



## Standard Terminology Relating to Carbon Paper and Inked Ribbon Products and Images Made Therefrom<sup>1</sup>

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### 1. Scope

1.1 This set of definitions is intended for use by users of carbon paper, inked ribbons and images made therefrom, so that they will be able to better understand the terminology used by others in the field.

### 2. Terminology

**acceptance range**—a relative range of variation in impact pressure and release characteristic over which the image acceptor media will receive an image of specified quality.

**accuracy (as distinguished from precision)**—the degree of conformity of a measured or calculated value to some recognized standard or specified value. This concept involves the systematic error of an operation, which is seldom negligible. (E 380)

**angle of inclination**—an angle at which the test sheet and supporting base are inclined from the horizontal. (F 254)

**archival quality**—the ability of a print to retain specified characteristics and legibility over a period of use and storage under specified conditions.

**background**—the reflectance of the receptor virgin surface.

**bleed of image**—spread or diffusion of an image with time.

**bleeding of coating**—the diffusion of coloring matter through a substrate from the coating, or to copy paper from the coating.

**blocking**—the tendency for coated sheets to stick together under pressure. (F 335)

**burn-off papers**—materials sensitive to and that will produce an image by electric current.

*carbon or carbon sheet*—see **carbon paper**.

**carbon paper**—a sheet composed of a supporting substrate on one or both sides of which is a coating containing a transferable (usually colored) material. The coating is of such nature that it will transfer in part or entirely to a copy sheet at the point of pressure contact. (F 129)

**carbon tissue**—a substrate manufactured for use in the production of carbon paper.

**cartridge**—a case containing an inked ribbon correction ribbon, or dry ink toner for insertion into an image producing device.

*cassette*—see **cartridge**.

**chemical reaction papers**—papers that produce a visible image by the reaction of relatively colorless materials which come into contact under pressure.

**cleanliness**—the degree of freedom from undesirable and unintentional ink transfer from carbon paper and inked ribbons.

**coefficient of image removal**—the change in reflectance of the printed pattern divided by one hundred. (F 362)

**color bleed resistance**—the freedom from intermixing of the inks on multiple-colored ribbons.

**control**—a standard production-inked ribbon (film or fabric), carbon paper, manifold sets, etc. that has known values in normal use. (F 153)

**correctable (as related to typewriter ribbons)**—an image that may be completely removed from the substrate by means of lift-off rather than erasure or cover-up.

**cover-up**—the obliteration of one or more images by means of an opaque material similar in color to the substrate.

**curl**—the degree of curvature of a sheet of paper or carbon paper.

**curl resistance**—the tendency of sheet carbon to be flat on exposure to varying conditions of temperature and humidity.

**embossed**—any deformation of the back of the acceptor media due to imaging, usually by type action.

**erasability**—ease with which the image may be removed without impairing the surface of the paper.

**fabric ribbon**—an inked ribbon wherein the substrate is a woven cloth material, such as nylon, cotton, silk, etc.

**feathering**—an undesirable thread-like deposit extending radially from the edge of an image.

**festooning**—loading a cartridge with a supply of imaging material without the use of carrier spools.

**flaking**—that phenomenon manifested in film carbon ribbons and carbon paper by the actual detachment of pieces of the ink itself from the substrate. Flaking is the result of loss of adhesion, usually due to strain or extension of the film ribbon substrate due to tension or to contact with ribbon

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- guides or parts other than the type font, or both. Flaking of carbon paper is usually due to stress or cracking of the ink film by folding, handling, etc.
- heat sensitive**—a material composition that will produce an image from application of localized heat.
- image**—the optical counterpart of an object produced by means of an image-producing device.
- image color**—appearance of the image dependent upon the spectral reflectance of the image, the spectral composition of the incident light, and the spectral response of the observer.
- image density**—the contrast between image and background as measured by densitometer.
- impact pressure range**—the variation in an imaging device due to type font width, on feet, impact, and other adjustments inherent in the device.
- impact sensitive**—the property of a carbon paper, ribbon, or paper to produce an image from impact (as with a typewriter).
- impressions per ribbon**—the average number of characters which can be printed from a given ribbon on a given typewriter or printer of specified print quality under specific usage conditions.
- ink deposit**—a coating containing a coloring material which transfers in part or entirely to a copy sheet at the point of pressure contact. (F 129)
- inked ribbon**—a ribbon composed of a supporting substrate of film, fabric, or paper and a coating or impregnation of a coloring material. The coloring material is of such nature that it will transfer in part or entirely to a copy sheet at the point of pressure contact. (F 129)
- intensity**—apparent depth of a black or colored image produced by a carbon or ribbon.
- lift off**—the removal of one or more images of copy from the substrate by transferring to an intermediate member.
- light stability**—resistance to change of color of the image with exposure to radiant energy.
- manifold**—to make many or several copies.
- manifolding performance**—the intensity and sharpness of the image as a function of the number of carbon copies produced in one typing or writing.
- mechanical durability**—resistance of the carbon paper or ribbon to cutting after repeated use.
- mechanical transfer papers**—papers that produce a visible image by the transfer of a coating to another sheet which may or may not be specially treated.
- möbius loop**—a one-sided surface formed by holding one end of a rectangle fixed, rotating the opposite end through 180° and then applying it to the first end.
- multi-strike film ribbon**—is a ribbon wherein the substrate film such as polyester is coated or impregnated with an ink which allows several different imprints be made from multiple overstrikes on the same location on the ribbon, and still result in full characters being printed.
- on-feet**—the desired and optimum uniformity of contact between the type font line and the platen.
- optical density**—the image intensity or density in terms of or measured by a reflectance densitometer.
- paper manifold set**—a business form prepared by interleaving one-time carbon paper and a receiving paper to give the number of parts required for comparison. A standard test set is 8 ½ by 11 in. (21.59 by 27.94 cm) and most frequently contains six plies six bond sheets, usually 12 lb (17 by 22-500) (45 g/m<sup>2</sup>) and five carbons, usually 8 lb (20 by 30-500) (18.75 g/m<sup>2</sup>). (F 497)
- pinhole**—an opening in the carbon tissue that permits the coating to seep through to the uncoated side.
- plyout**—a single wrap of ribbon extending out of its normal position in relation to the core or the next wrap.
- precision (as distinguished from accuracy)**—the degree of mutual agreement between individual measurements, namely repeatability and reproducibility. (E 380)
- pressure sensitive**—a carbon paper, ribbon, or paper capable of producing an image from pressure as with pen or pencil.
- pressure-sensitive copy paper**—paper systems that develop a visible image on the application of localized pressure.
- release characteristic**—see **sensitivity range**.
- resistance to breakage**—the resistance of the inked ribbon or carbon ribbon to rupture resulting from tension before or after use.
- sensitivity range**—the impact pressure range over which a ribbon or carbon will produce an image of specified quality.
- set-off**—the unintentional transfer of part of an image or ink from its intended location to another surface.
- sharpness**—*in carbon paper and inked ribbon images*, similarity of the geometry of the image to the type face and the rate of change of image density at the edge.
- single-strike film ribbon**—an inked ribbon wherein the substrate is a plastic film material such as polyethylene, where each area of the ribbon is capable of producing only one image.
- single-strike paper ribbon**—an inked ribbon wherein the substrate is paper, where each area of the ribbon is capable of producing only one image.
- slip resistance**—resistance of sheet carbon to slippage when placed between multiple sheets of copy paper.
- smudge**—the tendency of an image to smear or streak onto an adjacent area when rubbed; involves the redeposition of abraded material.
- smudge resistance**—the ability of an image to withstand smudging.
- splice**—the joint between two lengths of base film, fabric, or paper.
- staining**—the discoloration of image receptor sheet during contact with a carbon sheet.
- thread count**—the total number of warp and filling threads in one square inch of fabric.
- tolerance**—the total range of variation (usually bilateral) permitted for a size, position, or other required quantity; the upper and lower limits between which a dimension must be held. (E 380)

**toner**—a material used to increase the intensity and to control the color of the ink image transferred from ribbon or carbon paper.

DISCUSSION—This term is not to be confused with *toner* as described in Terminology F 335.

**treated carbon**—carbon that is coated or impregnated on the side not carbonized. The treatment is ordinarily applied to improve curl resistance or slip resistance of the sheet or both.

**water resistance**—ability of the image to resist deformation or change in color with immersion in water.

**wear resistance**—ability of the carbon or ribbon to retain its image-producing capacity after repeated use.

**write**—the images produced by a ribbon or first carbon.

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