

# FOMAPAN 100 Classic

## BLACK-AND-WHITE NEGATIVE FILM

### In general

FOMAPAN 100 Classic is a panchromatically sensitized, black-and-white negative film designed for taking photographs. The film meets high requirements for low granularity, high resolving power and contour sharpness and a wide range of halftones. FOMAPAN 100 Classic has a nominal speed rating of ISO 100/21<sup>0</sup>, but due to its wide exposure latitude the film gives good results even when overexposed by 1 EV (exposure value) (as ISO 50/18<sup>0</sup>) or underexposed by 2 EV (as ISO 400/27<sup>0</sup>) without any change in processing, i.e. without lengthening the development time or increasing the temperature of the developer used.

To make prints or enlargements, Fomabrom- and Fomaspeed-type enlarging papers are recommended; however, all sorts of black-and-white enlargement papers can be used.

### Speed

ISO 100/21<sup>0</sup>, 21<sup>0</sup> ČSN

### Schwarzschild effect

Exposure (seconds)	1/1000-1/2	1	10	100
Lengthening of exposure	1x	2x	8x	16x
Correction of aperture number	0	-1	-3	-4

### Processing

#### Safelighting

Total darkness or infrared light; for a short time an indirect safelighting can be used using e.g. an Agfa 108 filter with 15 Watt lamp at a distance of not less than 75 cm.

#### Development

FOMAPAN 100 Classic can be processed in all common negative developers. Recommended development times are shown in the table below (the development times are related to development in a spiral developing tank - agitation or turning over continuously during the first 30 seconds, then during the first 10 seconds in every minute). In this way, medium-contrast negatives can be obtained.

Developer	Development time (minutes)	
	20 °C	30 °C
Fomadon LQN (1+10)	7 - 8	2,5
Fomadon R09 (1+50)	8 - 9	-
Fomadon P	7 - 8	4
Fomadon Excel	5 - 6	1,5
Kodak Xtol	5 - 6	1,5
Ilford Microphen-stock	5 - 7	2
Ilford Perceptol-stock	8	3,5
Ilford ID 11/ Kodak D76-stock	6 - 7	3
Tetenal Emofin Liquid	4 - 5	-

When the development time has elapsed, the film is recommended to be shortly rinsed in distilled water or dipped in a 2 % acetic acid solution for 10 seconds.

#### Fixing

At a temperature ranging from 18 to 25 °C for 10 minutes in any common type of an acid fixing bath, or for at least 3 minutes in Fomafix rapid fixer.

#### Washing

The film should be washed in running water: for 30 minutes and 15 minutes the temperature of water being below 15 °C and over 15 °C respectively.

It is recommended to finish the processing with the film being rinsed in distilled water, or dipped in a wetting agent solution.

#### Storage

Unexposed films should be stored in the original packaging in a cool, dry place (temperature ranging from 5 to 21 °C, relative humidity from 40 to 60 %), out of reach of harmful vapours, gases and ionizing radiations. Films stored in a refrigerator and a freezer should be acclimatized to room temperature for approx. 2 and approx. 6 hours respectively. Exposed films should be processed as soon as possible.

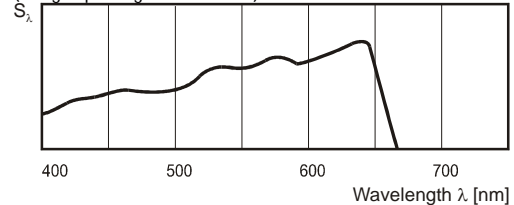
#### Packaging

FOMAPAN 100 Classic is available in the following sorts:

- 120 rollfilm 60 mm wide, exclusively on a 120 spool; identification edge markings: „ULTRA 100“
- double-edge perforated 35 mm film in 135-36, 135-24 and 135-12 cartridges for 36, 24 and 12 exposures 24 x 36 mm; bulk lengths of 17, 30.5 and 50 m in a darkroom packaging; identification edge markings: „FOMAPAN 100“ or „ULTRA 100“
- sheet film (for large-format cameras) sized: 9 x 12, 10 x 15, 12 x 16.5, 13 x 18 and 18 x 24 cm in a box of 50 sheets.

Other sizes are subject of an agreement with the manufacturer.

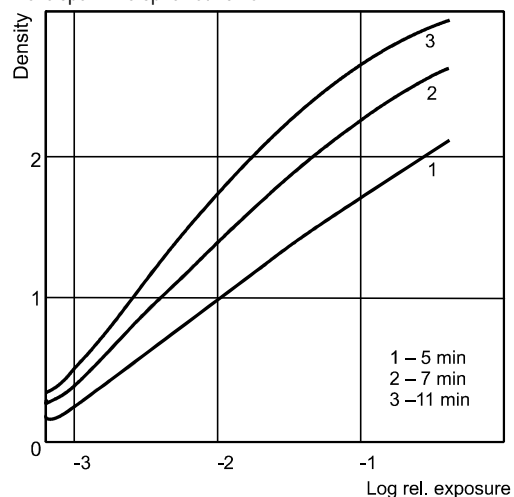
Relative spectral sensitivity  
(wedge spectrogram at 2850 K)



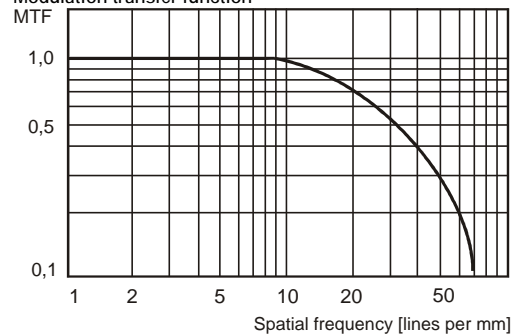
### Characteristic curves

Exposure: Daylight (5500 K), 1/20 s

Developer: Microphen at 20 °C



### Modulation transfer function



### Resolving power

110 lines per mm

### Granularity

RMS = 13,5 (Microphen at 20 °C, developed to  $\gamma = 0.6$ ).

Measured at D = 1.0.

### Base

The following bases are used for manufacturing the particular sorts of the film:

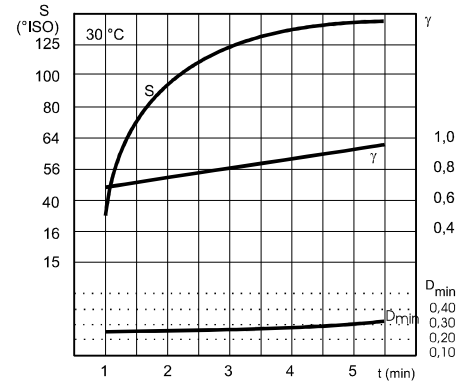
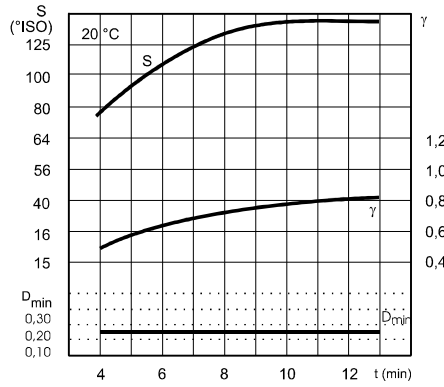
- 120 rollfilm - a bluish polyester base 0.1 mm thick, furnished with a matted colour backing which will decolourize during processing. The backing has anti-halation and anti-curling properties and prevents the incidence of Newton rings during enlarging.
- 35 mm film - a gray or gray-blue cellulose triacetate base 0.125 mm thick,
- sheet film - a clear polyester base 0.175 mm thick furnished with a matted colour backing which will decolourize during processing. The backing has anti-halation and anti-curling properties and prevents the incidence of Newton rings during enlarging.

The product has been produced and marketed in conformity with a quality system according to the international standard EN ISO 9001:2000.

# DEVELOPMENT CURVES FOR FOMAPAN 100 Classic

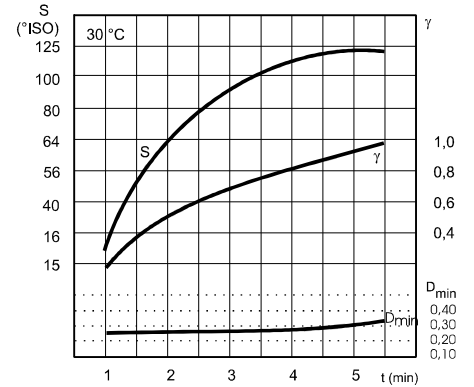
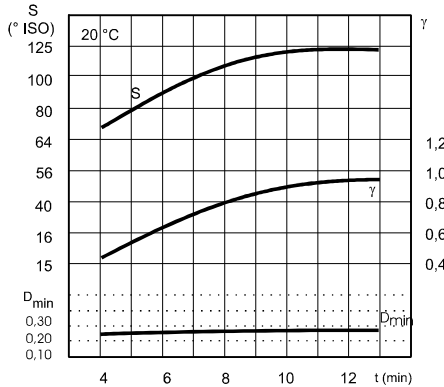
## Iford Microphen developer

$D_{min}/S/\gamma$  – development time curves at 20 and 30 °C  
 - daylight  $T_c = 5500$  K  
 - spiral developing tank - agitation or turning over continuously during the first 30 seconds, then during the first 10 seconds every minute.



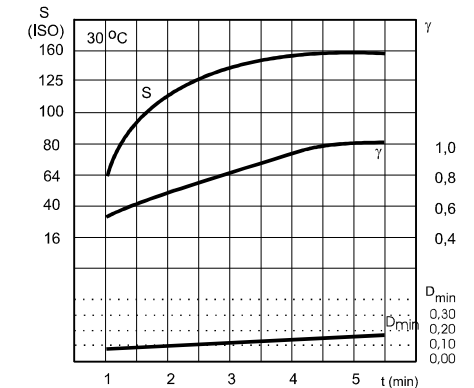
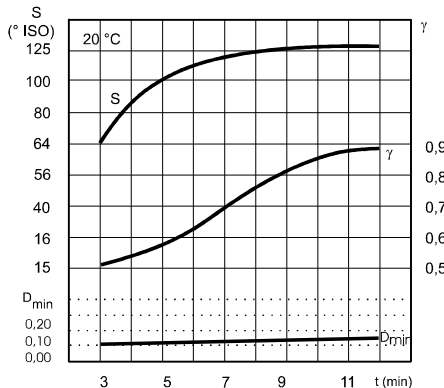
## Iford ID 11–stock Kodak D 76 developer

$D_{min}/S/\gamma$  – development time curves at 20 and 30 °C  
 - daylight  $T_c = 5500$  K  
 - spiral developing tank - agitation or turning over continuously during the first 30 seconds, then during the first 10 seconds every minute.



## Fomadon Excel Kodak Xtol developer

$D_{min}/S/\gamma$  – development time curves at 20 and 30 °C  
 - daylight  $T_c = 5500$  K  
 - spiral developing tank - agitation or turning over continuously during the first 30 seconds, then during the first 10 seconds every minute.



## Fomadon LQN developer (1+10)

$D_{min}/S/\gamma$  – development time curves at 20 and 30 °C  
 - daylight  $T_c = 5500$  K  
 - spiral developing tank - agitation or turning over continuously during the first 30 seconds, then during the first 10 seconds every minute.

