



# KODAK RELIABLE IMAGE TIP # 56

## Kodak Data Sheets

A Data Sheet contains pertinent information about the films such as sizes, descriptions, photographic specifications, graphs, recommended exposing and processing starting points and much more.

A Kodak Data Sheet is a good document to include with a bid response for microfilm or microfilm services as well as a reference tool.

To order Data Sheets call:

U S Kodak Customer Service Call: - 888-247-1234

Kodak Canada Customer Service Call: - 800-295-5490



**Camera Negative  
Microfilm Data Sheet**

**KODAK IMAGELINK HQ, CS, CP and FS Microfilms**



**Description**  
Kodak Imagelink Microfilms have been specially designed to produce high-quality images from a wide variety of source documents. These microfilms offer superior performance, handling, and digitizable images. They provide clear, bright, sharp images on reader screens, crisp, clear prints, and they provide the resolution required to be scanned for electronic transmission.

**Product applications**  
Micrographic media such as Kodak Imagelink Microfilms form the basis of every flat imaging system. These films provide unparalleled data and image integrity, as well as portability from one system to another ensuring low-risk storage of valuable information which can be retrieved for years to come.

**Kodak Imagelink HQ Microfilms** are used in a wide variety of micrographic applications and used in rotary and planetary microfilmers with standard fluorescent or tungsten light emitters.

**Kodak Imagelink FS Microfilms** are used in micrographic equipment with reduced light emitters or with very short exposure times.

**Kodak Imagelink CS, CP and FS Microfilms** are used in a wide variety of check imaging applications and equipment.

All Kodak Imagelink Microfilms provide excellent overall image quality and enhanced performance in retrieval devices such as the Kodak Imagelink Digital Workstation or the Kodak IMT-300 Microimage Terminal.

**Business Imaging Systems**

D-30

**D-30  
Cat. # 872-3611**



**Duplicating Microfilm  
Data Sheet**

**KODAK Duplicating (x462), Direct Duplicating (x468), Direct Duplicating Intermediate Microfilm (2470) and Positive Print Duplicating Microfilm (x440) (ESTAR Base)**



**Description**  
Kodak Duplicating Microfilms are silver-halide films designed for making high-quality duplicates of original camera and other duplicate microfilms. Depending on the film type used, these films can either maintain or reverse image polarity. These duplicating microfilms can be used in a variety of manufacturer's silver duplicators. Kodak Duplicating Microfilms are fine grain, high resolution microfilms with the exposure and development latitude to duplicate/enhance varying quality originals.


**Product applications**  
Eastman-Kodak Company produces a family of duplicating films (2462, 2462, 4462), a family of direct duplicating microfilms (2468, 3468, 4468), one direct duplicating intermediate microfilm (2470), and a family of positive print microfilms (2440, 3440, 4440). They all require conventional processing and can either maintain or reverse the original image polarity.

**Kodak Duplicating, Direct Duplicating Microfilms and Positive Print Duplicating Microfilms** are primarily intended for creating multiple distribution copies of camera film masters, and occasionally as intermediate print film masters, when creating large quantities of duplicates such that the original camera film is not at risk of damage. The Kodak Direct Duplicating Intermediate Microfilm is typically used as an intermediate print master but may also be used as a distribution copy. All duplicating microfilms use a "contact-printing" method, such that the master and duplicate are brought into intimate contact during exposure. A description of each follows.

**Document Imaging**


D-32

**D-32  
Cat. # 819-4755**



**Reference Archive  
Media Data Sheet**

**KODAK Reference Archive Media 1433/3433**



**Description**  
Kodak Reference Archive Media has been specially formulated for use in the Kodak 8000 Series Writers and the Kodak Digital Science™ Document Active Writer, Model 400, to provide high-quality, human-readable, reference archives of digital images. The high-resolution archival-quality images are easily re-digitized for online access and retrieval to provide short-term validation and long-term storage of records. This media provides clear, high-contrast, and sharp images that can be distributed according to the regulator's needs as hard-copy output, base, or e-mail attachments, or posted to an image server using your current compression scheme. The resulting partners, whether users on your network or external customers or auditors, can then be directed to these images via links embedded in e-mails.

**Product Applications**  
Kodak Reference Archive Media and the 8000 Series Writers provide the easiest way to help protect your critical business records from tampering or loss. Reference Archive Media renders a trustworthy copy of an electronic record to validate a transaction that will satisfy litigation and meet regulatory and audit requirements. These images can be used in reconstructing a record even if backup tapes, hardware, and software become obsolete.

You can avoid much of the expense and hazard of digital-only records storage by Reference Archiving critical business documents. Based upon technology developed by Kodak, Reference Archiving copies the records you wish to archive to an analog format on ISO-standard archival media. All of the information included in the original record is captured, in context. These non-visual documents can be accessed electronically to authenticate current activities, such as an online transaction, or to support audit activities triggered by regulatory activities and legal actions. You can also be assured of long-term access and retrieval.

This media has a Life Expectancy of at least 500 years when processed and stored according to the recommended practices of ISO and ANSI.

**Document Imaging**

D-35

**D-35  
Cat. # 859-93429**

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# KODAK RELIABLE IMAGE TIP # 56

## Kodak Data Sheets



### Duplicating Microfilm Data Sheet

**KODAK Diazo C Microfilm 1957, 2957, 3957, 4957**  
**KODAK Diazo D Microfilm 1956, 2956, 3956, 4956**

**Description**  
 Diazo microfilm (Estar base) is a fast-speed non-silver print film suitable for generating direct-duplicating copies in fiche or roll form from silver or reprotable diazo films. It can be processed in the usual commercially available diazo processors, using either aqueous or anhydrous ammonia vapor at various temperatures and pressures.

The colored title stripes facilitate fiche identification and the transparent stripe permits life reproduction on the next generation copy.

**Product Applications**  
 A typical use is for producing negative-appearing copies, i.e., clear lines with dark background made from reversal-processed computer output microfilm (COM). These films can also be used to duplicate copies of source documents, engineering drawings, and continuous-form negatives.

**Diazo C:** This film is formulated to produce a blue eye upon development. Its blue-eye image has high visual contrast on a reader. (See Spectral Density Curve.)

**Diazo D:** Upon development, unexposed areas of these films produce a mixture of yellow and blue dyes, which together form a black image with anhydrous or aqueous development. These dyes peak in absorption at about 470 and 580 nm, respectively. The blue dye gives visual contrast, and the yellow dye controls the contrast of red-generation prints onto this product or other blue-sensitive materials. (See Spectral Density Curve.)

**Features**

- Direct duplication—positive from positive, negative from negative
- Ultraviolet-blue sensitivity
- Fast printing speed
- Ultra-high resolving power
- Clear polyester base
- Title stripes available in a full range of colors and widths
- Thin base product offers reduced loading frequency and reduced film storage requirements
- Excellent image stability in readers

**Diazo C**

- Blue diazo film is formulated to be developed in either aqueous or anhydrous ammonia vapor, producing a blue background
- Designed for duplication of reversal-processed computer output microfilm
- Static-resistant backing
- High visual contrast

**Diazo D**

- Black diazo film is formulated for pressure development in either anhydrous or aqueous ammonia vapors, producing a neutral-black background similar in appearance to silver film
- Designed for document duplication where fast throughput and low contrast are desirable
- Static-resistant backing
- Excellent repeat characteristics with comparable contrast
- Medium visual contrast

D-41

**D-41**  
**Cat. # 848-6094**



### Duplicating Microfilm Data Sheet

**KODAK IMAGELINK DL 1000 Microfilm / 2482**



**Description**  
 Kodak Imagelink DL 1000 Microfilm 2482 is a rapid-access, thermally processed (dry) silver computer output microfilm. This film is designed to be exposed by a red (helium-neon) laser. When developed, a positive appearing image is formed (dark characters on a light background).

**Product Applications**  
 Kodak Imagelink DL 1000 Microfilm is designed to make masters for generating negative-appearing distribution copies (clear characters with dark background) on thermal print film. Positive- or negative-appearing copies can also be made on diazo or silver films, depending on customer preference. This film is not intended to be used as the primary "working" copy or for frequent use in reader printers.

Kodak Imagelink DL 1000 Microfilm is an extremely fine-grain, high-contrast microfilm which offers the highest quality thermally processed microimage available. When DL 1000 is used with Kodak Premium 1000 Thermal Print Film 1323, a very high-quality duplicate is achieved at optimum equipment throughput speeds.

Kodak Imagelink DL 1000 Microfilm is an extremely fine-grain, high-contrast microfilm which offers the highest quality thermally processed microimage available. When DL 1000 is used with Kodak Premium 1000 Thermal Print Film 1323, a very high-quality duplicate is achieved at optimum equipment throughput speeds.


**Product Applications**  
 Kodak Imagelink DL 1000 Microfilm is designed to make masters for generating negative-appearing distribution copies (clear characters with dark background) on thermal print film. Positive- or negative-appearing copies can also be made on diazo or silver films, depending on customer preference. This film is not intended to be used as the primary "working" copy or for frequent use in reader printers.

Imagelink DL 1000 Microfilm is primarily used to make masters for generating negative-appearing distribution copies (clear characters with dark background) on thermal print film. Positive- or negative-appearing copies can also be made on diazo or silver films, depending on customer preference. This film is not intended to be used as the primary "working" copy or for frequent use in reader printers.

DOCUMENT IMAGING  
 INNOVATION YOU CAN COUNT ON™

D-45

**D-45**  
**Cat. # 810-3244**



### Computer Output Microfilm Data Sheet

**KODAK COM DR Microfilm 2467 / ESTAR Base**

**Description**  
 Kodak COM DR Microfilm 2467 (Estar base) is a slow-speed film with a direct reversing emulsion that is blue-green sensitive. It has high spectral sensitivity in the 430 to 550 nm range.

**Product applications**  
 Kodak COM DR Microfilm 2467 is designed for use in blue phosphorus CRT (cathode ray tube) type computer output microfilm (COM). These devices photograph data displayed electronically rather than from printed documents. COM DR Microfilm is "drop-in" compatible with roll film COM equipment such as Baf & Howell, Datagraph 4500, XR, 3M Data COM, and graphic COMs such as the IV Cal Comp. COM DR Microfilm requires only conventional processing, and does not require the use of a "full reversal" processing system, which uses dichromate bleach.

**Features**

- Manufactured to meet ISO and ANSI standards for an LE 500 film
- Excellent capture of CRT, formfeed, and output
- Minimum adjustments are necessary to balance these exposures.

**Uniform background provides crisp diazo copies**

- Low printing density (D-min 0.04-0.05)
- Clearer master characters (D-max) allow for higher throughput rates of duplicators.

**Good exposure and duplication latitude**  
 The combination of a low D-min and medium contrast yields a wider exposure tolerance and lower exposure adjustments of duplicator exposure times.

**Low process sensitivity**  
 Even as process conditions vary, DR Microfilm maintains high image quality.


**Inertial photographic speed**  
 From batch to batch, there is no need to adjust exposure output.

**Halation protection**  
 Halation protection eliminates "image bloom" caused by reflected light. This is particularly important with headers and details from slides.

**Process-erasing antihalistic backing**  
 Even after processing, static protection is maintained to reduce dirt and dust buildup during duplication and handling.

D-48

**D-48**  
**Cat. # 195-2456**



### Duplicating Microfilm Data Sheet

**KODAK Premium 1000 Thermal Print Film 1323**  
**KODAK Thermal Print Film KF 1353/2353/3353**

**Description**  
 Vesicular films exposed to actinic radiation (UV/ violet) generate nitrogen gas within the plastic sensitized layer. These films are heated to development temperatures (125°C / 257°F) immediately after exposure, softening the plastic layer and expanding the gas to form vesicles. A visible image is produced from these vesicles upon cooling. The unexposed film area should be "cleared" or desensitized after development by reexposure to actinic radiation. This allows residual gas to escape by diffusion.

Unlike silver or diazo images which absorb light, a vesicular image scatters light. The vesicular image of Kodak Thermal Print Films has excellent optical density and visual contrast when viewed or printed with optical systems having small apertures, such as the f/4.5 apertures typically used with microfilm readers. Density will be much less with diffuse light, or when viewing the film on a diffuse illuminator. A projection densitometer should be used to measure the density on vesicular films.

**Product applications**  
 Kodak Thermal Print Films are suitable for generating distribution copies (usually negative-appearing) in fiche or roll format (i.e., clear lines with dark background) made from positive-appearing, computer output microfilm (COM) or other camera original films. Reversal-polarity prints can also be made from other microfilm images. A title stripe, if used, facilitates fiche identification.

**Features**

- Ultraviolet-blue sensitivity
- Dry process—heat alone
- Extremely high resolving power
- Clear polyester base
- Black title stripe available on 105 mm film
- Requires no developer
- Image reversal—positives from negatives and negatives from positives
- Not intended for reprinting from itself
- Neutral image tone when viewed in a microfilm reader

**Premium 1000/1323**

- Excellent image quality
- High contrast
- Medium printing speed
- For use with dry silver or conventional silver halide masters

**KF 1353/2353/3353**

- For use with dry silver masters
- Fast printing speed
- Medium-high contrast

BUSINESS IMAGING SYSTEMS

D-49

**D-49**  
**Cat. # 110-5469**