

## Oncology EC Film

Oncology EC Film is a high-contrast film that is coated on both sides with a very fine grain emulsion having low image noise. It is intended for radiation therapy beam localization and verification procedures. The film is designed to be used with EC-L and EC-V Lightweight Cassettes, which “sandwich” the film between a lead front screen and front and back fluorescent intensifying screens (gadolinium oxysulfide).

The film has a characteristic curve designed with the unique needs of portal imaging and verification imaging in mind. The characteristic curve (i.e., image contrast) is similar over energies from 6 to 20 MV.

The intensifying factor delivered by the use of rare-earth screens, coupled with the high-energy exposure source, allow the design of a very slow-speed, very fine-grain film emulsion. Oncology EC Film emulsion’s extremely small grain size, narrow grain size distribution, and low diffuse density variations work together to provide a very high-contrast, low-noise image. As a result, the images show clear definition of body structures, thus providing more anatomical detail.

### Sensitometric and Photographic Properties:

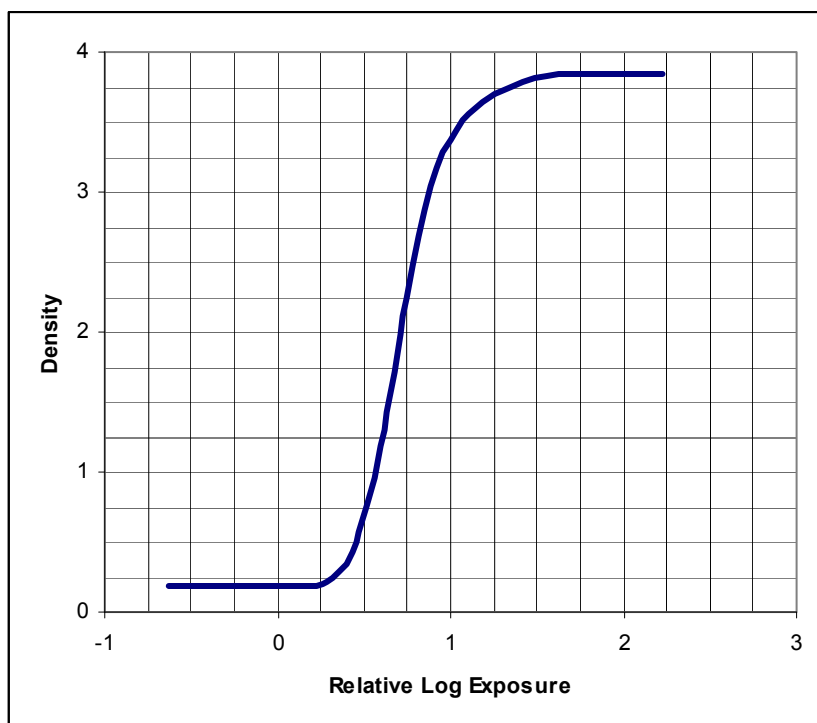
| Usage        | Lightweight Cassette and/or Screen |
|--------------|------------------------------------|
| Localization | EC-L Slow                          |
|              | EC-L Regular                       |
|              | EC-L Fast                          |
| Verification | EC-V Regular                       |
|              | EC-V Fast                          |

### Sensitometric Parameters:

|           |                                                                                                                                                    |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Speed     | Measured at 1.0 OD above Gross Fog                                                                                                                 |
| Contrast  | Measured as slope of the straight line portion of the sensitometric curve, and computed as the value for the rise for any three consecutive steps. |
| Gross Fog | Density of film base plus processing fog.                                                                                                          |

### Oncology EC Film

Simulated Green Screen Exposure; 90-second Processing  
RP X-OMAT Processor, Model M6; RP X-OMAT Chemicals; Diffuse Visual Densitometry



Notice: The 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 to a particular box or roll of photographic material. They do not represent standards or specifications that must be met by Carestream Health, Inc. The company reserves the right to change and improve product characteristics at any time.

**Automatic Processing Recommendations:**

In general, processing is recommended in X-OMAT and RP X-OMAT Processors using RP X-OMAT Developer and Replenisher and RP X-OMAT LO Fixer and Replenisher.

**Recommended Starter Volumes**

| Developer | Starter (Added to processor developer tank)  |
|-----------|----------------------------------------------|
| RP        | 89 ml (3 fl. Oz.) per 3.78 Litres (1 gallon) |

**Replenishment Rate Recommendations for X-OMAT or RP X-OMAT Processors (Replenishment by length)**

| Film Size Processed                                                                         | Use Condition | Average Number of Films per 8 hours processor operation | Replenishment Rates (ml per 35 x 43 cm) |       |
|---------------------------------------------------------------------------------------------|---------------|---------------------------------------------------------|-----------------------------------------|-------|
|                                                                                             |               |                                                         | Developer                               | Fixer |
| 35 x 35 cm (only)                                                                           | High          | 90 sheets or more                                       | 50                                      | 70    |
|                                                                                             | Medium        | 30 – 90 sheets                                          | 65                                      | 85    |
|                                                                                             | Low           | 30 sheets or less*                                      | 80                                      | 100   |
| Average size intermix                                                                       | High          | 115 sheets or more                                      | 50                                      | 70    |
|                                                                                             | Medium        | 40 – 115 sheets                                         | 65                                      | 85    |
|                                                                                             | Low           | 40 sheets or less*                                      | 80                                      | 100   |
| 35 x 43 cm (only)                                                                           | High          | 75 sheets or more                                       | 60                                      | 85    |
|                                                                                             | Medium        | 25 – 75 sheets                                          | 80                                      | 100   |
|                                                                                             | Low           | 25 sheets or less*                                      | 100                                     | 120   |
| *If sensitometry does not stay within control limits, flooded replenishment is recommended. |               |                                                         |                                         |       |

Please refer to Service Bulletin No. 30, available on the Carestream website or upon request, for additional processing recommendations.

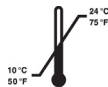
**Influence of developer temperature in case of manual processing**

The developing time must be adjusted as per the following table:

| Temperature °C:          | 20 | 22 | 24.5 | 26.5 |
|--------------------------|----|----|------|------|
| Developer Time (minutes) | 8  | 7  | 5    | 4    |

**Storage and Handling****Storage -**

Unexposed:



10–24 °C (50–75 °F)

Do not refrigerate or freeze as this can cause condensation to occur.



30–50 %RH



Protect from heat and radioactive sources. Film is to be properly shielded from x-rays, gamma rays, or penetrating radiation.

Exposed: Keep cool, dry, and properly shielded from penetrating radiation. Process as soon as possible.

Processed: 16–27 °C (60–80 °F), 30–50 %RH

The film should be used before the expiration date  indicated on the box with the lot number **LOT**.

**Handling -**

Hands must be clean, dry and free of lotions, etc. Film should be handled carefully by the edges to avoid physical strains such as pressure, creasing, or buckling. Luminous watches, cell phone and darkroom light leaks should be avoided.



Do not re-use. Film is a single use medical device.

## Safelight Filter



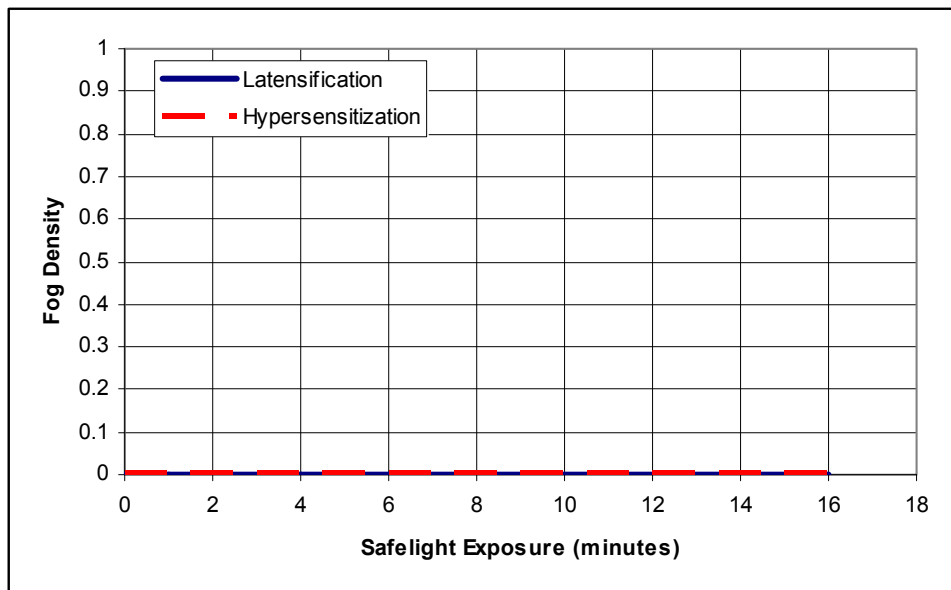
Use a Ruby Red Safelight Filter, such as GBX-2, with a frosted 15-watt bulb or a LED Safelight located at least 1.22 metres (48 inches) from the film.

**Latensification:** Safelight exposure after primary x-ray exposure.

**Hypersensitization:** Safelight exposure prior to primary x-ray exposure.

## Oncology EC Film

GBX-2 Safelight Filter, 15-watt bulb / 1.22 metres (48 inches)  
RP X-OMAT Processor, Model M6, RP X-OMAT Chemicals, 35 °C (95 °F)



The contents of this publication are subject to change without notice.



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