:AVITONE PD 1 P-OS AND PD 3 P-OS

Orthochromatic continuous tone, direct positive copying film

:Avitone PD 1 p-OS and PD 3 p-OS are orthochromatic, continuous tone, direct positive copying films, coated on a transparent polyester base with excellent dimensional stability. The films are suitable for use in the Open Skies project.
Thickness of the base:
:Avitone PD 1 p-OS : 0.10 mm (.004”).
:Avitone PD 3 p-OS: 0.18 mm (.007”).

Applications

- Duplicates and enlargements (negative/negative) of continuous tone negatives.
- Various continuous tone applications: copies are made with classic contact frames, in equipment with long wave light source or in electronic dodging equipment.
- The films can be used for making identical copies in the framework of the Open Skies project.

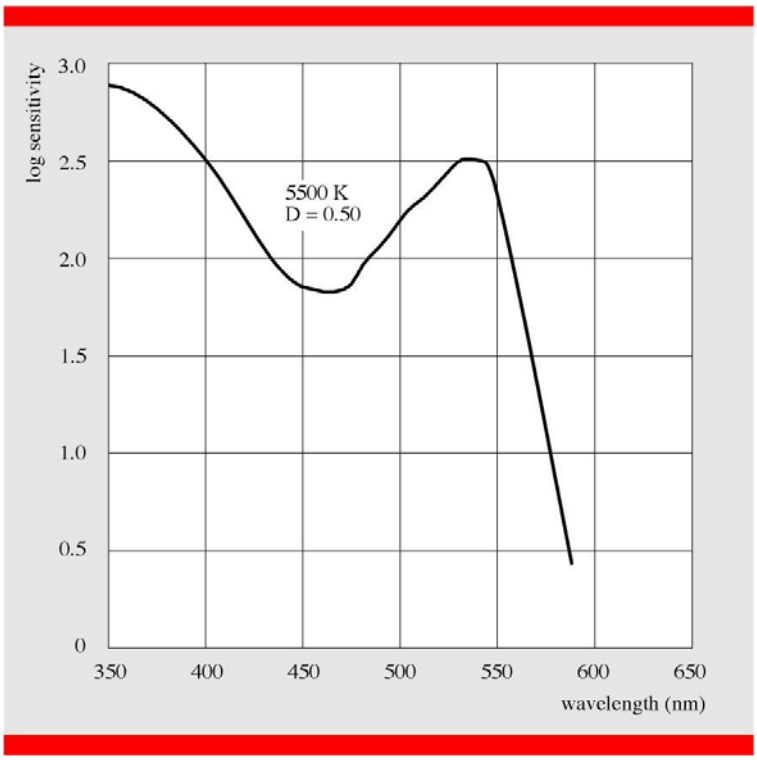
Features

- The fine granularity and the uniform anti-halation layer, which dissolves during processing, are a guarantee for high resolution. The user obtains very accurate information and excellent definition which is especially important for making copies from aerial photographs which were made during reconnaissance flights.
- The contrast range makes :Avitone PD 1 p-OS and PD 3 p-OS most appropriate for copying negatives with varying image quality and different density range.
- The average gradient may vary between 1.00 and 1.6 in appropriate chemistries and in function of the developing time. This enables gradation control and optimum image quality (processing in :Gevatone 66, in G 74 c developer for 20 to 70 seconds).
- Material speed depends on the density range of the negative which is copied and on the gradation aimed at during development. Speed varies with 0.3 log It at the most, depending on the developing speed and the desired gamma value.
- :Avitone PD 1 p-OS and PD 3 p-OS can be processed in a processor or in tray.
- The processed images show an absolute neutral silver image.
- Due to the low fog, the average gradation of 1 and the high maximum density these films are suitable for making a copy, which is identical to the original.

Photographic Data

Colour sensitivity: orthochromatic.

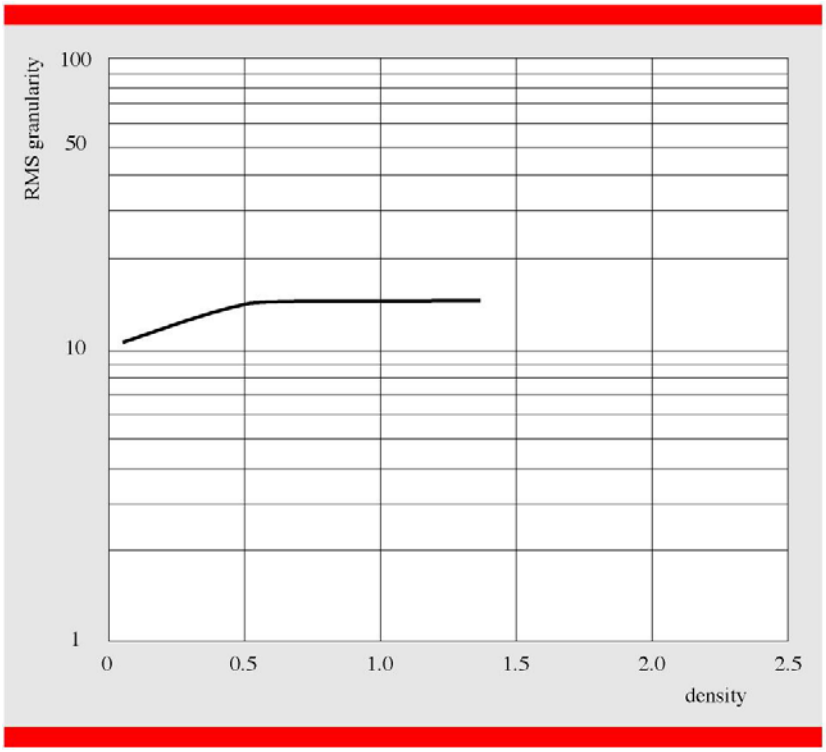
Spectral sensitivity



Sensitivity is reciprocal of the exposure (mJ/m^2) required to produce the indicated density.
Deveoped in :Gevatone 66, :G 74 c developer, 30 °C for 42 s.

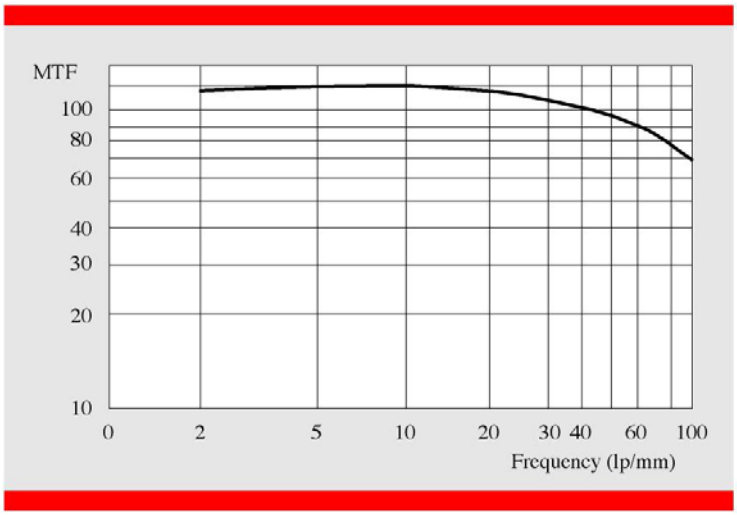
Resolution (according to ANSI standard, PH 1.33-1980):
TOC (Target Object Contrast) 1000:1: 326 lp/mm or 724 dots/mm.
TOC (Target Object Contrast) 1.6:1: 181 lp/mm or 362 dots/mm.

RMS granularity
The film emulsion is composed of an extremely fine, uniformly distributed grain.



Measured with a spot size of 50 µm in diameter. Processing in :Gevatone 66, in :G 74 c developer, at 30°C and gamma 1.00.

Photographic Modulation Transfer Function (MTF)



Developed in :Gevatone 66, in :G 74 c developer at 30 °C, for 20 s (gamma 1.00).

Production Guidelines

Darkroom conditions
Red light. It is safe to work with an R6 filter, fitted in a darkroom safelight with a 25 W incandescent lamp, at a minimum distance of 125 cm from the film.

Exposure example
Exposure unit: contact frame with halogen light source.
Original : a negative with a minimum density of 0.30 and a maximum density of 1.25.
Exposure intensity: 36 lx.
Exposure time: 15 s.

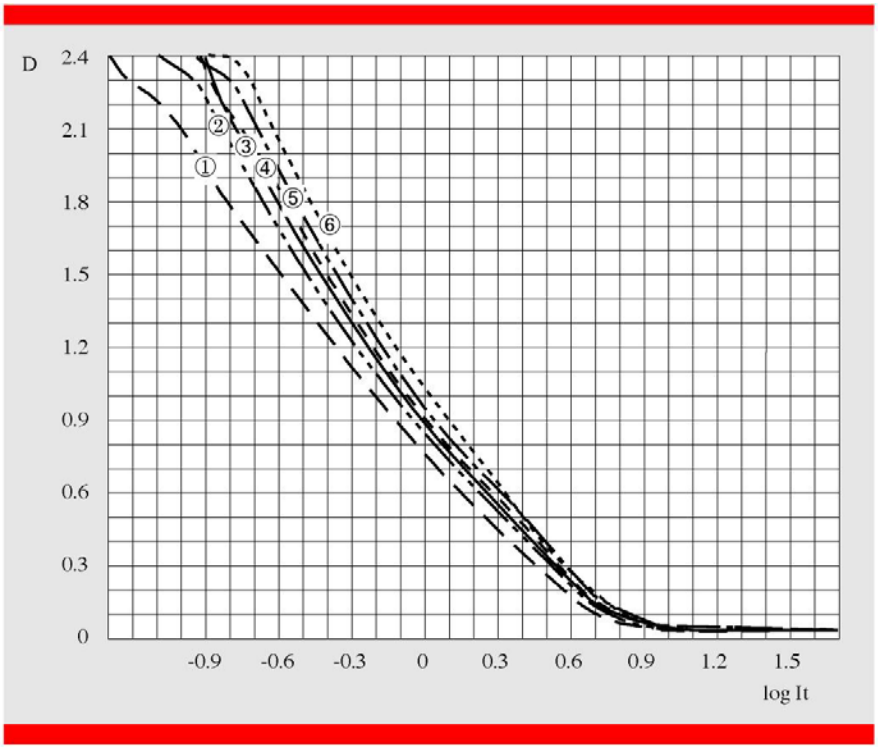
Processing
The films are suitable for rapid processing in :Gevatone 66, or in a similar processor. Development in tray is also possible.

Machine processing in :Gevatone 66
Depending on the desired gradation, optimum quality is achieved at a developing time of 20 to 70 seconds.

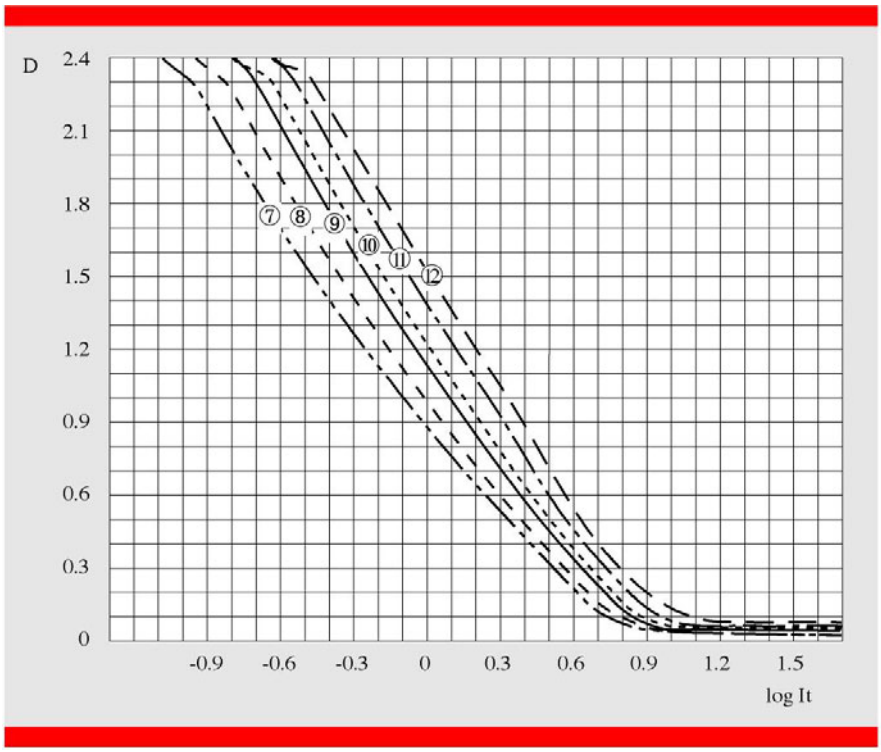
Recommended processing conditions
- Processor: Gevatone 66.
- Developer: :G 74 c (or :G 74 c + :AD 74) + :G 74 s (starter), at 30 °C.
- Developer replenishment :G 74 c (or :G 74 c + :AD 74), approx. 300 ml/m^2.
- Fixer :G 333 c or :Vfix (+8 ml of :Aditan per litre of fixer ready for use).
- Fixer temperature: 30 °C.
- Fixer replenishment: :G 333 c or :Vfix (+ 12 ml of :Aditan per litre of fixer ready for use), approx. 500 ml/m^2.
- Dryer temperature: 45 °C.

Main sensitometric curves

- Characteristic curves:



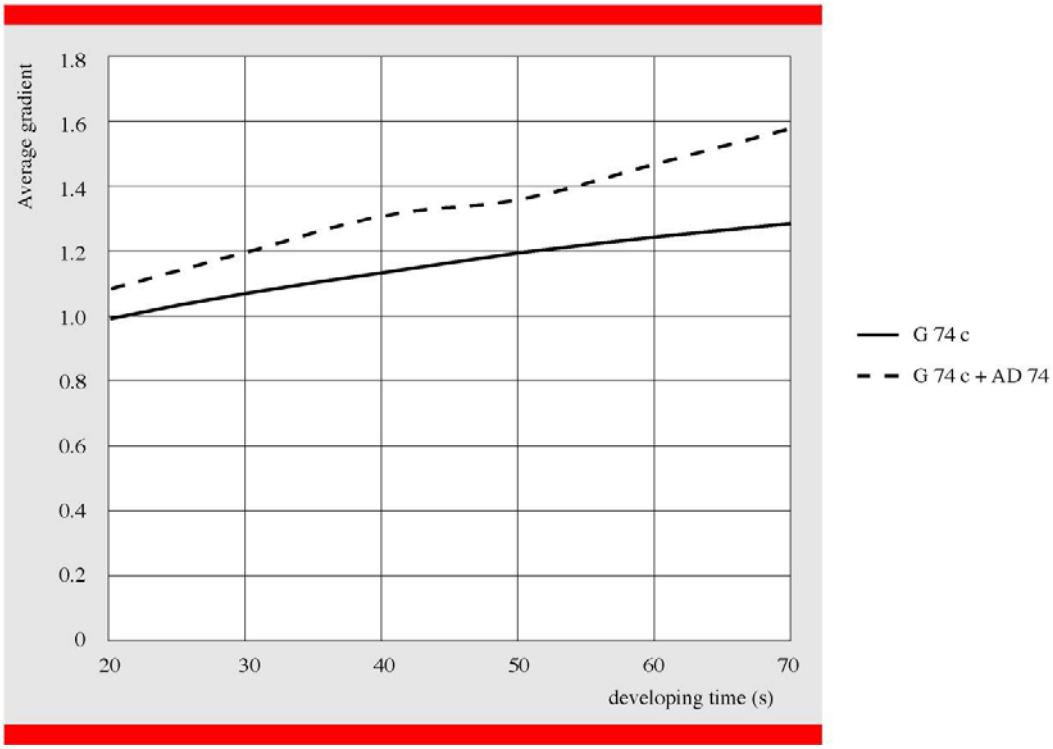
Processed in :Gevatone 66, in G 74 c developer at 30 °C.
Exposure 3500°K, 53 lxs, 21 step wedge.

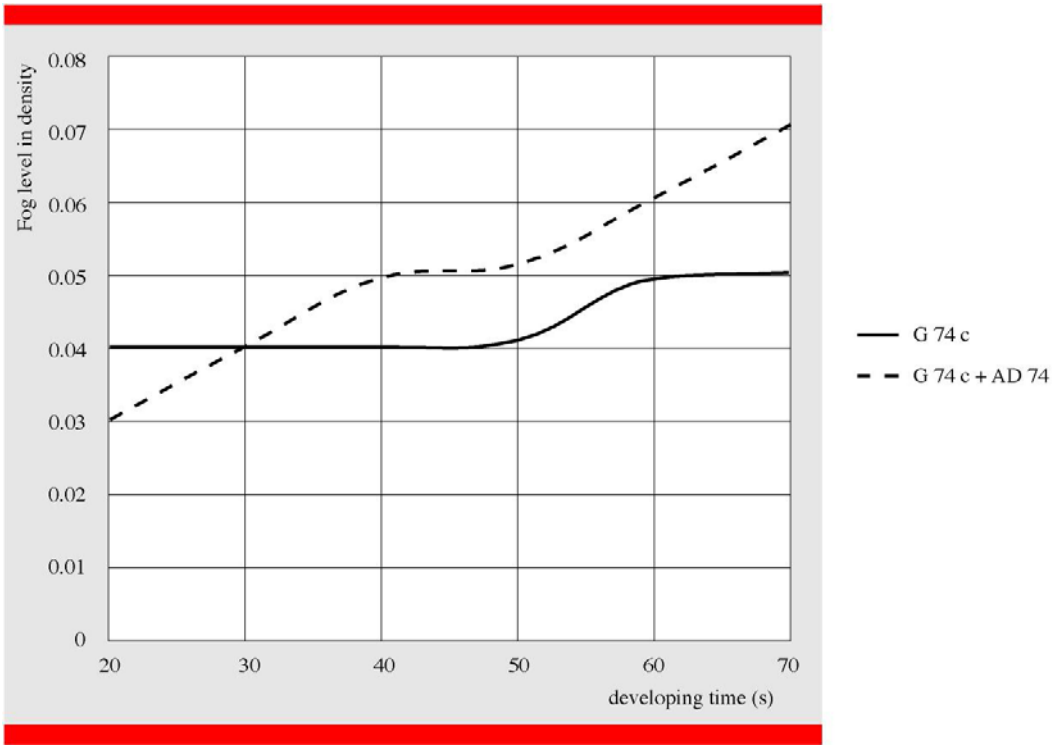


Processed in :Gevatone 66, in G 74 c developer + AD 74 at 30 °C.
Exposure 3500°K, 53 lxs, 21 step wedge.

The gamma linear imaging curve portion is measured between the points of 0.2 + fog and 0.75 log it more exposure. The speed point is expressed in absolute log It required to create a diffuse density of 1.00.

Developer	Developing time	Gamma linear	Speed point	Curve
:G 74 c	20 s	1.00	- 0.20 log It	1
:G 74 c	30 s	1.08	- 0.10 log It	2
:G 74 c	40 s	1.14	- 0.07 log It	3
:G 74 c	50 s	1.20	- 0.05 log It	4
:G 74 c	60 s	1.25	- 0.02 log It	5
:G 74 c	70 s	1.29	+ 0.026 log It	6
:G 74 c + :AD 74	20 s	1.09	- 0.07 log It	7
:G 74 c + :AD 74	30 s	1.20	+ 0.01 log It	8
:G 74 c + :AD 74	40 s	1.31	+ 0.13 log It	9
:G 74 c + :AD 74	50 s	1.37	+ 0.19 log It	10
:G 74 c + :AD 74	60 s	1.47	+ 0.27 log It	11
:G 74 c + :AD 74	70 s	1.58	+ 0.37 log It	12



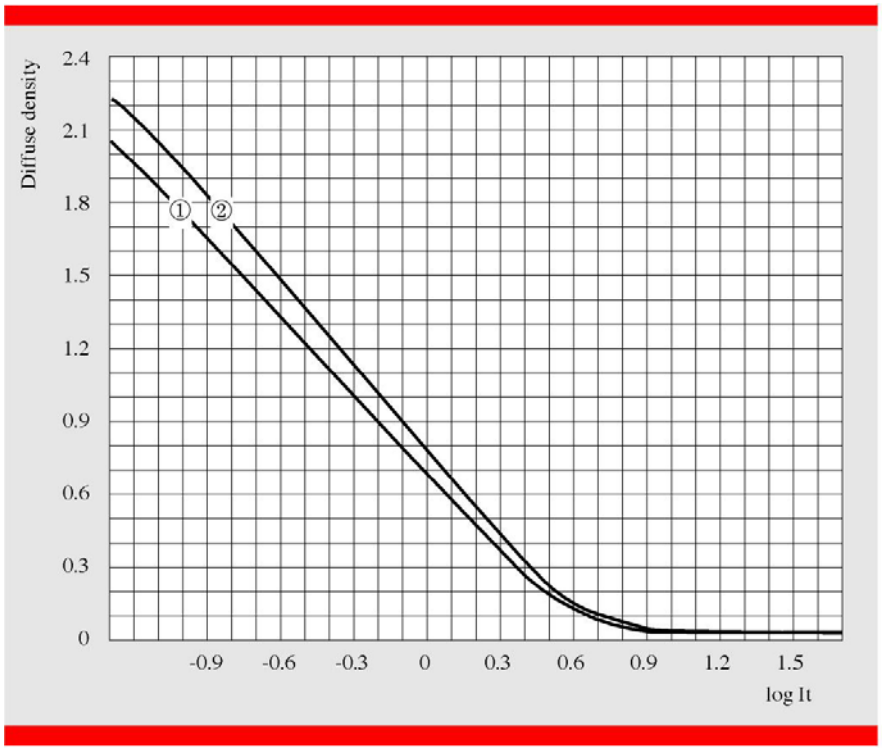


Machine processing in :AgfaLine, in :G 101 or :Vdev rapid access developer
Depending on the desired gradation, optimum quality is achieved at a developing time between 20 and 25 seconds.

Recommended processing conditions in :AgfaLine

- Developer: :G 101 or :Vdev at 35 °C/95 °F or 38 °C/100 °F.
- Developer replenishment: 250 ml/m^2.
- Fixer: :G 333 c or :Vfix at 35 °C/95 °F or 38 °C/100 °F.
- Fixer replenishment: 500 ml/m^2.
- Dryer temperature: 50 °C.

- Main sensitometric curves



① 35 °C/95 °F, 20-25 s

② 38 °C/100 °F, 20-25 s

Exposure: 3500 °K, 53 lxs, 21 step wedge.

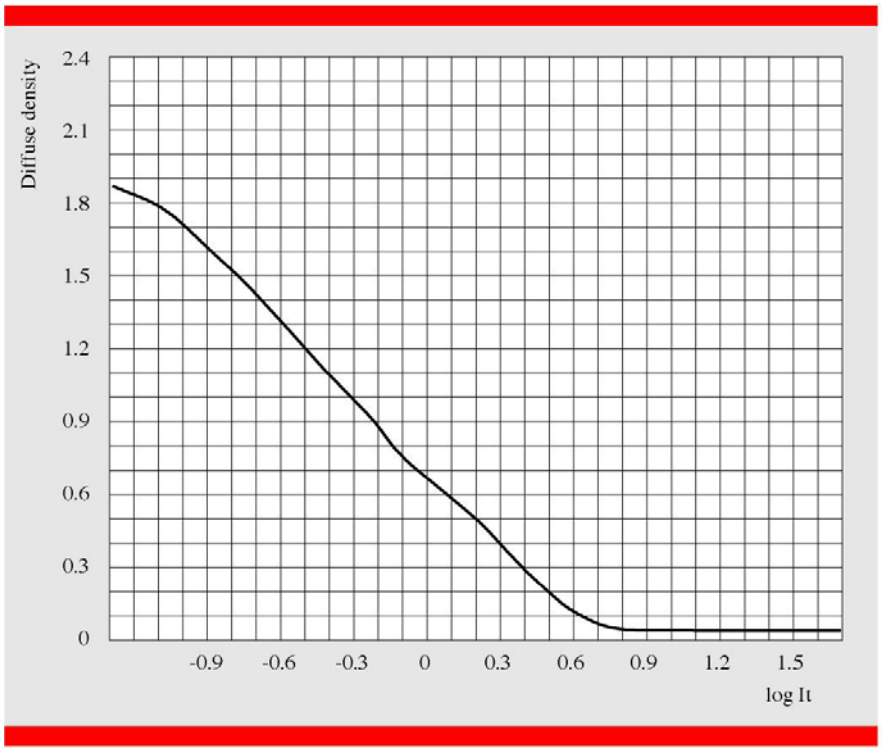
Curve	Developer	Developing time	Gamma linear	Speed point
1	:G 101or :Vdev / 35 °C	20 - 25 s	1.00	- 0.34 log It
2	:G 101 or :Vdev / 38 °C	20 - 25 s	1.08	- 0.25 log It

Fog level is 0.03 D in G 101 developer.

Development in tray

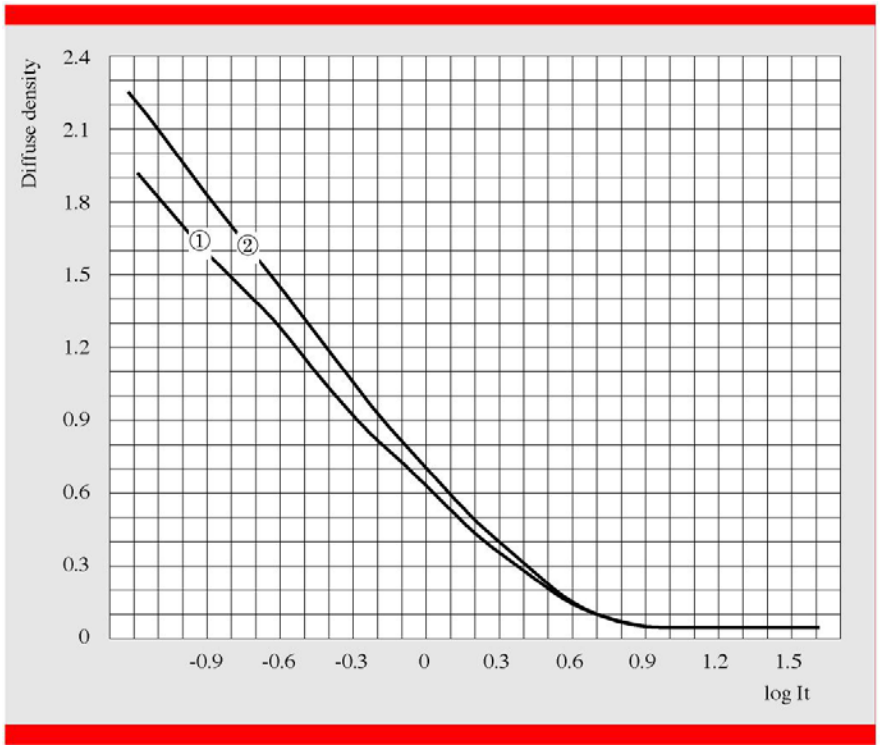
- Processing in :Refinal developer, at 22 °C for 6 minutes.

Sensitometric curve:



- Processing in :Adaptol developer, at 20 °C, for 2 - 4 minutes.

Sensitometric curves:



① 2 min.

② 4 min.

Assortment

Standard assortment

Product	Size	Size	Specs	Code	Stock item
:Avitone PD 1 p-OS	25.4 x 25.4 cm	10 x 10”	100 sheets/box	EDDYP	no
:Avitone PD 1 p-OS	24 cm x 76 m	9.5” x 250 ft	AH897 / EI / NP	EDPMB	yes
:Avitone PD 1 p-OS	24 cm x 152 m	9.5” x 500 ft	AM897 / EI / NP	ECXFO	yes
:Avitone PD 1 p-OS	126 cm x 305 m	5” x 1000 ft	AP397 / EI / NP	EDWSJ	no
:Avitone PD 1 p-OS	126 cm x 76 m	5” x 250 ft	AL397 / EI / NP	EB4X6	no
:Avitone PD 3 p-OS	25.4 x 25.4 cm	10 x 10”	100 sheets/box	3EUUS	yes

Other film sizes can also be supplied, but are subject to special order conditions.