors should 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 the customer's request, Vendors should provide manifests and any other documentation needed to confirm the proper management or disposal of material.

#### **G. Packaging and Label Requirements:**

If the original shipping container is used to return spent cartridges, the container should be constructed to permit use for returns.

The shipping container to be used for returns should include a label, on at least one of the long sides that says:

"IMPORTANT: SAVE THIS BOX AND ALL INTERNAL PACKAGING FOR  
RETURN OF THE EMPTY CARTRIDGE."

Packaging shall comply with Environmental Conservation Law section 37-0205. Packaging shall not contain inks, dyes, pigments, adhesives, stabilizers, or any other additives to which any lead, cadmium, mercury or hexavalent chromium is intentionally added or contain incidental concentrations of lead, cadmium, mercury or hexavalent chromium which together are greater than 100 parts per million by weight (0.01%).

New York State encourages affected entities to adopt the following:

- The use of bulk packaging.
- The use of reusable packaging.
- The use of innovative packaging that reduces the weight of packaging, reduces packaging waste, or utilizes packaging that is a component of the product.
- That all packaging remain the property of the supplier and not become the property of the affected state entity under any circumstance or condition. The vendor shall certify that the packaging material will be reused, recycled, or composted, and managed in compliance with applicable local, state, and federal laws.
- Packaging that maximizes recycled content and/or meets or exceeds the minimum post-consumer content level for packaging in the U.S. Environmental Protection Agency Comprehensive Procurement Guidelines. If corrugated packaging is used, vendors should provide written documentation from the carton manufacturer/supplier that verifies a 50% minimum percentage of post-consumer recycled content.
- Packaging that is readily recyclable or compostable in the purchasing entity's community recycling program. (Contact the State's Environmental Agency to find out the products that are readily recyclable in residential programs.)