XEROX®

Facts About the Safety of Xerox Products

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The Business of Xerox

Xerox is the global leader in the document management business, offering the most innovative array of document products, services and solutions in the industry.

Our strategic intent is to help people find better ways to do great work – by constantly leading in document technologies, products and services that improve our customers' work processes and business results.

Xerox has successfully transformed itself into a digital, color and document solutions and services company. We offer unrivaled expertise in the production and management of documents: color and black-and-white, digital and paper, across networks or on a desktop, in a commercial print facility or a quick-print shop, for the small office or the global enterprise. Our document processing activities encompass the designing, developing, manufacturing, marketing and servicing of a complete range of document processing products and systems that make office work more productive.

General Policy

It is the policy of Xerox Corporation that all products and materials marketed worldwide meet recognized standards for safety, health and environment, and to ensure that "good practice" is followed where no such standards exist or apply. In addition, Xerox products, materials, and practices comply with the appropriate governmental standards. In instances where standards of different severity apply under various jurisdictions, our usual practice is to comply with the strictest standards multinationally. The purpose of this policy is to ensure that Xerox products and materials do not constitute a risk to the health and safety of our customers, employees or the general public.

Overview

To ensure full compliance with the above policy, health and safety considerations are an essential element of the product and materials design and review process. Extensive system testing is conducted under a variety of simulated field and stress conditions to verify that all the health and safety requirements have been met. Our internal test groups conduct some of these tests while others are performed by external test organizations.

With regard to the materials used in Xerox products, we have historically performed appropriate acute toxicity tests (ingestion, inhalation, sensitization, etc.). When deemed necessary, results of longer term exposure tests are evaluated. With advances in the field of genetic toxicology, we have used a battery of tests for a number of years as a predictor of potential, longer term effects.

In all of these activities, Xerox uses qualified personnel to perform the required studies. As developments warrant, external experts are consulted to provide advice and critique.

In any instances where new information raises a concern about the safety of a product or material, prompt corrective measures are taken. In the case of electrical or mechanical safety concern(s), where problems can be analyzed more rapidly, the recommended corrective actions are disseminated promptly to service representatives by *Critical Safety Bulletins.* In all cases, action is taken with health and safety being the first priority.

Safety Data Sheets

Xerox Corporation prepares summaries of the safety and health information for its products in the form of Data Sheets.

Product Safety Data Sheets (PSDSs) contain information about the mechanical, electrical, and environmental attributes of our machines, as well as their emissions into the surrounding environment.

Material Safety Data Sheets (MSDSs) provide information on any hazards, and the safe use of our products that may be classified as chemicals. They also contain storage, shipping, and disposal instructions.

Our *MSDSs*, in accordance with applicable governmental regulations, are provided to customers in the U.S. with the initial shipment of product or material. Our *MSDSs* have also been filed with the Chemical Control Boards (or equivalent) in the Scandinavian countries.

All safety data sheets are updated periodically to reflect new information. They are provided upon request via the Internet at www.xerox.com or Xerox North America or Europe Environment, Health & Safety (EH&S) support organizations. Contact information can be found on the last page of this publication.

General Safety Practices

It is important to observe a few fundamental rules in order to ensure the safety of those involved with the use and care of complex electrically operated machines. The following list is offered for guidance.

- Machines must be sited according to published Xerox installation requirements. These should be reviewed if a machine is moved to a new location.
- Comply with all caution and warning labels in order to avoid potentially hazardous conditions.
- Machines must be connected to a properly grounded electrical service outlet.
- Some covers are interlocked to ensure removal of hazardous conditions when covers are opened. Interlocks must not be bypassed or defeated.
- Covers or guards held in place by fasteners that require tools to be removed are not to be removed except by trained service personnel.
- Use only Xerox-approved maintenance procedures and materials, both inside and outside the machine.
- If unusual noises, odors or smoke are noticed, the machine should be stopped immediately, disconnected from its power supply, and serviced before next use.
- Spent materials and products should be disposed of according to instructions provided on *MSDSs* and *PSDSs*.
- To avoid nuisance or discomfort effects, it is best to avoid staring at the machine’s light sources.

Imaging Processes

XEROGRAPHY

In the traditional xerographic imaging process, an electrostatic charge is applied to a photoconductive layer coated onto a metallic drum. Today, most xerographic equipment use a technology based on a multilayer organic photoconductor. The photoconductor generally includes a small quantity of selenium and is coated onto a lightweight aluminum tube or polyester film base. Following light exposure from the document, the resultant latent image is developed with a finely divided electrostatic powder known as toner or dry imager. Generally the toner is supplied to the latent image in the form of a developer mixture, composed of large carrier with small toner particles adhering to it, and is transported to it by a cascading or magnetic conveying process. The toner adhering to the imaged areas is transferred electrostatically to the paper and is fused permanently to it by application of heat or heat and pressure. The residual toner on the photoconductor is removed, and the photoconductor is prepared for the next imaging cycle.

LASER PRINTING

In laser writing or printing, the image is first digitized into a series of very small dots (pixels) by either a computer or document scanner. The digitized image is then transferred onto the photoreceptor via a laser beam. The rest of the xerographic process is essentially conventional.

SOLID INK

In the solid ink printing process, solid blocks of ink are melted and jetted through piezoelectric print heads. Images are printed onto paper in a single pass of the print engine.

INK JET

In the ink jet imaging process, a stream of colored liquid ink is ejected dropwise through an electrical field to travel to a receiver sheet of plain paper.

FACSIMILE

In facsimile reproduction, the document is scanned by light sources and the image is converted to an electronic form compatible with telephone communications. At the receiver, electro-optical systems decode and print the transmitted image via direct thermal, thermal transfer, xerographic or ink jet processes.

SCANNING

In scanning, an original document is converted into a digital image by an electronic sensor. Optics in the scanner create a focused image of the document on the surface of the image sensor. The sensor converts this image into a matrix of samples known as pixels. Once the image is in digital form, it can be processed in a variety of ways prior to printing.

LIQUID DEVELOPMENT

In liquid development, finely divided powder particles are suspended in a liquid hydrocarbon, which is then brought into contact with the photoconductor. The powder is fixed to the paper or receiver by the evaporation of the liquid through the application of heat, or both heat and pressure. Generally, the other steps are the same as in conventional xerography.

IONOGRAPHY

In ionography, ions are deposited selectively on a dielectric surface that is subsequently developed and the image is simultaneously transferred and fixed onto a receiver sheet by the application of pressure.

Machine Design and Exposure Limits

Xerox policy requires that products meet safety standards at least as strict as those generally accepted by approval agencies and government regulations. A Product Safety Plan for each product program details the specific requirements. Assessments are made for all possible hazards: electrical, mechanical, chemical, biological, radiation, heat emission, and noise. Possible interactions between hazards are also considered. Results of assessments must be satisfactory in all areas to permit shipment of the machine to the customer. In addition to these assessments, service procedures, service materials, special tools and the key operator's manual must all be approved prior to customer shipments. Minimum product space requirements are defined, to ensure proper machine performance and to provide adequate access for service operations.

Xerox products are typically submitted to approval agencies such as Underwriters' Laboratories (UL), Canadian Standards Association (CSA), and British Standards Institute (BSI) for certification against the latest version of the internationally accepted product safety standard IEC60950 (Safety of Information Technology Equipment).

Xerox takes a prudent and responsible position on potential health risks to its employees and customers. Accordingly, Xerox Exposure Limits (XEL), internal company exposure limits for chemical or physical agents, may be established. XELs are more stringent than external consensus or regulatory limits. Applicable XELs and exposure limits from external sources are both shown on *MSDSs*.

Ergonomics/Human Factors

Human factors are an integral part of our design process. Our multidisciplinary team of professionals evaluates our products to ensure usability by our customers, serviceability by our technicians and ease of assembly by our manufacturing personnel. We believe this effort helps to protect the health and safety of our customers as well as our employees.

Document Illumination

Due to the intensity of the light source, some lamp systems are interlocked with the platen cover to prevent any operator exposure. Staring at lamps can produce an afterimage, but this is of short duration and has no permanent effects. We recommend that platens be covered while making copies to minimize exposure and facilitate good copy quality.

Lasers

Xerox products containing lasers are designed and built to comply with governmental and international standards. Such standards have very strict safety requirements. Xerox products containing lasers are designed so that potentially harmful laser beams will not exit the machine. Covers and shields need not, and should not, be removed for customer maintenance. Covers that may be removed by Xerox service personnel are labeled to indicate potential laser hazards. No service mode requires direct viewing of the laser beam or permits the beam to exit the confines of the machine. Service personnel following established adjustment procedures are not exposed to potentially harmful laser beams. Products containing lasers do not represent a hazard to machine operators or bystanders.

Materials Safety Evaluation

All materials used in our various products comply with applicable external regulatory requirements, as well as more stringent Xerox internal safety requirements. During the risk or safety assessment of any material/product, both its inherent properties (potential hazards) and its availability to customers and service personnel (exposures) are considered.

The various materials used in imaging processes are evaluated for their toxic potential by reviewing published technical data or acquiring the necessary information through responsible testing. The safety evaluation process considers potential short- and long-term effects, as well as reproductive impact. Although acute toxicity determinations are no longer conducted for most Xerox toners, any testing judged necessary is performed by oral, dermal or inhalation routes.

The potential for eye and skin irritation is also determined. Human skin patch testing is considered to be definitive and animals are used only when required as a prerequisite to the human tests. When deemed necessary, longer term exposures, with the appropriate route of administration and dosage, are also evaluated.

We also utilize various bacterial and mammalian cell type tests in the safety evaluation of materials. With the rapid advances made in the field of genetic toxicology, the most suitable and validated assays are used as predictors of potential genotoxic effects.

All tests are performed to the Organization for Economic Cooperation and Development (OECD) methods by independent laboratories that operate in accordance with the rules of good laboratory practice, and the results are documented and placed into the health and safety archives. Further, all laboratories used in safety testing are accredited by, or meet the standards of, the American Association for Accreditation of Laboratory Animal Care.

Responsible use and humane treatment of animals are basic requirements of sound scientific research and the generation of valid test data. Our safety testing activities are in full compliance with these basic principles. Summaries of the test results are published on the *MSDS* under the heading relating to Toxicology, and the actual detailed test reports are available to the appropriate health and safety regulatory agencies.

In all of the above activities, Xerox has used qualified internal or external personnel to perform the assessments and supervise the required studies. As a normal part of the safety assessment process, external experts have been consulted to provide advice and critique.

Toners and Developers

Xerox toners are fine powders composed of plastics, colorants, and small quantities of functional additives. Constituents in the formulation are purposefully selected for a combination of traits that allows for high xerographic quality and yet only use materials that can pass our health and safety reviews. Toners are not considered to be hazardous preparations according to any regulatory classification criteria.

The toners are typically designed using styrene-acrylic, styrene-butadiene or polyester polymers. In black toners, several different specialty grade carbon blacks or iron oxide are used as colorant, while for color images, various dyes or pigments are employed. The level of nitropyrenes and polycyclic aromatic hydrocarbon (PAH) trace impurities in the carbon black is strictly controlled and is exceedingly low. During the toner manufacturing process, the carbon black (or other colorant) and polymer are combined in such a way that the colorant becomes encapsulated by the polymer.

Under normal operating conditions, the toners are entirely stable and no significant decomposition occurs. When exposed to the proper combination of heat and pressure, the toner simply flows and adheres to the paper.

Developers are composed of a carrier material and toner. Xerox carriers are based on special grades of sand, glass, steel, or ferrite types of materials. They are generally coated with a small amount of special polymer to achieve the desired functional behavior in the xerographic equipment.

Toner Inhalation Study

Xerox Corporation conducted a comprehensive inhalation toxicology investigation of xerographic toner. We took this action because of the lack of knowledge regarding the biological effects of long-term inhalation of toners or other closely related materials, such as polymer dusts. Since Xerox introduced toners into wide commercial use, we felt an ethical responsibility to understand their behavior.

The major investigation focused on two species of rodents who were exposed to three levels of a test toner for the majority of their life span. The special test toner was purposefully designed to be capable of reaching the deep lung in rodents and complied with the strict National Toxicology Program test protocols.

The inhalation studies did not show any dose-related effect of exposure on survival and/or causes of death. Similarly there were no effects on body weight gain or food consumption. The clinical and blood chemistry parameters were essentially unchanged. There was no evidence of systemic or upper respiratory system toxicity. There was no change in lung tumor frequency when compared to either concurrent and historical control data. All of the observed changes were restricted to the lungs and associated lymph nodes.

In brief, there were no changes at the low exposure level, which is the most relevant level with respect to potential human exposures (actual exposures are typically substantially lower than the lowest dose in this investigation). Effects in the lungs were observed at the highest dose. At the middle exposure level fewer types and smaller magnitude of lung changes were observed.

Toner Inhalation Study (continued)

The various lung changes observed at the high and, to a lesser extent, middle exposure levels, were consistent with “lung overload.” The term “lung overloading” is used to refer to a well-characterized series of generic responses attributable to the presence of large quantities of benign dusts that are retained in the lung. These responses have been observed with a variety of insoluble dusts that are respirable, but are considered to be “nontoxic.”

The results of the investigation should not be a cause for concern. Toner exposures during the operation or servicing of Xerox equipment are well below the lowest exposure or “no effect” level in the inhalation studies.

The results of the study have been communicated to the appropriate regulatory authorities and continue to be recognized as extremely important investigations into the properties of inhaled particles. As a part of Xerox’s ongoing Hazard Communication Program, a summary of these studies is found on the *MSDSs* for all toners and developers.

Xerox also initiated a complex series of studies of manufacturing and service employees to investigate whether or not there could be any adverse health consequences associated with occupational exposure to toner. The studies have now been ongoing for almost 20 years. As with the rodent inhalation studies, the results of the occupational health studies continue to indicate that there are no significant health effects associated with the exposure to toner at the levels found in manufacturing or service.

The overall studies include studies of the health of current employees and an assessment of the causes of death for people who had worked for the company between 1960 and 1982. The analysis to date indicates that the health and mortality patterns of Xerox employees are consistent with a healthy working population.

Xerox Corporation will continue to use its health and safety program to ensure that any statement made regarding the health of its work force has sound scientific basis and understanding.

Photoreceptors

A xerographic photoreceptor is a multilayer device in which photoconducting layers are very tightly bonded to a substrate that provides mechanical stability. For rigid applications, the substrate is composed of a metal or metallic alloy, generally an aluminum drum or tube. Incorporating a substrate of either an electroformed nickel belt or a polyester film base provides flexibility.

Most current photoreceptors use a novel, organic photoconductor. These imaging systems utilize special technologies that enhance the resolution of the copied image through the use of special lasers and digital xerography. Some may contain a very small amount of selenium.

The photoconductors used in the older Xerox products are principally composed of amorphous selenium. Some of them use a selenium alloy that contains a very low level of arsenic (less than 0.5%), while others use an alloy based on arsenic triselenide. The photoreceptor of some drum products also contains tellurium. Such photoconductors are no longer used in the design of new products.

Liquid and Solid Inks

In some imaging applications (such as plotters, printers) liquid and solid inks may be used. The liquid inks are generally based on a paraffinic solvent and contain various colorants and dispersing agents. Black inks contain specialty grade carbon blacks while colored inks contain dyes or pigments. Similarly, the various solid inks contain polyethylene, waxes, resins, dyes, and pigments. These materials are subject to the same rigorous safety evaluation as other imaging materials.

Fuser Lubricants

Some xerographic processes use lubricants as release agents during the fusing process. These lubricants are silicone oils and greases, which are inert and have high thermal stability. The lubricants are not mineral oils and are not subject to the regulatory controls for such materials.

Indoor Air Quality and Chemical Emissions

Xerox Corporation is aware that our customers wish to maintain excellent indoor air quality in their workplace environment. All our machines are tested to ensure that we meet or exceed current standards or acceptable practices for emissions. For example, we measure ozone, volatile organic compounds, and particulate substances emitted from each xerographic product, and any other compounds when their use makes it appropriate. In addition, the various operations involving paper and toner may result in very small amounts of paper dust and toner becoming airborne.

Xerox sets machine emission standards such that during normal operation, the area in which a machine operates will have air that is no more than one-tenth the Threshold Limit Value (TLV), other national Occupational Exposure Limit, or Xerox Exposure Limit (XEL) for each chemical emitted. Where no standard exists, such as for volatile organic compounds (VOCs), Xerox sets limits that ensure new products comply with any anticipated regulations and that no emission component will exceed one-tenth the referenced limit.

Xerox uses very rigorous protocols for emission testing. The emission characteristics of each Xerox machine are summarized in its *PSDS.* Due to the nature of the test procedures, the values listed are substantially greater than those that an individual would be exposed to operating the equipment for eight hours a day under normal conditions. For example, measurements are made in a test chamber having very limited air turnover. Summarized in Table I are the results of typical, time-weighted average airborne concentrations of ozone, dust, fuser oil, arsenic, selenium and tellurium measured at the operator position of six Xerox products. The dust measurements refer to “total dust,” which is composed primarily of paper dust and small quantities of toner, usually less than 10% of the total dust.

Xerox makes every effort to ensure that its equipment does not emit objectionable odors into the workplace. However, since some chemicals have very low odor thresholds, some people with a sensitive sense of smell may sometimes detect faint odors, even though the concentration of the chemical is significantly below any that would present a potential health concern.

Indoor Air Quality and Chemical Emissions (continued)

As part of our normal development activities, Xerox strives to keep chemical emissions to a minimum, consistent with safe and reliable operation of the equipment. A comparison of the measured values with the applicable U.S. and other national standards shows all of them to be well within the required limits. It should be noted that, even under these test conditions, the measurements are usually near the limit of detection.

Ozone

In xerographic devices, ozone is produced primarily by the corona discharge of the various corotrons. Ultraviolet emissions from document exposure lamps are so low that the ozone generated by this means is insignificant. Ozone is generated only when the machine is copying or printing. Some Xerox equipment does require ozone limiting devices. The Xerox Ozone Management Program requires that machines situated in locations that do not meet either space or temperature and humidity requirements must be equipped with a filter to reduce ozone to an acceptable level. Some machines are equipped with ozone filters at the factory while others may be retrofitted at the placement site. With other machines the emission of ozone is controlled by ducting. While high levels of ozone are toxic, ozone is unstable and rapidly reverts back to oxygen. Xerox requires that the ozone concentration at the operator position should not exceed a Time-Weighted Average (TWA) of 0.01 parts per million (ppm) as a result of machine operation when the machine is operated at 3 times the average usage rate in a room with no forced ventilation. The *Facts About Ozone* publication is available upon request or on the Internet at www.xerox.com/environment (refer to 'Publications').

Volatile Organic Compounds

In some conditions, total volatile organic compounds may be emitted during and immediately after copying or printing. The concentrations are low, at least two orders of magnitude below the occupational exposure limits for such compounds. Volatile compounds have to be measured in special inert chambers because their levels are less than those found in typical room interiors due to building materials, floor coverings and furniture.

Due to its use in combined form in some toners, styrene may be emitted, but is only detected, if at all, at concentrations far below recognized standards and exposure limits.

Particulate Materials

Dust associated with copying and printing consists primarily of paper particles and fibers, with smaller amounts of toner particles (less than 20%). Dust is emitted from the exhausts used to extract heat from the machine interior, but is controlled by filters. Paper fragments are also generated during paper handling outside the machine. Therefore, levels of paper dust ultimately depend on the composition and quality of paper used, but the levels are significantly below the standard limit values for respirable dust.

Electromagnetic Compatibility

Xerox products are designed to function properly in the intended electromagnetic environment without causing harmful interference to nearby equipment or radio communication services. In this regard, Xerox products comply with all governmental regulations covering Electromagnetic Compatibility (EMC). Compliance is verified by appropriate product testing prior to placement in the marketplace.

Xerox products sold in the European Community (EC) meet stringent electromagnetic immunity requirements. Compliance with these requirements ensures that the machine is protected from electric and magnetic fields generated by other equipment, electrostatic discharges (ESD), and transients and surges in the incoming AC line current.

Noise

Xerox products do not produce noise levels that would be expected to damage human hearing. A mandatory noise source sound pressure emission limit of 82 decibels (dB) (A) has been established to ensure that Xerox products may be operated continuously without the need for protective equipment to preclude hearing damage. Additionally, other significantly lower noise limits are recommended that should maintain reasonable comfort in environments used primarily for mental undertakings (52 dB(A)) or for mechanized office and comparable activities (67 dB(A)). Compliance with Xerox's audible noise standard is determined by machine testing in specially designed anechoic chambers.

Product Service and Maintenance

All service procedures and materials are reviewed and approved by Xerox's environmental health and safety personnel prior to field usage. This review involves an assessment and control of potential mechanical, electrical, chemical and physical agents (laser, noise, etc.) hazards to minimize the safety and health exposure of Xerox employees and customers. Field usage of these procedures and materials is monitored and modifications are made, as appropriate, to maximize performance. Modifications may take the form of product retrofits, warning labels or special bulletins.

All potential employee or customer exposures to chemical and physical agents are evaluated and measured during product development stages and verified under normal product usage conditions. The results of these measurements are published in each product's *PSDS*. In some marketplaces, *MSDSs* and *PSDSs* are supplied with the product's installation package, and are available via the Internet. Otherwise they are available upon request through Xerox Environment, Health & Safety, from any Xerox Sales Representative, or from a Customer Service Engineer.

Xerox has also created several mechanisms for customers to perform service on their own equipment. These service procedures may be web based, within a customer training course such as *eXcellerate*, or described to the customer by a Customer Service Support Center Representative over the telephone. Each of these service procedures has been reviewed and approved by the Environment, Health & Safety organization to ensure that customers are not significantly exposed to physical hazards, chemical or physical agents, ergonomic stressors, or hazardous electrical energy.

Disposal of Spent Materials and Equipment

Proper disposal of waste materials minimizes environmental impact and promotes public health and welfare. Xerox has developed and implemented an environmental management program by providing identification of hazardous waste materials for proper disposal and encouraging recycling or reclaiming of waste products. All materials that are used in the various imaging processes are evaluated against the following criteria: environmental toxicity and biodegradability, ignitability, corrosivity, and reactivity. The *MSDSs* contain sections on Spillage and Disposal that outline the procedures to follow. Some of the more common materials are detailed below.

PHOTORECEPTORS

Used or damaged Xerox photoreceptors containing arsenic and selenium should be returned to Xerox Corporation or the supplier for disposition. If they are not returned to Xerox, state and local laws regarding disposal of this material must be followed, and we recommend disposal in a chemical waste landfill. The organic photoreceptors used in our modern machines have met all the criteria to be classified nonhazardous and may be disposed of casually with normal office refuse.

TONER

All Xerox dry toners have been tested against the criteria named above. Landfilling of the material is generally recommended along with normal office refuse. Xerox recommends that caution be taken in the incineration of toners, as dust clouds may be explosive if a source of ignition is present.

DEVELOPER

Developer also meets all criteria for classification as nonhazardous and may be disposed of with normal office refuse. However, state and local requirements may be more restrictive. Consulting the appropriate state and local waste disposal authorities is advised.

SERVICE MATERIALS

MSDSs have been made available for each of the service materials sold by Xerox. These materials have also been evaluated against hazardous waste criteria to determine proper disposal. If the waste materials are classified hazardous and small quantity generator exemptions do not apply, applicable governmental regulations must be observed for proper disposition.

For any questions concerning disposal of Xerox materials, review *MSDSs* and observe all applicable governmental regulations.

EQUIPMENT

Xerox operates a worldwide equipment takeback and reuse/recycle program. Contact a Xerox sales representative (1-800-ASK-XEROX in North America) to determine which Xerox products are part of the program. If a product is not part of the Xerox program and customers are managing its disposal, please note that the product may contain lead, mercury and other materials whose disposal may be regulated due to environmental considerations. For recycling and disposal information, contact local authorities. In the United States, customers may also refer to the Electronic Industries Alliance web site www.eiae.org.

Summary

It is a fundamental principle of Xerox Corporation to ensure that its products are safe and do not in any way represent a concern to its customers or employees. We trust that the information presented demonstrates our commitment to safety. If you would like additional information on the above, or any other aspect of environment, health and safety of Xerox products, please visit the Xerox Environment, Health & Safety website: www.xerox.com/environment or contact:

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Table 1

Typical Airborne Concentrations of Materials at the Operator Position of Various Xerox Equipment [a]

Substance Concentration	Xerox Time Weighted Average (TWA) Limits	PEL [b]	Office				Production	
			Black & White (B&W)		Color		B&W	Color
			CopyCentre C65	WorkCentre Pro 55	Phaser 7300	WorkCentre Pro 40	DocuTech 120DC	DocuColor iGen3
Ozone ppm [c]	0.01	0.10	0.008	0.0045	0.0025	0.0016	0.005	0.02
Dust [f] mg/m^3 [d]	0.1	15 [g] 5 [h]	0.002	0.025	<0.003	0.01	0.07	0.03
Fuser (Silicone) Oil mg/m^3 [d]	N.A.[e]	N.A.[e]	N.D.[i]	N.A.[e]	N.A.[e]	N.A.[e]	N.D.[i]	0.06
Arsenic $mg/m^{3(d)}$	N.A.[e]	0.01	N.A.[e]	N.A.[e]	N.A.[e]	N.A.[e]	N.A.[e]	N.A.[e]
Selenium $mg/m^{3(d)}$	N.A.[e]	0.20	N.A.[e]	N.A.[e]	N.A.[e]	N.A.[e]	N.A.[e]	N.A.[e]
Tellurium $mg/m^{3(d)}$	N.A.[e]	0.10	N.A.[e]	N.A.[e]	N.A.[e]	N.A.[e]	N.A.[e]	N.A.[e]

(a) Measured in 1,000 cubic foot chamber, continuous usage, and 0.5-1 air changes per hour.
(b) OSHA Permissible Exposure Limit (PEL) -- The maximum permissible exposure an employee may experience from airborne substances averaged over an eight-hour period of time as mandated by OSHA.
(c) ppm -- parts per million; at minimum Xerox siting requirements, high daily copy volume and natural ventilation.
(d) mg/m^3 -- milligrams per cubic meter.
(e) Not applicable.
(f) Total dust measurements. Composition is primarily paper dust with some toner dust (<10%).
(g) Total dust.
(h) Respirable dust.
(i) None Detected.