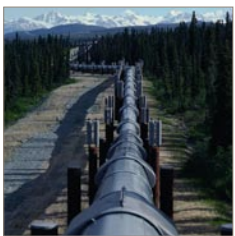
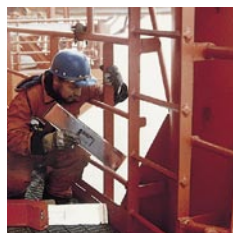
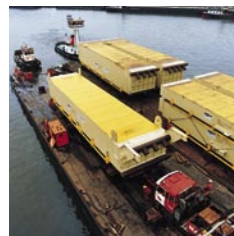



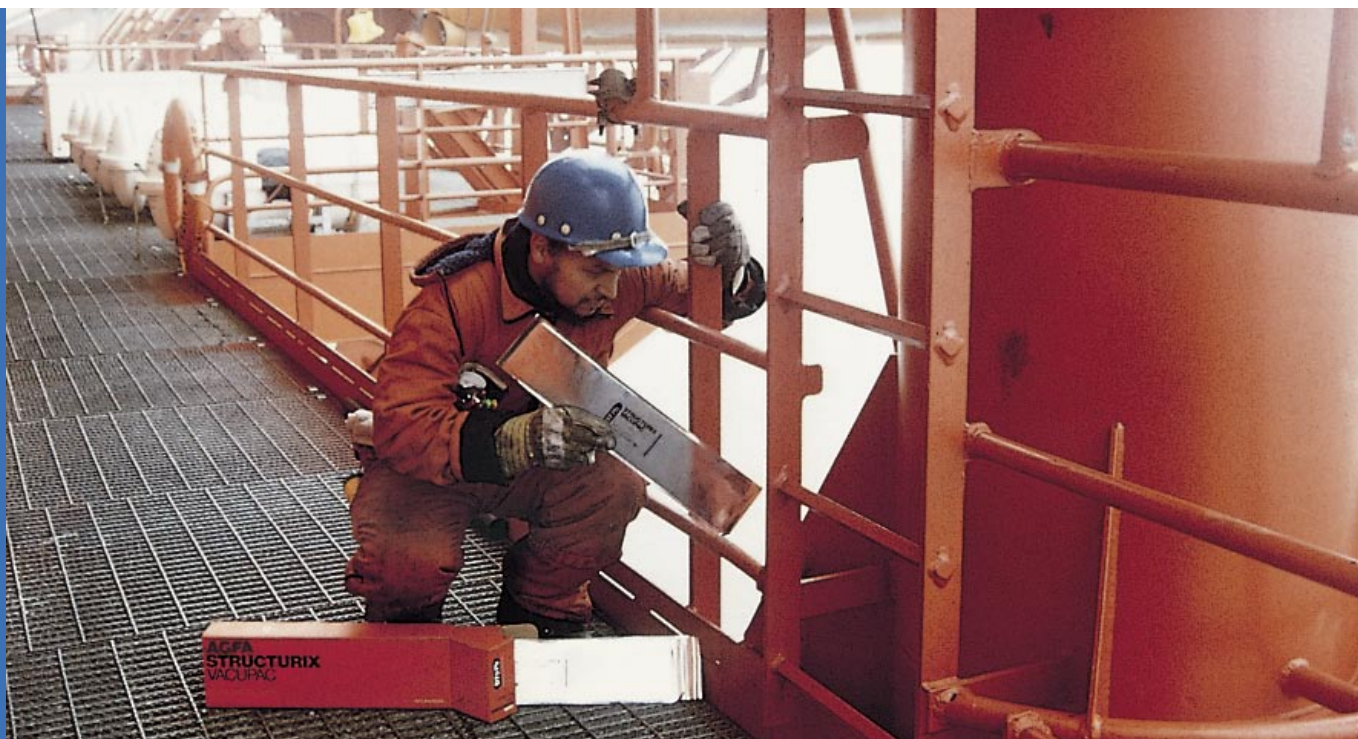


# Radiographic Film Systems



GE imagination at work 

## Helping you achieve your inspection and testing goals.



Whether you're an inspection services provider or the manufacturer of products that undergo non-destructive testing (NDT), GE Inspection Technologies can help improve the safety and profitability of your operation. We offer the world's most extensive array of NDT solutions. More importantly, we also put the world's most knowledgeable NDT experts at your service. Thanks to this combination of best-in-breed technologies and unsurpassed service, no challenge you might be facing is too difficult for GE Inspection Technologies.

### **Certified Quality**

We understand the responsibility you bear in quality assurance, and understand our role in your success. You can trust us to support you with radiographic film systems and services that consistently

give you the edge in quality control and customer satisfaction. Quality control is what helped AGFA become the first radiographic film manufacturer to achieve ISO certification for its STRUCTURIX films in 1990. Since then, we have continued this legacy of quality, assuring you that our entire film system—films, equipment, and chemistry—is produced under a strict Quality Management System approved to ISO 9001-2000. And all AGFA NDT film systems are certified according to the Industrial Film Systems Classification Standards to assure the delivery of consistent, expected capabilities in day-to-day use. So it should come as no surprise that GE Inspection Technologies is the only company able to offer you the AGFA NDT film systems, the only one that can boast certification by BAM, the independent German Federal Institute for Materials Research and Testing.

### **Integrated System**

All components of AGFA NDT film systems are designed and developed to work together seamlessly, start to finish. In bringing you integrated film systems, we're assuring you of improved quality, consistency, and safety, plus greater ease, savings in time and costs, and the peace of mind that comes with a proven, end-to-end solution. In bringing you renowned AGFA NDT film systems, we're providing you the films and solutions most widely used in industrial radiography. Compare GE Inspection Technologies to your other options and experience firsthand the difference in working with one proven source and one seamless solution for all of your inspection and testing.

# Film Systems

## AGFA NDT eco FILM SYSTEMS

The AGFA NDT eco Film System breaks new ground in being economical to use and ecologically responsible. This advanced film system increases economics and minimizes its impact on the environment with:

- up to 60% higher film throughput capacity
- up to 40% less chemistry and packaging
- up to 40% less chemistry and packaging waste
- considerable decrease in wash water replenishment rates
- lower silver freights in the wash water
- less energy consumption

You can trust GE Inspection Technologies as a company to do our part to preserve the global environment.

### A certified system

This AGFA NDT eco Film System is perfectly suited to applications that demand the highest image quality. The system is certified according to the Industrial Film Systems Classification Standards EN 584-1, ASTM E-1815-96, ISO 11699-1

and JIS-K7627. Recently, the German Federal Institute, BAM, awarded the AGFA NDT eco Film System in 5 minute cycle the certificate of compliance to International Classification Standards.

### AGFA NDT films

The AGFA NDT films D2, D3, D4, D5, D7, D8 can be used in this system. Adaptations have been made to harmonize the drying characteristics of this assortment.

### AGFA NDT Si and S eco in 5 minute cycle

The AGFA NDT Si and S eco are specially designed to meet the strictest standards for silver content in the wash water.

The secret lies in the processor's double fixing tank. This cascade fixing system ensures that the amount of silver in the wash water remains within the limit of < 50 mg/m<sup>2</sup>, which equals 4 ppm silver concentration. At a fixer replenishment rate of 1,200 ml/m<sup>2</sup>, a maximum silver concentration of 1 ppm is achieved.

### AGFA NDT chemicals

Thanks to the intelligent composition of the new chemicals AGFA NDT ecoDEV and ecoFIX, it is possible to reduce

chemistry consumption to less than 60 percent of present reference levels, while maintaining excellent sensitometric and physical characteristics. This drastic reduction in chemistry consumption translates into lower purchasing costs, while the smaller volume of developer and fixer waste leads to lower disposal costs.

## AGFA NDT STANDARD FILM SYSTEMS

For decades AGFA's standard film systems—both the G 128/G 328 chemicals for manual processing and the G 135/G 335 chemicals for automatic processing—rise up to the expectations of customers all over the world. No wonder GE Inspections Technologies' AGFA NDT radiographic film systems are most widely used. Their outstanding reputation is also thanks to continuous investments in R&D. With so many reasons why industrial customers choose AGFA NDT standard film systems, it should come as no surprise that they are certified according to the Industrial Film Systems Classification Standards.



AGFA NDT S eco



AGFA NDT eco Chemicals



AGFA NDT films D2 to D8

# Film Characteristics and Applications

## AGFA NDT D2

Extremely fine grain film with very high contrast. Ideal for exposures requiring the finest possible detail rendering.

- Electronic components
- Composite materials
- Castings (light metals and alloys)
- Multiple film techniques

## AGFA NDT D3

Ultra fine grain film with very high contrast. This film obtains a very high detail perceptibility, which meets the requirements of the most critical NDT applications. For direct exposure or with lead screens, using either X-ray, gamma rays, or radiation from megavolt equipment.

- Electronic components
- Composite materials
- Castings
- Very high quality welds
- Nuclear quality
- Aerospace and aircraft industry
- Multiple film techniques

## AGFA NDT D3 SC

Single coated film with very high image quality, accurate interpretability, high contrast. The colorless back coating guarantees a very flat film under all conditions.

- Electronic components
- Composite materials
- Neutron radiography
- Inspections whereby optical enlargement is required
- Multiple film techniques

## AGFA NDT D4 SC

Single-sided, high-contrast film with unmatched definition. The colorless anti-curl backing does not affect exposure or processing.

- Electronic components
- Composite materials
- Neutron radiography
- Inspections whereby optical enlargement is required
- Multiple film techniques

## AGFA NDT D4

Extra fine grain film with very high contrast. Suitable for a wide variety of critical applications. For direct exposure or with lead screens, using either X-ray, gamma rays, or radiation from megavolt equipment.

- Electronic components
- Composite materials
- Castings
- Very high quality welds
- Defense and nuclear industry
- Aerospace and aircraft industry
- Multiple film techniques

## AGFA NDT D5

Very fine grain film with high contrast. Excellent for visualization of discontinuities. This film is intended for direct exposure or use with lead screens, using either X-ray or gamma rays.

- Welding
- Castings
- Shipbuilding
- Aerospace and aircraft industry
- Multiple film techniques

## AGFA NDT D7

Fine grain film with high contrast and high speed. Designed for direct exposure or with lead screens. For exposure with lead screens, using either X-ray or gamma rays.

- Welding and casting
- Defense industry
- Aerospace and aircraft industry
- Composite materials
- Multiple film techniques

## AGFA NDT D8

Medium grain film with high contrast and very high speed. Suitable for a variety of applications. This film can be used for direct exposure or with lead screens. It gives good image quality with short exposure times. If even higher speed is required, fluorescent screens, in combination with AGFA NDT F8 (not D8), should be used.

- Concrete and heavy construction work
- Castings
- Multiple film techniques

### AGFA NDT Wide Latitude films

The AGFA NDT wide latitude films are specially designed for in-process radiography and to inspect wide range thickness objects such as castings.

#### AGFA NDT D4W

An extra fine grain film with medium contrast and very high speed. The film can be used for direct exposure techniques or with lead screens.

- Ferrous and non-ferrous castings
- Multi-thickness objects
- Non-critical welds

#### AGFA NDT D6W

A high contrast, fine grain film with medium contrast combining good image quality and wide latitude.

## SPECIAL APPLICATION FILMS

#### AGFA NDT F8

Designed as a high-quality film for fluorometallic (RCF) screen exposure when the speed obtainable with Pb screen system is insufficient or radiation safety is of prime importance.

- On stream corrosion/erosion radiography
- Concrete and heavy construction work
- Low dosage output, e.g. microfocus

#### AGFA NDT F6

Medium speed, high contrast, fine grain film. Specially designed for short exposures through the use of fluorometallic screens and fast processing cycles

- Offshore pipelines or similar applications

## INTENSIFYING SCREENS

#### AGFA NDT RCF

Blue emitting fluorometallic screen used in combination with Agfa NDT F6 or F8. Reduces radiation exposure and/or the level of necessary radiation.

- Radiography of thick objects
- Inspection of offshore pipelines
- On-stream

#### AGFA NDT 1200

Blue emitting fluorescent screen with extremely high absorption and conversion efficiency, together with acceptable detail perceptibility.

- High-energy applications, including such large concrete structures as bridges and buildings
- Flash radiography in which exposure times are extremely short
- Microfocus-enlargement techniques in which radiation doses are very low

# Image Quality and Film System Classifications

## A NEW FILM SYSTEM CLASSIFICATION

The introduction of the Industrial Film Systems Classification Standards EN 584-1, ASTM E-1815-96, ISO 11699-1, and JIS-K7627 provides an important means to assign film systems to the appropriate film system class.

These standards identify the various types of industrial X-ray film systems and classify them based on objectively quantified parameters that are the foundation of film imaging performance.

In the context of growing quality awareness, the new perception of film system classification, described in EN 584-1, ASTM E-1815-96, ISO 11699-1, and JIS-K7627, is gradually becoming the norm for the industry.

The standards for control of film processing EN 584-2 and ISO 11699-2 provide the means to control the processing at the processor user level. The objective is to make sure that a classified system will produce the expected results in daily use.

Film Type AGFA NDT	CEN EN 584-1	ASTM E 1815-96	ISO 11699-1	JIS-K7627
D2	C1	special	T1	T1
D3 s.c.			T1	T1
D4 s.c.			T1	T1
D3	C2	I	T1	T1
D4	C3	I	T2	T2
D5	C4	I	T2	T2
D7	C5	II	T3	T3
D8	C6	III	T4	T4

## QUALITY ASSURANCE TOOLS

GE Inspection Technologies provides you with AGFA NDT Quality Assurance Tools, a set of practical, dedicated tools for the radiographer to control and prove compliance of his or her entire system.

### AGFA NDT CERTIFIED PMC STRIP

The AGFA NDT Certified Processing Monitoring Control Strip is a handy, fast, and reliable tool for monitoring the quality of the film processing system and for proving compliance with existing standards on systems classifications. AGFA NDT PMC Strips are also available without certificate.

### AGFA NDT CERTIFIED DENSTEP

The AGFA NDT Certified DENSTEP is a density step wedge film to verify the calibration of optical transmission densitometers used in the industrial X-ray field.

### AGFA NDT THIO-TEST

The AGFA NDT THIO-TEST measures the archivability of processed film by measuring the residual thiosulphate in the emulsion layers.



# The Right Packaging



GE offers different forms of film packaging, all in accordance with the ISO 5655 norm. Whatever the application of industrial radiography, there is a right AGFA NDT film available, in the right packaging. No object is too large nor too small. AGFA NDT films are supplied in all standard sheet and roll sizes (special sizes on demand) and in darkroom or daylight packaging.

## SHEET FILM IN DAYLIGHT PACKAGING

### Pb VACUPAC

- the perfect daylight packaging
- film is sandwiched between two 0.027 mm lead screens vacuum packed guaranteeing optimal image quality
- completely light tight, airtight, and moisture proof
- can be used under extremely dirty and damp conditions
- ideal for applications with energies higher than 100 kV

### Pb ETE (EDGE-TO-EDGE)

- film is sandwiched between two 0.027 mm lead screens
- double-sided edge makes it possible to place the film against or between elements of a work piece easily and accurately
- opening is as simple as tearing the thread included for this purpose
- envelopes can be cut easily and taped for use with odd-shaped angles and corners
- envelopes are easy tape to the work piece
- designed for exposures with energies higher than 100 kV and isotopes

### DW ETE (EDGE-TO-EDGE)

- identical to Pb ETE, but specifically intended for material testing using low to very low radiation energy (<100 kV)
- packaged without lead screens

## ROLLS IN DAYLIGHT PACKAGING

### Pb ROLLPAC

- light tight, moisture proof, and greaseproof
- film is sandwiched between two 0.027 mm lead screens
- specially designed to apply to spherical or tubular objects

### DW ROLLPAC

- identical to Pb ROLLPAC, but specifically intended for material testing using low to very low radiation energy (<100 kV)
- packaged without lead screens

## ROLLPAC PRECUT

- films in ROLLPAC packaging can be supplied in precut lengths from 70 cm by special order
- ideal for pipeline projects, which generally consist of large series of pipes of the same diameter
- highly economical



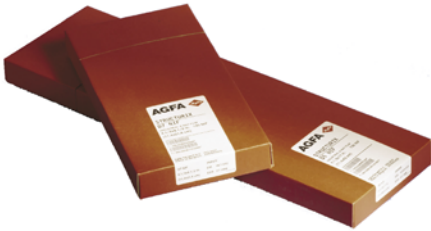
*Extra vacuum protection  
Each pack of 100 sheets is supplied "in vacuo"  
to preserve the vacuum well beyond the  
expiration date.*

# The Right Packaging

## SHEET FILM IN DARKROOM PACKAGING

### NIF (NON-INTERLEAVED FILMS)

- the most economical way to buy sheet film
- the intrinsic film quality is the same as that of pre-packed film
- sheets of film are packed per 100 in a paalpo bag inside a cardboard box
- the paalpo bags allow for easy film removal and re-closure



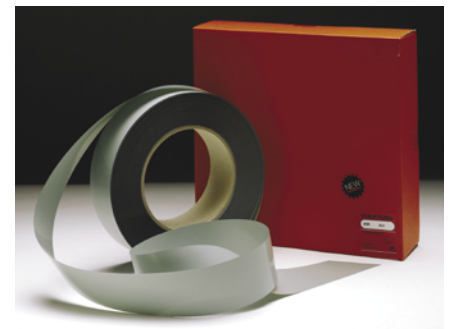
### FW (FOLDER WRAPPED)

- each film is wrapped in a paper folder to prevent handling faults in the darkroom
- paper folders make it easy to store and protect the films after processing
- folder-wrapped packaging is ideal when open boxes remain in use for a period of time in areas of high humidity and temperature, as the folder prevents the films from sticking together

## ROLLS IN DARKROOM PACKAGING

### BLR (BULK LOAD ROLL)

- packaging with bare film on a cardboard core
- film can be cut to any length and loaded with or without lead screens in reloadable cassettes in the darkroom







AGFA NDT chemicals are designed to obtain the best processing quality with AGFA NDT X-ray films. Because the goal in film processing is to control all of the parameters that influence the image quality of the radiographs, the use of optimal chemicals is essential. GE Inspection Technologies provides a complete line of advanced, high-quality AGFA NDT processing chemicals specially designed for industrial X-ray applications. AGFA NDT chemicals are also designed developed and manufactured to have a minimal impact on the environment.

## MANUAL PROCESSING CHEMICALS

### AGFA NDT G 128 DEVELOPER

G 128 is a single part, liquid developer for manual processing of industrial X-ray films. Its main advantages include:

- robust performance even at high ambient temperature and high humidity
- excellent stability during storage as concentrate

### AGFA NDT G 328 FIXER

G 328 fixer is a single part, liquid fixer for manual processing of industrial X-ray films.

- contains no hardening agent

## AUTOMATIC PROCESSING ecoCHEMICALS

### AGFA NDT ecoDEV

The AGFA NDT ecoDEV is a new two-part developer suitable for universal use but specifically designed for super fast 5 minute processing with lower replenishment rates while delivering optimal developing capabilities. The hardener-free and boron-free AGFA NDT ecoDEV has a reduced impact on the environment.

### AGFA NDT ecoSTART

AGFA NDT ecoSTART is a new one-part starter solution to be added to ecoDEV ready-for-use solution when the developer is replaced, ensuring optimal radiographs right from the start.

### AGFA NDT ecoFIX

The AGFA NDT ecoFIX is a new two-part boron-free fixer for universal use but specially designed for super fast processing, with lower replenishment rates while rendering improved archiving results.

## AUTOMATIC PROCESSING STANDARD CHEMICALS

### AGFA NDT G 135 DEVELOPER

AGFA NDT G 135 is a three-part developer that can be used for both automatic and manual processing. The developer is known for its durability, stability, and intrinsic quality, guaranteeing outstanding sensitometric and physical characteristics. Furthermore, the developer has self-cleaning characteristics.

### AGFA NDT G 135 s STARTER

AGFA NDT G135 s Starter is a one-part, ready-for-use starter solution recommended whenever the G135 developer is replaced, ensuring optimal radiographic images right from the start.

### AGFA NDT G 335 FIXER

The AGFA NDT G 335 Fixer is a two-part fixer for universal use in either automatic or manual processing, with excellent archival permanence. The formula prevents crystallization, reduces maintenance requirements, and is most suitable for silver recovery.

## CLEANING PRODUCTS

### AGFA NDT DEVCLEAN

DEVCLEAN is a highly efficient, two-part maintenance product for the thorough cleaning of the developing area of both manual and automatic processor tanks along with the accessories used for manual development. Silver deposits and sludge on all parts dissolve effortlessly, completely, and rapidly.

### AGFA NDT FIXCLEAN

FIXCLEAN is a one-part, liquid cleaning product for regular maintenance of the fixer and wash water areas of manual and automatic processor tanks as well as chemistry mixers.

# Processing Equipment

GE Inspection Technologies provides the full AGFA NDT Film Systems product line, consisting of an innovative assortment of films, chemicals, and processors perfectly geared to one another. AGFA NDT processors are among the most popular in the non-destructive testing industry. The satisfaction of our customers is the best example of the reliability, performance, and cost saving features of the AGFA NDT equipment.

## AUTOMATIC FILM PROCESSING EQUIPMENT

### REVOLUTIONARY “eco” or CASCADE FIXING PROCESSING TECHNOLOGY

The AGFA NDT Si, S eco and M eco are the next generation of industrial film processors specially designed to meet the strictest standards for silver content in the wash water. The secret lies in the double fixing tank. This cascade fixing system ensures that the amount of silver in the wash water remains significantly lower than in conventional processing systems. Such money-saving innovations as film area detection and infrared drying result in lower chemistry, water, and electricity consumption.

### AGFA NDT Si and S eco

AGFA NDT Si and S eco form the basis of the AGFA NDT high-capacity film system that boasts a revolutionary design and takes X-ray film processing to the next level. Both processors are leading-edge processors bringing higher film throughput capacity, precise replenishment rates, superior image quality, optimized archiving results, easier maintenance, and minimum processing costs.



### AGFA NDT M eco

The compact AGFA NDT M eco is a smaller version of the Si and S eco.

- specially designed for consumers of small and medium-sized quantities of films
- economical consumption of chemistry, water, and electricity
- infrared drying reduces heat produced in the darkroom
- the optimal replenishment system as a result of film surface scanning
- an intermediate washing system that keeps the fixer bath in optimum condition
- washing system also prevents development faults occurring on the film



### AGFA NDT U

With the AGFA NDT U, you have at your disposal the most universal processor from our selection. AGFA NDT U combines simplicity, reliability, and universal use in one processor. It is specially designed for customers who use medium-sized quantities of film. The AGFA NDT U is very versatile and processes sheet film as well as roll film.

- perfect processing quality
- selectable processing cycles
- replenishment by area



### AGFA NDT FEEDER

Compact and time-saving, the AGFA NDT FEEDER converts the AGFA NDT Si, AGFA NDT S eco, and AGFA NDT U into practical daylight systems. With the AGFA NDT FEEDER, you can save time and expense in the darkroom. Multiple film sizes can be accommodated.

### AGFA NDT MIXER

The AGFA NDT MIXER is a fully independent unit that relieves you of mixing chemicals. Simply place the bottles at the right time on top of the NDT MIXER. The rest occurs automatically to save time and prevent errors.

- ensures optimal mixing of developer and fixer
- yields consistent, high-quality film results



## MANUAL FILM PROCESSING EQUIPMENT

### AGFA NDT DRYER

Inexpensive to purchase and operate, the AGFA NDT DRYER is essential equipment for labs that do not use automatic processors but process X-ray films manually.

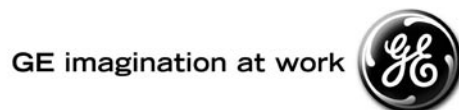


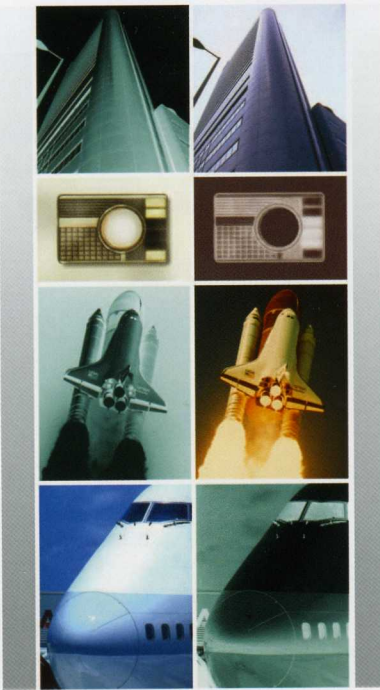
## What can GE do for you?

As the world's leading supplier of industrial radiographic solutions, AGFA's quality and reliability are well known. GE Inspection technologies is proud to be the exclusive provider of AGFA's renowned NDT solutions.

These wide-ranging and comprehensive solutions likely include a solution to the challenges you are facing. If not, the application experts at GE Inspection Technologies can help custom design a non-destructive testing system for you. Our experts are conveniently located in application centers around the world, staffed by people who understand your industry and your needs. They alone can draw on the broadest range of NDT technologies and the global experience of GE.

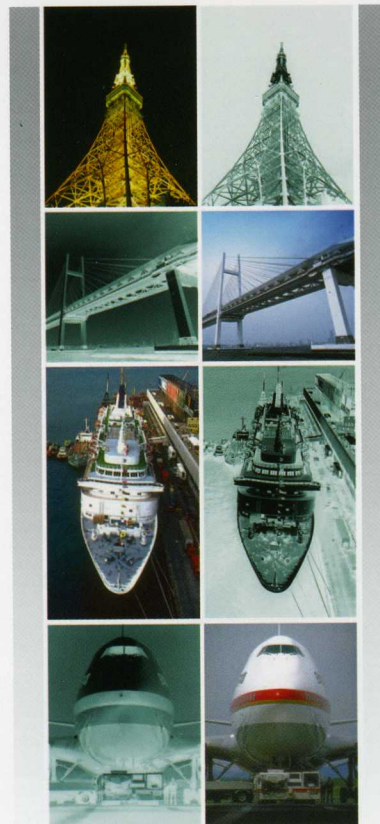
To find out what we can do for you, contact your nearest GE Inspection Technologies sales representative or visit [www.GEInspectionTechnologies.com](http://www.GEInspectionTechnologies.com) today.





## Industrial X-RAY FILM

# IX



# FUJI INDUSTRIAL RADIOGRAPHIC FILMS

for consistent high quality  
non-destructive inspection

Fuji industrial radiographic films feature revolutionary new film technology. The combination of the latest in emulsion making science and computerized manufacturing processes assure consistent batch to batch performance, optimum image quality and compatibility with all NDT chemistries and current brand tank/automatic processing conditions. The Fuji family of films incorporate unique speed, and grain technologies thus permitting their use over a wide range of applications with consistent high quality regardless of the material examined and the source of radiation employed.

Film	Applications	Features
Type/ID Notch		
IX 20	<ul style="list-style-type: none"> <li>• Micro-electronic parts</li> <li>• Neutron radiography</li> <li>• Critical investment castings</li> <li>• Ultra-fine ceramic parts</li> <li>• Graphite composite parts</li> </ul>	<p>A single emulsion, ultra-fine grain, medium high contrast film suitable for critical imaging quality applications.</p> <p>Its single emulsion feature minimizes parallax and permits extremely sharp magnified viewing.</p> <p>IX20 is generally used in direct exposure techniques or with lead screens.</p>
IX 25	<ul style="list-style-type: none"> <li>• Micro-electronic parts</li> <li>• Fine ceramic parts</li> <li>• Castings: low to medium atomic number metals</li> <li>• Applications requiring the highest of contrast</li> <li>• High-output supervoltage X-ray exposure</li> </ul>	<p>Fuji's finest grain, high contrast ASTM special film having maximum sharpness and discrimination characteristics. It is suitable for new materials, such as carbon fiber reinforced plastics, ceramic products, and micro electronic parts.</p> <p>IX25 is generally used in direct exposure techniques or with lead screens.</p> <p>IX25 is recommended for automated processing only.</p>
IX 50	<ul style="list-style-type: none"> <li>• Electronic parts</li> <li>• Graphite epoxy composites</li> <li>• High curie isotope exposures</li> <li>• Castings: low to medium atomic number metals</li> </ul>	<p>An ultra-fine grain, high contrast ASTM Class I film having excellent sharpness and high discrimination characteristics. It is suitable for use with any low atomic number material where fine image detail is imperative. Its ultra-fine grain makes it useful in high energy, low subject contrast applications where high curie isotopes or high output X-ray machines permit its use. Wide exposure latitude has been demonstrated in high subject contrast applications. IX50 is generally used in direct exposure techniques or with lead screens.</p>
IX 80	<ul style="list-style-type: none"> <li>• Welds: low to medium atomic number metals</li> <li>• Castings: low to medium atomic number metals</li> <li>• Aircraft construction and maintenance</li> <li>• Graphite epoxy composites</li> </ul>	<p>An extremely fine grain, high contrast ASTM Class I film suitable for detection of minute defects. It is applicable to the inspection of low atomic number materials with low kilovoltage X-ray sources as well as inspection of higher atomic number materials with high kilovoltage X-ray or gamma ray sources. Wide exposure latitude has been demonstrated in high subject contrast applications. IX80 is generally used in direct exposure techniques or with lead screens.</p>
IX 100	<ul style="list-style-type: none"> <li>• Welds: medium to higher atomic number metals</li> <li>• Castings: medium to higher atomic number metals</li> <li>• Aircraft construction and maintenance</li> <li>• Ordnance inspection</li> </ul>	<p>A very fine grain, high contrast ASTM Class II film suitable for the inspection of light metals with low activity radiation sources and for inspection of thick, higher density specimens with high kilovoltage X-ray or gamma ray sources. Wide exposure latitude has been demonstrated in high contrast subject applications. Although IX100 is generally used in direct exposure techniques or with lead screens, it is suitable for use with fluorescent or fluorometallic screens.</p>
IX 150	<ul style="list-style-type: none"> <li>• Heavy, multi-thick steel parts</li> <li>• Steel reinforced concrete</li> <li>• Low curie isotope and low-output X-ray exposures</li> </ul>	<p>A high speed, fine grain, high contrast ASTM Class III film suitable for inspection of a large variety of specimens with low-to-high kilovoltage X-ray and gamma ray sources. It is particularly useful when gamma ray sources of high activity are unavailable or when very thick specimens are to be inspected. It is also useful in X-ray diffraction work. IX150 is used in direct exposure techniques or with lead screens.</p>
IX 29	<ul style="list-style-type: none"> <li>• Castings and other multi-thickness subjects</li> </ul>	<p>An ultra-fine grain, medium-high contrast ASTM Class W-A film suitable to inspect wide range thickness subjects such as precision cast parts with X-ray or gamma ray sources. IX29 can be used in direct exposure techniques or with lead screens.</p>
	<ul style="list-style-type: none"> <li>• Castings and other multi-thickness subjects</li> </ul>	<p>An extremely fine grain, medium contrast ASTM Class W-B film suitable to inspect multi-thick, low atomic number metal, and steel cast parts. IX59 can be used in direct exposure</p>

# Advantages of FUJI IX Film

## (1) High Image Quality

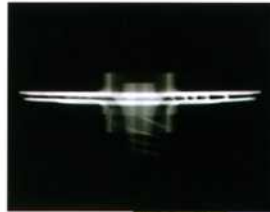
Fuji IX films exhibit high defect recognition due to their fine granularity.

## (2) Constant Performance

For example, Fuji batch to batch consistency is the best in the industry.  
For this reason, exposure conditions don't vary from one part to the next, thereby increasing productivity.

## (3) Less density uneveness.

Fuji emulsion coating is so even and uniform that it avoids most of the density uneveness that sometimes occurs in automatic processing with other products.



Film	Relative speed*				Film system class			Sheet : Non interleaved
	100KV Direct	200KV with lead	Ir-192 with lead	Co-60 with lead	ASTM E1815-96	ISO 11699-1	JIS K7627	Available packaging type
IX 20	10	9	8	5	—	—	—	Sheet : Non interleaved
IX 25	20	17	15	10	SPECIAL	T1	T1	Sheet : Non interleaved : Envelopak : Envelopak+Pb Roll : Non interleaved : Envelopak, Envelopak+Pb
IX 50	35	30	30	30	I	T2	T2	Sheet : Interleaved : Non interleaved : Envelopak, Envelopak+Pb Roll : Non interleaved : Envelopak, Envelopak+Pb
IX 80	55	55	55	55	I	T2	T2	Sheet : Interleaved : Non interleaved : Envelopak, Envelopak+Pb Roll : Non interleaved : Envelopak, Envelopak+Pb
IX 100	100	100	100	100	II	T3	T3	Sheet : Interleaved : Non interleaved : Envelopak, Envelopak+Pb Roll : Non interleaved : Envelopak, Envelopak+Pb
IX 150	200	200	170	170	III	T4	T4	Sheet : Interleaved : Non interleaved : Envelopak, Envelopak+Pb Roll : Envelopak, Envelopak+Pb
IX 29	22	22	22	22	W-A	—	W-A	Sheet : Non interleaved : Envelopak Roll : Non interleaved : Envelopak
IX 59	45	45	45	45	W-B	—	W-B	Sheet : Non interleaved : Envelopak Roll : Non interleaved : Envelopak

# *Fuji 5-minute processable IX films are offered in eight types with a variety of packaging to meet any NDT need.*

## Sheet and Sheet-Pack Film



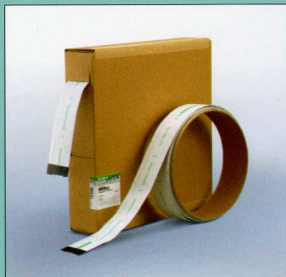
Four types of sheet film package including interleaved, Non-interleaved, Envelopak, and Envelopak + Pb are available in most conventional sizes. Blue tint and sharper images make these products ideal for the most critical radiographic applications.



### Envelopak Sheet Film

Envelopak is a complete daylight package containing pre-cut sheet film. Triple-layered packaging is water-proof and oil resistant, permitting ease of use under most exposure/environmental conditions. Envelopak is available with or without lead screens.

## Roll and Roll-Pack Film



Roll film is pre-cut in 70mm, 10", 14" and 17" standard widths. Blue tint and sharper images make these films ideal for the most critical radiographic applications. Supplied in a convenient dispenser box, Roll-Pack is available with or without lead screens (Envelopak Roll and Envelopak + Pb Roll). The sealed and flushed edge is cut at any desired length for subjects requiring special film sizes. Darkroom loading Roll Film is also available.



FUJIFILM NDT Systems  
1055 Stevenson Court  
Roselle, IL 60172-2300  
630-582-2202  
800-323-2546  
[www.fujindt.com](http://www.fujindt.com)



# Fuji Chemicals

## AUDEL

A superior high contrast developer designed specifically for industrial automatic processing. This developer is becoming "World Famous" for running clean and keeping processors clean. Capable of processing large quantities of industrial X-ray film. Pratt & Whitney approved.

## UNIVERSAL FIXER

Designed specifically for Automatic and Manual fixing of Industrial X-ray film. This two part liquid concentrate is formulated for optimum results.

## HI RENDOL "I"

A single Manual Developer formulated for today's high demand manual processing. Capable of processing large quantities of industrial X-ray film.

## MANFLO

For the polished surface appearance, this wetting agent is used in manual processing to prevent water spotting and the uneven drying of industrial X-ray films.

## DEVELOPER STARTER

Designed specifically for use with Audel developer. Each 1/2 gallon bottle contains enough starter to season 24 gallons of developer solution.

## DEVELOPER SYSTEMS CLEANER

An environmentally friendly liquid systems cleaner designed to clean the developer tank and developer recirculation system of automatic processors as well as associated racks, rollers, etc. Also suitable for cleaning developer hand tanks.

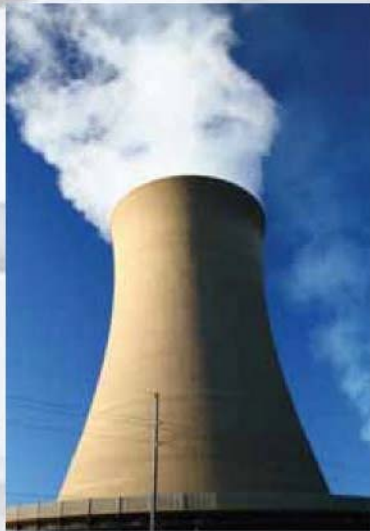
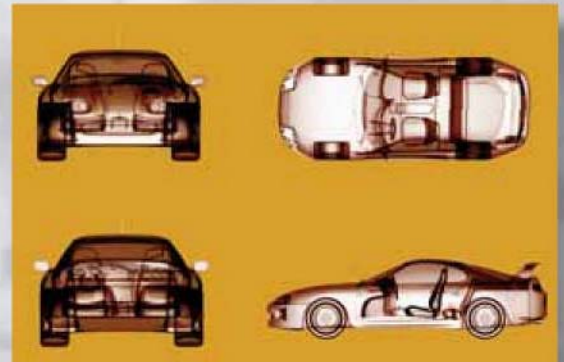
## FIXER SYSTEMS CLEANER

An environmentally friendly liquid systems cleaner formulated to clean the fixer tank and fixer recirculation system of automatic processors as well as associated racks, rollers, etc. Also suitable for cleaning fixer hand tanks.



**DETEK, Inc.**  
6805 Coolridge Drive  
Temple Hills, MD 20748-6940  
**800-638-0554**    **FAX 301-449-7011**  
www.detek.com    sales@detek.com

# CPAC Industrial NDT



**Chemistry, Equipment & Mixers**

**cpac**  
Imaging

## Processing Chemicals

### CPAC Industrial Automatic Developer

A three part liquid formulation. Can be mixed manually or used in conjunction with an automatic mixer.

Makes 10 gallons (38 liters) #24115

2 x 5 gallon kits

Makes 200 gallons (760 liters) #24015

- 1 Unit Part A (50 gallon drum of concentrate)
- 1 Unit Part B (2.5 gallon container of concentrate)
- 1 Unit Part C (3.5 gallon container of concentrate)
- Two units of Part C required to make 200 gallons



### CPAC Industrial Manual Developer

2 x 5 gallon kits #24118

### CPAC Industrial Fixer (For Automatic and Manual Processes)

A two part liquid formulation. Can be mixed manually or used in conjunction with an automatic mixer.

Makes 10 gallons (38 liters) #24117

2 x 5 gallon kits

Makes 200 gallons (760 liters) #24017

- 1 Unit Part A (50 gallon drum of concentrate)
- 1 Unit Part B (5 gallon container of concentrate)
- Two units of Part B required to make 200 gallons



### CPAC Industrial Developer Starter

Used when preparing the initial CPAC Industrial Developer solution.

6 -- 1 qt. bottles #29027



Chemistry Conversion Table	Converts to	Catalog
Agfa NDT G135 Developer 2 x 5	CPAC NDT Developer 2 x 5	#24115
Agfa NDT G135 Developer 50 gal. Drum	CPAC NDT Developer Drum Kit	#24015
Fuji Audel Developer	CPAC NDT Developer	#24115
Kodak Industrex Developer	CPAC NDT Developer	#24115
Agfa NDT G335 Fixer 2 x 5	CPAC NDT Fixer	#24117
Agfa NDT G335 Fixer 50 gal. Drum	CPAC NDT Fixer Drum Kit	#24017
Fuji Universal Fixer	CPAC NDT Fixer	#24117
Kodak Industrex Fixer	CPAC NDT Fixer	#24117
Agfa NDT G1 35s Starter	CPAC NDT Starter	#29027
Fuji Starter	CPAC NDT Starter	#29027
Kodak Industrex Starter	CPAC NDT Starter	#29027

## Cleaning Products



### Developer Systems Cleaner Kit

This rapid acting processor cleaner removes chemistry residue, silver deposits and algae from developer tanks, wash tanks and racks of all processors. This kit contains NO chromium compounds.

Makes 2 gallons - 2 mixes/package #28560

2-32 oz. Pt A's; 2-32 oz. Pt B's;  
2-32 oz. Neutralizer's

### Fixer Systems Cleaner

Highly effective, makes tanks and racks look new with less time and work. The cleaners are environmentally safe when used as directed.

Makes 2 gallons #29025

4 x 1/2 gallon

### BioEase Wash Water Tablets

This easy-to-use tablet eliminates and prevents most algae and slime in all wash systems of processors. One tablet treats 20 gallons of wash water.

25 tablet bottle #774165

500 tablet bag #774165-500

### BioPERGE® Liquid Biocide

BioPERGE® is formulated for the control of bacteria and fungi. This product is EPA registered for water recycling. BioPERGE has the following benefits: biodegradable, convenient liquid, broad spectrum microbiological activity, reduces costly down time, keeps systems cleaner longer and helps control odors associated with deposits of sludges.

5 gallon cube #900145-005

30 gallon cube #900145-030

### Photo-Ease Industrial Cleaner

Industrial-strength, biodegradable cleaner removes stubborn processing chemical stains from many surfaces. This non-flammable, rust inhibiting, non-corrosive cleaner works wonders on processor and mixer tanks. Photo-Ease is simple to use, and also removes stubborn stains like grease, tar, oil, and rust from metal surfaces.

22 oz. spray trigger bottle #775253

1 gallon #774257

### pHotoDerm Hand Soap

A pH balanced liquid-gel designed for people who work with processing chemicals. pHotoDerm penetrates the skin to neutralize odors, remove chemical residue, and prevent skin irritation. This fast acting formula is gentle enough to moisturize your hands, and strong enough to prevent dermatitis and other allergic skin reactions.

11 oz. bottle #774255

# Equipment & Mixers

## CPAC Silver Recovery Electrolytic Systems

### ML-27



Application: Recommended for medium sized industrial x-ray labs for treatment of all combinations of fixer solutions. Equipped with a stationary cathode, meaning less moving parts, that equates to minimal maintenance. It can be plumbed directly to processor fix overflow or can easily be filled manually via an integral funnel assembly in rear of tank. Desilters a 4 1/2 gallon batch. Holding tank capacity is 10 1/2 gallons.

Expected results: ML-27 units reduce silver content to approximately 100 ppm (mg/l). Tailed with a Trickle Tank and RePAC -10 iron mesh cartridge, each unit can reduce silver content to less than 5.0 ppm (typically 2.0 ppm or less).

### ARU-2100, 700 & RU-4



Application: Recommended for small industrial x-ray labs for treatment of all combinations of fixer solutions. It must be plumbed directly to the processor fix overflow. These units are referred to as "terminal" type silver recovery units. They range in recover capacity from .5 troy oz./hr to 3 troy oz./hr. Typical application ranges from 1.5 gallons to 8 gallons per 8 hours. Recommend using a RePAC-10 iron mesh tailing cartridge after the silver recovery unit to collect any residual silver.



### SilvPAC LM/BF 15 & 20



Application: Recommended for large industrial x-ray labs for treatment of all combinations of fixer solutions. Equipped with a stationary cathode, meaning less moving parts, that equates to minimal maintenance. The two piece cathode design allows for quick silver harvesting. There is no need to scrape the cathode, just flex it and the silver falls off. Able to desilver up to 75-120 gallons per day, respectively.

## CPAC Chemical Mixers

### AutoMixer



CPAC AutoMixer mixes packaged (bi-pak) developer and fixer concentrate with water in a clean and consistent method to meet specific gravity specifications. Versatile 7.5 or 12.5 gallon capacity allows larger volumes of working solution when needed.

### RAM-C-NDT



If using more than ten gallons of fixer or developer a day, the RAM-C will minimize your chemical mixing and handling responsibilities. Great for Industrial X-Ray labs running multiple shifts. The RAM-C combines a high-volume chemical mixer with replenishment holding tanks. Plus, you can feed up to six processors from one unit. Precisely mixes chemistry to any manufacturers specific gravity specifications. Replenishment tanks are equipped with separate agitation pumps to ensure the chemicals are mixed properly and to prevent oxidation. For use with developer and fixer concentrates, from 15 to 55 gallon drums.



Chemistry:  
5440 Oakbrook Parkway, Norcross, Georgia 30093 Ph.: 800-262-9333  
Equipment:  
2364 Leicester Road • P.O. Box 175, Leicester, NY 14481 Ph.: 800-828-6011  
[www.cpacequipment.com](http://www.cpacequipment.com)

# Kodak Industrex AA400

## Film

### VERSATILITY IS THE KEY.



KODAK INDUSTREX AA400 Film is extremely versatile, which makes it a great solution for many industrial applications. You can use it in multiple-film radiography and in single-film techniques—and with direct x-rays or with lead foil screens. Best of all, AA400 Film incorporates Carestream Health's patented T-GRAIN Emulsion technology.

#### The Basics

AA400 Film is an ASTM E 1815-96 Class II film that offers high speed, high contrast and gives you a fine-grain image. This film offers incredibly robust handling characteristics. It can withstand high temperatures and humidity, and it is resistant to static artifacts—so you get the image you need, whatever the conditions you're working under.

#### Recommended Uses

KODAK INDUSTREX AA400 Film is available in a wide range of sizes and packaging formats, and it's designed for applications such as:

- Aircraft inspection
- Aero-engines
- Archeological artifacts
- Assemblies
- Castings
- Concrete
- Electrical components
- Forensics
- Forestry
- Munitions, bomb disposal
- Nuclear applications
- Pipelines
- Tires
- Welded fabrication

#### Get the T-Grain Emulsion Advantages

KODAK INDUSTREX Films with T-GRAIN Emulsion offer a brand new, state-of-the-art technology that's specifically designed for industrial radiographic testing applications. What does that mean for you?

#### Outstanding Image Quality

With a cool, clean image tone and low noise, you get a sharp, clear image every time.

#### Convenient Processing Flexibility

The films work well in standard process cycles—but they're just as effective in longer or shorter process cycles.

#### Superb Durability

The films are static resistant, more heat resistant than conventional systems, incredibly sturdy, and you'll get fewer artifacts from handling.

# KODAK INDUSTREX AA400 Film

## Processing Options

AA400 Film can be processed manually or automatically in a range of processing cycles.

Notice: Observe precautionary information on product labels and Material Safety Data Sheets. Develop with rack and tank, using properly replenished solutions.

## Automatic Processing

See Carestream Health publication TI-2621, *Processing KODAK INDUSTREX Films*, for additional information on automatic processing.

## Film Characteristics (Sensitometric)

ISO/EN exposure conditions: 200/220 kV, lead screens; KODAK INDUSTREX Single Part Developer Replenisher and KODAK INDUSTREX LO Fixer and Replenisher.

KODAK INDUSTREX Processors/Cycles	Base + Fog	Contrast <sup>1</sup>
M431C—8 min 79°F (26°C)	0.20	4.7
M431C—5 min 86°F (30°C)	0.20	4.65

<sup>1</sup>Contrast calculated between net densities of 1.5 and 3.5.

## Manual Processing

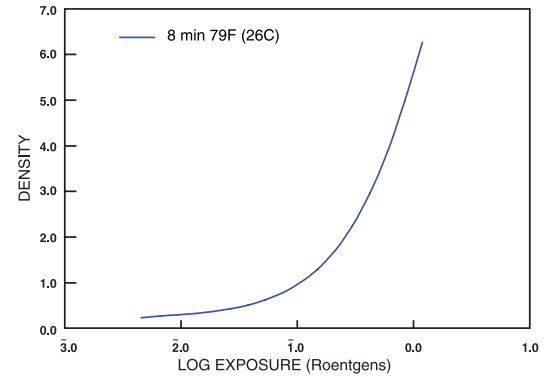
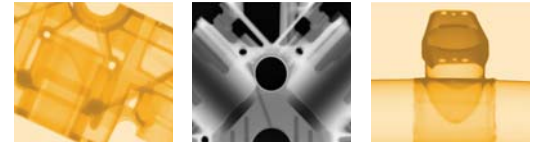
See Carestream Health publication TI-2643, *Guide to Manual Processing of KODAK INDUSTREX Films*, for additional information on manual processing.

Develop with rack and tank, using properly replenished solutions.

Developer	Temperature	Recommended Time (Minutes)	Agitation
KODAK INDUSTREX Single Part Developer	68°F (20°C)	5	Intermittent
Replenisher	72°F (22°C)	4	(5 seconds, every 30 seconds)
	75°F (24°C)	3	
	79°F (26°C)	2	

## For More Information

To learn more about KODAK INDUSTREX AA400 Film and other Carestream Health NDT products and solutions, contact a Carestream Health representative at 877-865-6325 ext 714 or visit [www.carestreamhealth.com/go/ndt](http://www.carestreamhealth.com/go/ndt).



### Exposure:

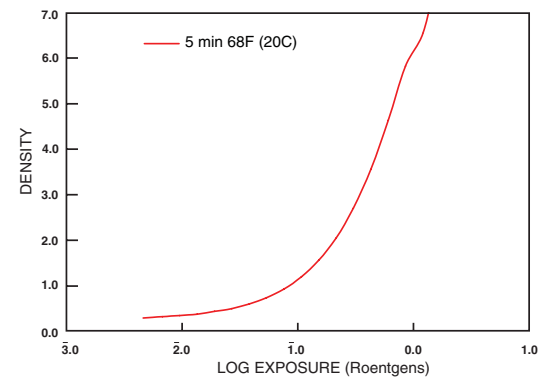
220 kV Direct X-rays with lead screens

### Processing:

KODAK INDUSTREX Processor  
KODAK INDUSTREX Chemicals

### Densitometry:

Diffuse Visual



### Exposure:

220 kV Direct X-rays with lead screens

### Processing:

Manual; KODAK INDUSTREX Single Part Developer Replenisher

### Densitometry:

Diffuse Visual

**Kodak**

Licensed Product

**Carestream** HEALTH

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CAT 847 6970

Exclusive manufacturer of **Kodak** INDUSTREX Products

# Kodak Industrex M100

## Film

### WHEN CLARITY IS CRITICAL.



KODAK INDUSTREX M100 Film gives you outstanding sharpness—in fact, we've set the standard in this industry. The film's excellent sensitivity and low speed make it the perfect choice for critical inspections of a wide range of materials. You'll have confidence that you'll find what you're looking for—whether it's a pipe weld, an aerospace engine, or a sculpture that you're imaging.

### The Basics

M100 Film is an ASTM E 1815 Class I film that offers very fine grain with extremely high contrast and definition. And it's versatile—you can use it with direct x-rays or with lead foil screens.

### Recommended Uses

KODAK INDUSTREX M100 Film is available in a wide range of sizes and packaging formats, and it's designed for applications such as:

- Aircraft inspection
- Aero-engines
- Assemblies
- Electrical components
- Castings
- Composites, fibre-reinforced
- Forensics
- Munitions, bomb disposal
- Nuclear applications
- Paintings, sculptures
- Pipelines
- Welded fabrication

### Get the T-Grain Emulsion Advantages

KODAK INDUSTREX Films with T-GRAIN Emulsion offer a brand new, state-of-the-art technology that's specifically designed for industrial radiographic testing applications. What does that mean for you?

### Outstanding Image Quality

With a cool, clean image tone and low noise, you get a sharp, clear image every time.

### Convenient Processing Flexibility

The films work well in standard process cycles—but they're just as effective in longer or shorter process cycles.

### Superb Durability

The films are static resistant, more heat resistant than conventional systems, incredibly sturdy, and you'll get fewer artifacts from handling.



# KODAK INDUSTREX M100 Film

## Processing Options

M100 Film can be processed manually or automatically in a range of processing cycles.

Notice: Observe precautionary information on product labels and Material Safety Data Sheets. Develop with rack and tank, using properly replenished solutions.

## Automatic Processing

See Carestream Health publication TI-2621, *Processing KODAK INDUSTREX Films*, for additional information on automatic processing.

## Film Characteristics (Sensitometric)

ISO/EN exposure conditions: 200/220 kV, lead screens; KODAK INDUSTREX Single Part Developer Replenisher and KODAK INDUSTREX LO Fixer and Replenisher.

KODAK INDUSTREX Processors/Cycles	Base + Fog	Contrast <sup>1</sup>
M431C—8 min 79°F (26°C)	0.19	5.4
M431C—5 min 86°F (30°C)	0.19	5.25

<sup>1</sup>Contrast calculated between net densities of 1.5 and 3.5.

## Manual Processing

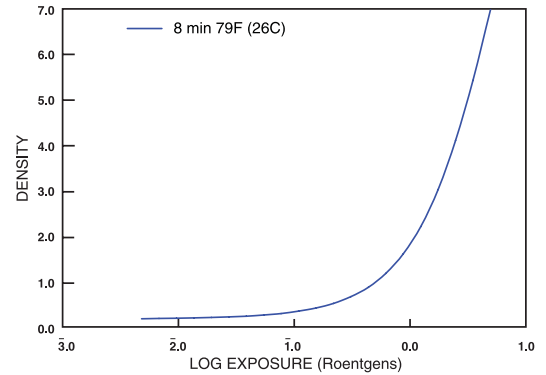
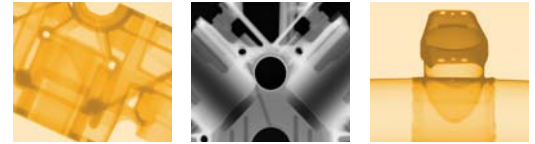
See Carestream Health publication TI-2643, *Guide to Manual Processing of KODAK INDUSTREX Films*, for additional information on manual processing.

Develop with rack and tank, using properly replenished solutions.

Developer	Temperature	Recommended Time (Minutes)	Agitation
KODAK INDUSTREX Single Part Developer	68°F (20°C)	5	Intermittent
Replenisher	72°F (22°C)	4	(5 seconds, every 30 seconds)
	75°F (24°C)	3	
	79°F (26°C)	2	

## For More Information

To learn more about KODAK INDUSTREX M100 Film and other Carestream Health NDT products and solutions, contact a Carestream Health representative at 877-865-6325 ext 714 or visit [www.carestreamhealth.com/go/ndt](http://www.carestreamhealth.com/go/ndt).



### Exposure:

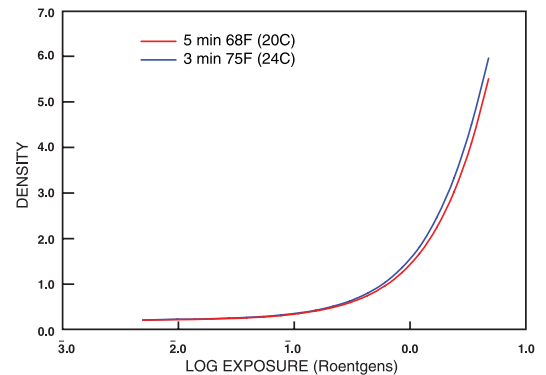
220 kV Direct X-rays with lead screens

### Processing:

KODAK INDUSTREX Processor  
KODAK INDUSTREX Chemicals

### Densitometry:

Diffuse Visual



### Exposure:

220 kV Direct X-rays with lead screens

### Processing:

Manual; KODAK INDUSTREX Single Part Developer Replenisher

### Densitometry:

Diffuse Visual

**Kodak**

Licensed Product

**Carestream** HEALTH

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CAT 137 5617

Exclusive manufacturer of **Kodak** INDUSTREX Products

# Kodak Industrex MX125

## Film

### UP TO THE CHALLENGE.



Simply put, KODAK INDUSTREX MX125 Film is tough. Tough as nails. Its static resistance is unparalleled in the industry, and its heat resistance is remarkable. The film is extremely durable; it can withstand the toughest handling (and even darkroom practices). It can also survive high humidity, and it's much less susceptible to handling artifacts than most films.

### The Basics

MX125 Film incorporates Carestream Health's patented T-GRAIN Emulsion technology. This medium-speed film offers very fine grain and very high contrast. It has excellent sensitivity, so it's perfect for critical radiography—especially with high energy. You can use it with direct x-rays or with lead foil screens. This film is classified as ASTM E 1815 Class I.

### Recommended Uses

KODAK INDUSTREX MX125 Film is available in many sizes and packaging formats, and it's designed for a wide range of applications, including:

- Aircraft inspection
- Aero-engines
- Archeological artifacts
- Assemblies
- Electrical components
- Castings
- Composites, fibre-reinforced
- Forensics
- Forestry
- Munitions, bomb disposal
- Nuclear applications
- Paintings, sculptures
- Pipelines
- Welded fabrication

### Get the T-Grain Emulsion Advantages

KODAK INDUSTREX Films with T-GRAIN Emulsion offer a brand new, state-of-the-art technology that's specifically designed for industrial radiographic testing applications. What does that mean for you?

### Outstanding Image Quality

With a cool, clean image tone and low noise, you get a sharp, clear image every time.

### Convenient Processing Flexibility

The films work well in standard process cycles—but they're just as effective in longer or shorter process cycles.

### Superb Durability

The films are static resistant, more heat resistant than conventional systems, incredibly sturdy, and you'll get fewer artifacts from handling.

# KODAK INDUSTREX MX125 Film

## Processing Options

MX125 Film can be processed manually or automatically in a range of processing cycles.

Notice: Observe precautionary information on product labels and Material Safety Data Sheets. Develop with rack and tank, using properly replenished solutions.

## Automatic Processing

See Carestream Health publication TI-2621, *Processing KODAK INDUSTREX Films*, for additional information on automatic processing.

## Film Characteristics (Sensitometric)

ISO/EN exposure conditions: 200/220 kV, lead screens; KODAK INDUSTREX Single Part Developer Replenisher and KODAK INDUSTREX LO Fixer and Replenisher.

KODAK INDUSTREX Processors/Cycles	Base + Fog	Contrast <sup>1</sup>
M431C—8 min 79°F (26°C)	0.20	5.15
M431C—5 min 86°F (30°C)	0.20	5.05

<sup>1</sup>Contrast calculated between net densities of 1.5 and 3.5.

## Manual Processing

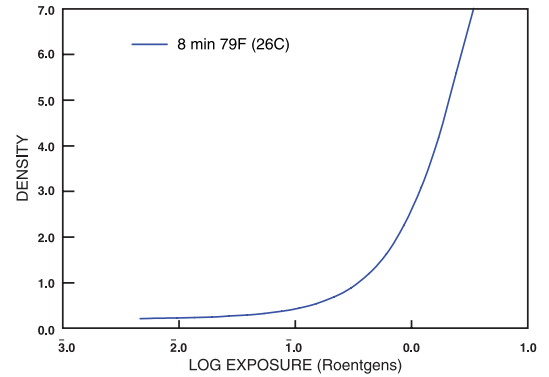
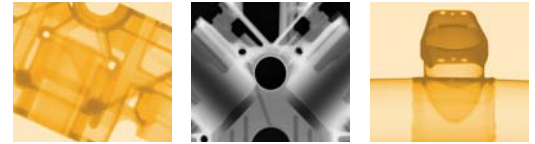
See Carestream Health publication TI-2643, *Guide to Manual Processing of KODAK INDUSTREX Films*, for additional information on manual processing.

Develop with rack and tank, using properly replenished solutions.

Developer	Temperature	Recommended Time (Minutes)	Agitation
KODAK INDUSTREX Single Part Developer	68°F (20°C)	5	Intermittent
Replenisher	72°F (22°C)	4	(5 seconds, every 30 seconds)
	75°F (24°C)	3	
	79°F (26°C)	2	

## For More Information

To learn more about KODAK INDUSTREX MX125 Film and other Carestream Health NDT products and solutions, contact a Carestream Health representative at 877-865-6325 ext 714 or visit [www.carestreamhealth.com/go/ndt](http://www.carestreamhealth.com/go/ndt).



### Exposure:

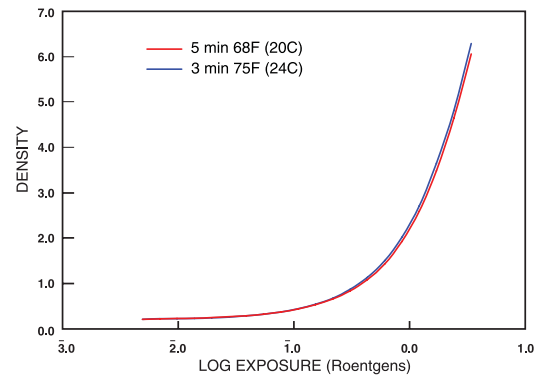
220 kV Direct X-rays with lead screens

### Processing:

KODAK INDUSTREX Processor  
KODAK INDUSTREX Chemicals

### Densitometry:

Diffuse Visual



### Exposure:

220 kV Direct X-rays with lead screens

### Processing:

Manual; KODAK INDUSTREX Single Part Developer Replenisher

### Densitometry:

Diffuse Visual

**Kodak**

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HEALTH

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CAT 802 0406

Exclusive manufacturer of **Kodak** INDUSTREX Products

# Kodak Industrex T200

## Film

### WHEN CLARITY IS CRITICAL.



KODAK INDUSTREX T200 Film is recommended for critical imaging applications, since it can be used in multiple film loads to provide you with an extended imaging range. Best of all, it incorporates Carestream Health's patented T-GRAIN Emulsion technology.

### The Basics

T200 Film is a medium-speed, high-contrast film with very fine grain. T200 Film is an En 584-1 Class 4 film and our fastest ASTM E 1815 Class I film. It's tough and durable—T200 Film can withstand high temperatures, and it's less susceptible to handling and static artifacts. It's also versatile—you can use it with direct x-rays or with lead foil screens.

### Recommended Uses

KODAK INDUSTREX T200 Film is available in a wide range of sizes and packaging formats, and it's specially designed for applications such as:

- Aircraft inspection
- Aero-engines
- Assemblies
- Electrical components
- Archeological artifacts
- Castings
- Forensics
- Forestry
- Munitions, bomb disposal
- Nuclear applications
- Paintings, sculptures
- Pipelines
- Welded fabrication

### Get the T-Grain Emulsion Advantages

KODAK INDUSTREX Films with T-GRAIN Emulsion offer a brand new, state-of-the-art technology that's specifically designed for industrial radiographic testing applications. What does that mean for you?

### Outstanding Image Quality

With a cool, clean image tone and low noise, you get a sharp, clear image every time.

### Convenient Processing Flexibility

The films work well in standard process cycles—but they're just as effective in longer or shorter process cycles.

### Superb Durability

The films are static resistant, more heat resistant than conventional systems, incredibly sturdy, and you'll get fewer artifacts from handling.

# KODAK INDUSTREX T200 Film

## Processing Options

T200 Film can be processed manually or automatically in a range of processing cycles.

Notice: Observe precautionary information on product labels and Material Safety Data Sheets. Develop with rack and tank, using properly replenished solutions.

## Automatic Processing

See Carestream Health publication TI-2621, *Processing KODAK INDUSTREX Films*, for additional information on automatic processing.

## Film Characteristics (Sensitometric)

ISO/EN exposure conditions: 200/220 kV, lead screens; KODAK INDUSTREX Single Part Developer Replenisher and KODAK INDUSTREX LO Fixer and Replenisher.

KODAK INDUSTREX Processors/Cycles	Base + Fog	Contrast <sup>1</sup>
M431C—8 min 79°F (26°C)	0.20	4.7
M431C—5 min 86°F (30°C)	0.20	4.7

<sup>1</sup>Contrast calculated between net densities of 1.5 and 3.5.

## Manual Processing

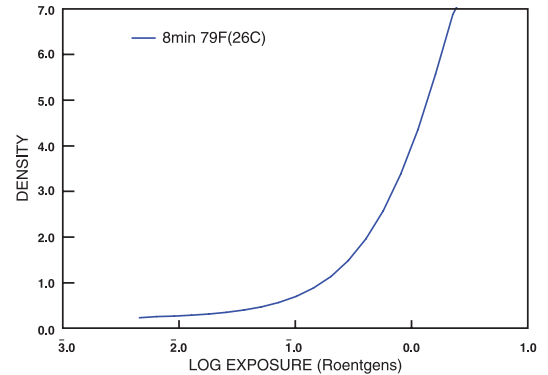
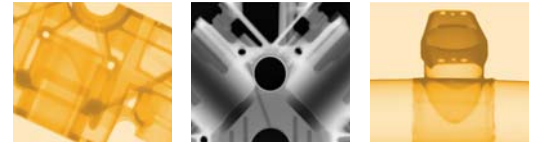
See Carestream Health publication TI-2643, *Guide to Manual Processing of KODAK INDUSTREX Films*, for additional information on manual processing.

Develop with rack and tank, using properly replenished solutions.

Developer	Temperature	Recommended Time (Minutes)	Agitation
KODAK INDUSTREX Single Part Developer	68°F (20°C)	5	Intermittent
Replenisher	72°F (22°C)	4	(5 seconds, every 30 seconds)
	75°F (24°C)	3	
	79°F (26°C)	2	

## For More Information

To learn more about KODAK INDUSTREX T200 Film and other Carestream Health NDT products and solutions, contact a Carestream Health representative at 877-865-6325 ext 714 or visit [www.carestreamhealth.com/go/ndt](http://www.carestreamhealth.com/go/ndt).



### Exposure:

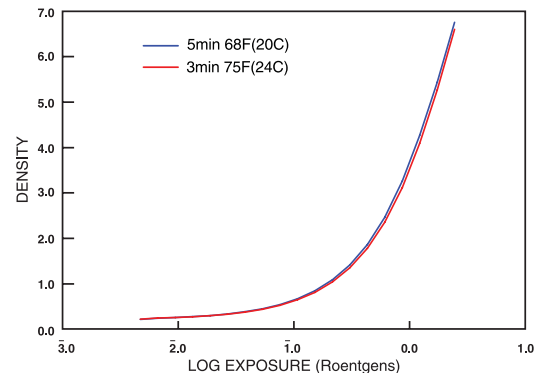
220 kV Direct X-rays with lead screens

### Processing:

KODAK INDUSTREX Processor  
KODAK INDUSTREX Chemicals

### Densitometry:

Diffuse Visual



### Exposure:

220 kV Direct X-rays with lead screens

### Processing:

Manual; KODAK INDUSTREX Single Part Developer Replenisher

### Densitometry:

Diffuse Visual

**Kodak**

Licensed Product

**Carestream** HEALTH

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Exclusive manufacturer of **Kodak** INDUSTREX Products

# Processing KODAK INDUSTREX Films



## KODAK INDUSTREX Single Part Developer Replenisher

KODAK INDUSTREX Single Part Developer Replenisher is a universal, single-part concentrate used to process all types of non-destructive testing film. As its name implies, this is a single part liquid concentrate for easy mixing. It is compatible with existing automatic processing cycles of 8 minutes and longer, and allows a shorter processing cycle (5 minutes) for all films.

The developer formula allows high photographic consistency and quality, and ensures an efficient use of the developer when using a low replenishment rate and it also reduces any environmental impact. This developer reduces or minimizes operator maintenance due to crystallization, silver deposits, or sludge.

### Features:

- High chemical stability—includes consistent image quality over an extended period of time, improved resistance to aerial oxidation, and low sludge formation
- Designed for use in both automatic and manual processing
- Reduced packaging, less solid waste
- Glutaraldehyde free
- Strengthened “activation power” which allows for fast processing and high productivity
- Outstanding image quality—cold (blue) image “tone” and low granularity
- Reduced environmental impact—lower COD and BOD<sub>5</sub> (5-days Biochemical Oxygen Demand)
- Concentrated (single part) liquid developer provides ease of use
- Can be used in chemical auto-mixers

## KODAK INDUSTREX LO Fixer and Replenisher

This fixer is recommended to process all types of industrial imaging film in automatic and manual processing cycles.

This fixer consists of a single part liquid—just add water to the proper dilution. For use, the concentrate must be diluted with water according to the instructions provided below (see “Mixing Instructions.”)

### Features:

- Low odor
- Improved archivability
- Reduced environmental impact—lower COD and BOD<sub>5</sub> (5-days Biochemical Oxygen Demand)
- Concentrated (single part) liquid fixer provides ease of use
- Designed for use in both automatic and manual processing
- Can be used in chemical auto-mixers

## Compatibility

KODAK INDUSTREX Single Part Developer Replenisher and KODAK INDUSTREX LO Fixer and Replenisher can be used with all KODAK INDUSTREX Films.

## STORING SOLUTIONS

To maintain product quality, these chemicals must be stored in the original package, at a temperature between 5 and 30° C (41 to 86° F). When stored in these conditions, the lifetime is two years from the date of manufacture.

Discard solutions if there is evidence of contamination, dirt, over-dilution, excessive evaporation, or crystallization.



**NONDESTRUCTIVE TESTING EQUIPMENT**

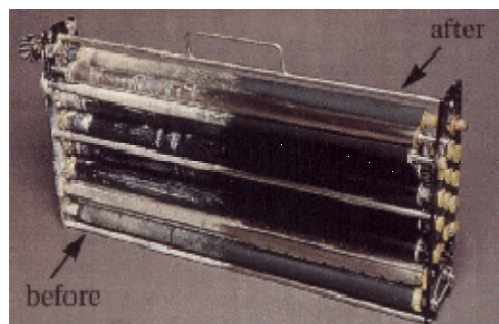
## **CLEAR IMAGE RADIOGRAPHIC CLEANER**

CLEAR IMAGE RADIOGRAPHIC CLEANER was developed and tested in 1996 as a safer and environmentally friendlier alternative for cleaning X-Ray film processors. Since its introduction, service engineers nationally and internationally have praised CLEAR IMAGE RADIOGRAPHIC CLEANER for its effectiveness, safety, ease of use, and biodegradability.

CLEAR IMAGE RADIOGRAPHIC CLEANER is a working biodegradable solution for cleaning radiographic film processors, film labs and radiology labs. It effectively cleans all parts of the film processor including the developer tanks and rollers, the fixer tanks and rollers, the wash tank, and the external panels. It is also a superior cleaner for the mixing units, the silver recovery units, and fixer and developer chemical spills and stains.

CLEAR IMAGE RADIOGRAPHIC CLEANER is much safer to use than the traditional acid developer cleaners and the toxic three-part cleaners. CLEAR IMAGE RADIOGRAPHIC CLEANER is biodegradable, acid-free, chromate-free, non-toxic and it will not stain or burn holes into the service engineer's clothes/uniforms.

CLEAR IMAGE RADIOGRAPHIC CLEANER is simple to use. The product is applied with a sprayer that delivers a thick foam to the surface being cleaned. After waiting a short time for CLEAR IMAGE RADIOGRAPHIC CLEANER to "work," the area is scrubbed lightly with a non-abrasive pad and rinsed thoroughly.



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## **NONDESTRUCTIVE TESTING EQUIPMENT**



**Clear Image  
Radiographic  
Cleaner  
makes Daily  
Cleaning Safe  
and Simple...**

Processor manufacturers recommend that the crossovers and squeegees be cleaned daily. It's preventative maintenance and significantly improves the image quality.

With *Clear Image Radiographic Cleaner* you can quickly, easily, and safely

perform the recommended daily maintenance. No mixing, no waiting, *no acid*. Grab the bottle, spray-on, wash-off. You keep the processor running smoothly and the images clear.

\*Always follow manufacturer's recommended cleaning procedures.

**CLEAR  
IMAGE**

RADIOGRAPHIC CLEANER

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