



Features

- High-resolution, archival-quality images that provide short-term validation and long-term record storage
- Easily re-digitized for online access and image distribution via hardcopies, faxes, email attachments, or an image server using your compression scheme

Product Applications

IMAGELINK Reference Archive Media and IMAGELINK Archive Writer 9600 Series:

- Protect critical documents from tampering or loss
- Provide electronic transaction records to satisfy legal, regulatory, and audit requirements
- Reconstruct records if backup tapes, hardware or software becomes obsolete
- Avoid the expense and risk of digital-only record storage by copying original records, in context, in an analog format on ISO-standard archival media
- Allow electronic access of non-volatile documents to authenticate transactions and support audit activities
- Provide long-term access and retrieval

Life expectancy 500

Processed film can be stored indefinitely provided it is processed and stored in accordance with relevant ISO and ANSI standards.

IMAGELINK Reference Archive Media has been specially formulated for use in the IMAGELINK Archive writer 9600 Series to provide high quality, human-readable reference archives of digital images.

Media Features

- Manufactured to **ISO and ANSI standards** for LE-500 films
- **High resolution and excellent halation protection** provide superior output of digital images
- Maintains **superior latent images** with minimal degradation of image density between time of exposure and delayed processing
- Image quality and background **density** not significantly affected by typical processing variations
- Roll-to-roll and emulsion batch-to-batch **consistency**, requiring minimal need for adjustments or operator intervention between media rolls or batches
- Coated on **polyester (PET) base**, which meets ISO requirements for safety film (ISO 18906)
- Even after processing, **anti-static backing** maintains protection, reducing dirt and static problems in retrieval, scanning, and duplicating equipment

Process Handling

Handle closed cartridges or film on standard flanged spools in subdued light. Subdued light may be used while loading and unloading IMAGELINK Smart Cassettes 215, for Reference Archive Media 06 or IMAGELINK Smart Cassettes 100 for Reference Archive Media 13.

Handle *unprotected* Reference Archive Media in total darkness. If a safelight is required for safety, you can use a Kodak No. 3 Green Safelight Filter with a 7.5 watt bulb at least eight feet from the media. Packaged media may be handled in room light.

You can handle this media under a safelight for a limited time only. Test under actual use conditions before taking this risk.

Physical Properties

Nominal Thickness Data

Media	PET-13	PET-06
Pet Base	5 mil (0.127 mm)	2.5 mil (0.064 mm)
Emulsion	0.2 mil (0.005 mm)	0.2 mil (0.005 mm)
Backing	Negligible*	Negligible*
Total Mils [†]	5.2 (0.132 mm)	2.7 (0.069 mm)

* Static-resistant and process-survivable

[†] Before processing

Photographic Properties

Spectral Sensitivity is specially formulated to match exposure device of the IMAGELINK Document Archive System.

Resolving Power based on recommended process:

Test Object Contrast	Lines / mm
1.6:1 (ISO-RPL)	200
1000:1 (ISO-RP)	630

These values were determined using a method similar to ANSI/ISO 6328-1982, *Photography-Photographic Materials – Determining the Resolving Power of Photographic Materials, Method for*, except the light source used was a high-pressure mercury arc.

Post-Processing Image Stability

When processed as recommended, this media meets both ANSI and ISO specifications for long-term storage with a Life Expectancy LE-500 rating.

ISO 18901:2002, *Photography-Processed Silver-Gelatin Type Black-and-White Film-Specifications for Stability*, states that the maximum permissible concentration of thiosulfate ion is 0.014 grams per square meter for extended-term storage. ISO 18901 has superseded ANSI/NAPM IT9.1-1992, but requirements have not changed.

Media Storage Before Use

- Keep unopened packages at 21°C (70°F), 50% relative humidity or below, and protected from radiation and X-rays
- To avoid moisture condensation on refrigerated media, do not open the package until media has warmed throughout to normal room temperature (about 1 to 1-1/2 hours)

Processing Information

This media can be processed in most typical continuous-strand-type processors, such as the IMAGELINK Archive Processor, medium-tank, and deep-tank processors.

Processing Chemicals

This media yields optimal results using IMAGELINK processing chemicals and parameters, but it is compatible with other standard microfilm processing equipment and high quality chemicals (results may vary).

Processor Setup for Reference Archive Media

	Developer		Fixer		Dryer Temp	Dilution	
	Time	Temp	Time	Temp		Dev	Fix
Archive Processor	13.5 sec	100° F (37.8°C)	13.5 sec	96° F (35.6°C)	135° F (57.2°C)	Ready to use	Ready to use
Deep Tank*	48 sec	85° F (29.4°C)	32 sec	85° F (29.4°C)	160° F (71.1°C)	1:7	1:3

* These dwell times and temperatures are starting points. Your systems or needs may require variations for specific photographic aims. Dwell times are determined by timing media movement from entrance roller to exit rollers of each process solution while running in the processor.

To avoid aeration and obtain best results, always add chemical concentrate to water, not water to concentrate.



Replenishment Rates

To determine the developer and fixer replenishment rates (mL/min), **multiply the transport speed (ft/min) by the processor replenishment specification** for 16mm films.

$$\text{Transport Speed (ft/min)}^* \times \text{Replenishment Spec (mL/linear ft)} = \text{Replenishment Rate (mL/min)}^\dagger$$

* Transport speed is determined by dividing the path length (in feet) of the developer tank by the dwell time (in seconds) and multiplying by 60.

† 1 mL/min = 1 cc/min

Processor Replenishment Specification (mL/linear foot)

	Developer	Fixer
Archive Processor	0.75	0.75
Deep Tank	1.00	1.25

Post-Processing Media Storage

ISO 18911-2000, *Photography-Processed Safety Photographic Films Storage Practices*, gives appropriate conditions for extended-term (permanent) and long-term storage. These are the same requirements as previously stated in ANSI/NAPM IT9.11-1993.

Obtain the latest revision of these ANSI and ISO standards by:

- Contacting the Association for Information and Image Management International (AIIM) at <http://www.aiim.org>.
- Visiting the American National Standards Institute (ANSI) Internet web site <http://www.ansi.org>.
- Visit www.iso.org

Example

Processor: Allen M70 (deep tank)

Film type: 16 mm

Dwell: 43 seconds

Developer film path: 154 feet

Processor replenishment spec:

- Replenishment (Dev): 1
- Replenishment (Fix): 1.25

Transport speed:

$$\frac{154 \text{ feet}}{43 \text{ sec}} \times \frac{60 \text{ sec}}{1 \text{ min}} = 215 \text{ ft/min}$$

Replenishment results:

$$\text{Developer } \frac{215 \text{ feet}}{\text{min}} \times \frac{1.0 \text{ mL}}{\text{feet}} = 215 \text{ mL/min}^* \text{ (dev. replenishment)}$$

$$\text{Fixer } \frac{215 \text{ feet}}{\text{min}} \times \frac{1.25 \text{ mL}}{\text{feet}} = 268 \text{ mL/min}^* \text{ (fixer replenishment)}$$

* 1 mL/min = 1 cc/min

A bluish tint in the background is a normal post-process characteristic of this media. Extreme variations from the recommended processing conditions may affect the severity of the tint. This characteristic does not negatively affect image permanence, quality, or reproducibility.

About Our Data

The sensitometric curves and data in this publication represent product tested under the conditions of exposure and processing specified.

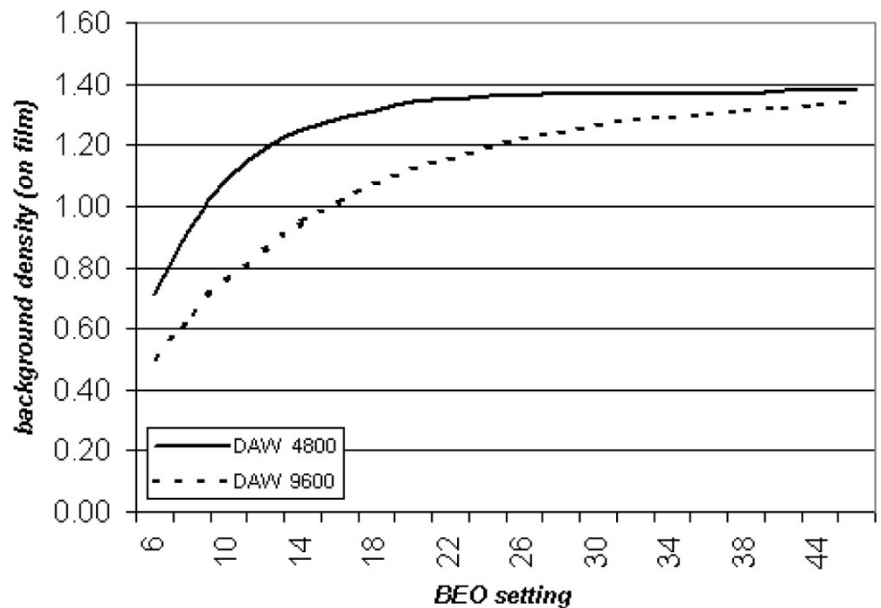
They are representative of production coatings and, therefore, do not apply directly to a particular box or roll of photographic material.

EPM reserves the right to change and improve product characteristics at any time.

BEO Intensity vs. Density

Brightness Emitter Optimization (BEO) is a measure of the light intensity of the LEDs, which is controlled by the amount of time the LEDs are on.

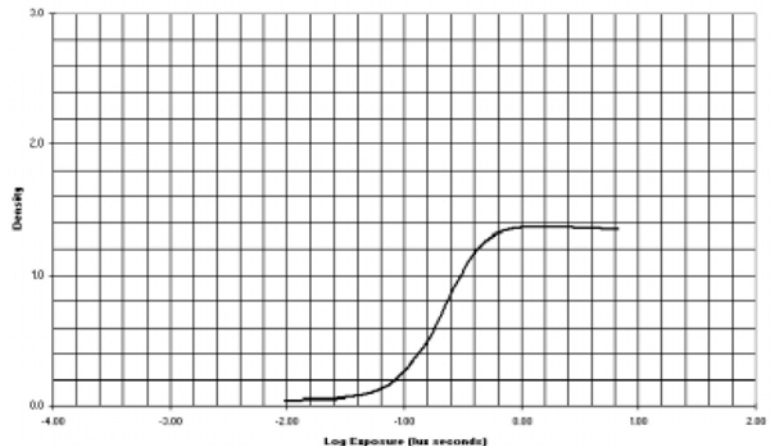
IMAGELINK Reference Archive Media
IMAGELINK Archive Processor and IMAGELINK Chemicals



While the data presented are typical of product on coatings, they do not represent standards which must be met by Eastman Park Micrographics. Varying storage, exposure, and processing conditions will affect results. The company reserves the right to change and improve product characteristics at any time.

Characteristic Curve

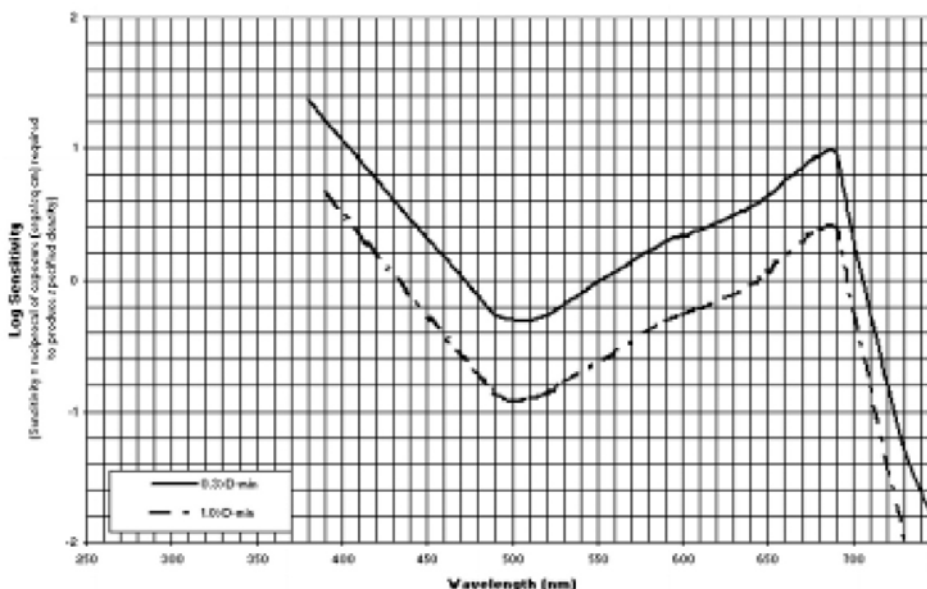
IMAGELINK Reference Archive Media
IMAGELINK Archive Processor and IMAGELINK Chemicals





Spectral Sensitivity Curve

IMAGELINK Reference Archive Media
Xenon Flash exposure, 85 microseconds, KOOAK WRATTEN 29 Filter
IMAGELINK Archive Processor and IMAGELINK Chemicals



Our History

Eastman Park Micrographics (EPM) formed in 2011 after the Dallas-based Kofile Inc. purchased Kodak's micrographic business. EPM is headquartered in Dallas, Texas, and markets its products worldwide.

We bring extensive experience in all aspects of document imaging to provide unique expertise in micrographics products and solutions.

Our Mission

- To continue to be the leading supplier of high quality microfilm products and services worldwide
- To expand our portfolio of Reference Archive Solutions

Ordering: Reference Archive Media

Catalog No.	Description	Format	Spec	Rolls per Case
134NEXO	IMAGELINK RA Microfilm 13*	16MM X 30.5M (100ft)	MSP	100
334NXDM	IMAGELINK RA Microfilm 06†	16MM X 66M (215ft)	MSP	100

* Uses IMAGELINK Smart Cassette 100, CAT No. 1537166

† Uses IMAGELINK Smart Cassette 215, CAT No. 8357584

Material Safety Data Sheets

Material Safety Data Sheets (MSDS) on the chemicals (only) and caution labels for processor tanks are available by contacting Eastman Park Micrographics at 1-866-934-4376 or at www.epminc.com.

You will need to supply the catalog numbers of the chemicals for which you need MSDSs.

North and South America Chemicals:

Catalog No.	Ready to Use	Dilution	Bottles /Case
1112490	5L IMAGELINK Archive Processor Developer (Prostar)	None	2
1112456	5L IMAGELINK Archive Processor Fixer (Prostar)	None	2
Catalog No.	Concentrate	Dilution	Bottles /Case
1118869	5L IMAGELINK Microfilm Developer and Replenisher	1:7	2
1111917	210L IMAGELINK Developer and Replenisher (55 gal) drum	1:7	1
1117222	5L IMAGELINK Microfilm Fixer and Replenisher	1:3	2
1111164	210L IMAGELINK Microfilm Fixer and Replenisher (55 gal) drum	1:3	1

Europe, Asia and Australia Chemicals:

Catalog No.	Ready to Use	Dilution	Bottles /Case
AR4NYM7	5L IMAGELINK Archive RTU Dev	None	4
HF4NYL5	5L IMAGELINK Archive HF Dev	None	4
AR4NYNA	5L IMAGELINK Archive RTU Fix	None	4
Catalog No.	Concentrate	Dilution	Bottles /Case
G14NYQG	5L IMAGELINK G3231c Dev	1:3	4
G34NYSL	5L IMAGELINK G3343c Fix	1:3	4