FOMA AIR 200

BLACK-AND-WHITE NEGATIVE FILM

General

FOMA AIR 200 is a medium speed panchromatic black-and-white negative film with an extended sensitivity to the red spectral area featuring an increased contrast and a wide exposure latitude as well as an excellent resolving power and granularity. The film is a particularly suitable for aerial photography intended for collecting information to be used in cartography, aerial research, development studies as well as for general aerial photography and for space or road surveillance cameras.

Characteristics

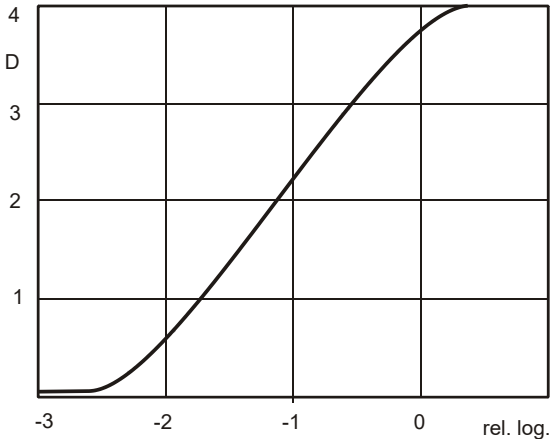
– Due to an excellent resolving power many details can be clearly distinguished and a wide exposure latitude ensures a good legibility even in shadows.
– A change of gradation from 1.10 to 1.60 depending on the development time and developer used enables to control the gradation to obtain the optimum image quality.
– The film contains a very effective antihalo backing that improves its high resolving power. The backing will be decolorised during processing.
– The used polyester film base ensures an excellent dimension stability during processing as well as during archiving and it enables to obtain a high procesion at evaluating the images mainly for use in cartography.
– A thorough hardening of the film enables unperturbed processing in machine at hight temperatures.

Effective aerial film speed (EAFS)

ISO A 200 / γ 1.4
(for red light according to ISO 7829)

Sensitometric characteristic

(Developer according to ISO 7829, 20 °C/68 °F, 8 min.)



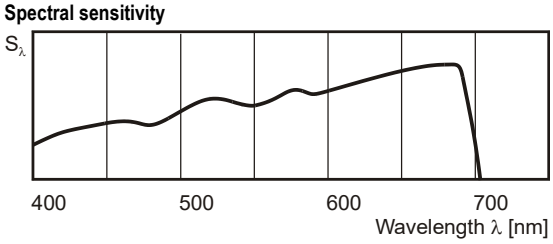
Typical exposure time in a camera

– approx. from 1/250 sec to 1/350 sec at f/4,5 – 5,6

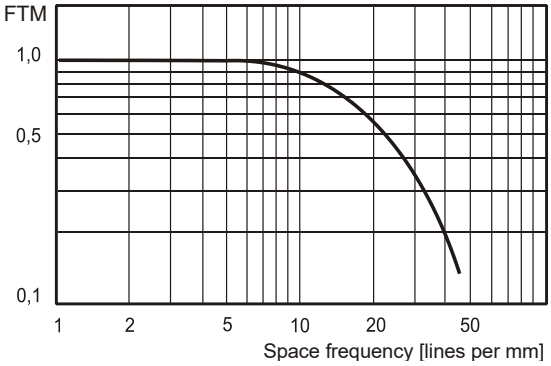
Filsters used		
type of filter	*colour of filter*	*factor of filter*
G 500*	yellow-green	3,5x
P 550*	orange	4,5x

*/ produced by Zeiss, Germany

Spectral sensitivity



Modulation transfer function



Resolving power 120 lines per mm
(processing according to ISO 7829)

Granularity (RMS) = 24.0
Processing with the develoepr according to ISO 7829 at a temperature 20 °C/68 °F to obtained an average gradient γ = 1.42, measured at D = 1.0.

Film base

For double-side perforated and non perforated films a polyester 0.1 mm thick film base (optical density 0.09) is used.
The film base contains a matt antihalo backing that will be fully decolorised during processing. This layer produces articurl effects and suppresses creating of the interference Newton rings during enlarging.
Film thickness (film base+emulsion layer) 0,11 mm.
Square weight of a non processed film at 50% of the relative humidity = 155 g/m^2.

Dimensions

Width [mm]	*Length [m]*	*Winding (emulsion in)*
perforated films		
35	10	free wound without any core
non perforated films		
35	10 a 60	plastic core, internal diameter 25.9 ± 0.2 mm
Other sizes are subject of an agreement with the manufacturer.		

*/ in limited quantity by agreement

Processing

Recommended developers
Developer according to ISO 7829
G 251 (Agfa_Gevaert)
DK 50 (Kodak)
D 19 (Kodak)
FV 33 (Foma)

Composotion of FV 33

Phenidone	0,2 g
Hydroquinone	5,0 g
Sodium sulphite	100,0 g
Sodium carbonate	5,0 g
Sodium tetraborate cryst.	3,0 g
Boric acid	3,5 g
Potassium bromide	2,0 g
Water to	1000,0 ml

Safelights – nfrared light or total darkness.

Storage

The unexposed films should be stored in the original packing in a dry and cool room at a temperature from 5 to 25 °C (41 °F to 77 °F) and a relative humidity from 40 to 60 % out of reach of harmful steams, gases and ionizing radiation. After a long term storage at a low temperature, the film shall be kept for about 2 to 4 hours at an ambient temperature before usage.
The exposed film should be developed as soon as possible.

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

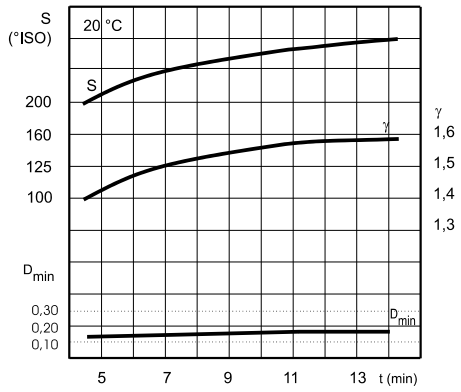
DEVELOPING CHARACTERISTICS FOR FOMA AIR 200

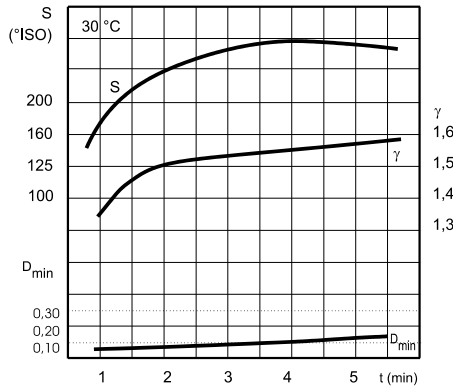
ISO 7829 developer

Dependence of D_{min}, S, γ on the development time at 20 °C (68 °F) and 30 °C (86 °F)

– daylight T_c = 5500 K

– development in developing tank for the first 30 s at a permanent turning over and then with alternate movement for 10 s and quiet for 50 s.



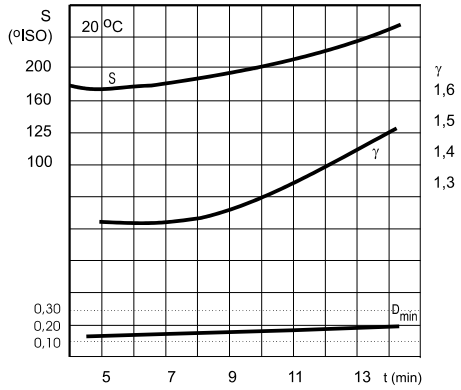


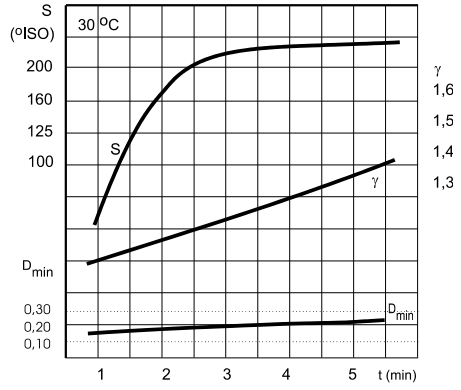
DK 50 developer

Dependence of D_{min}, S, γ on the development time at 20 °C (68 °F) and 30 °C (86 °F)

– daylight T_c = 5500 K

– development in developing tank for the first 30 s at a permanent turning over and then with alternate movement for 10 s and quiet for 50 s.



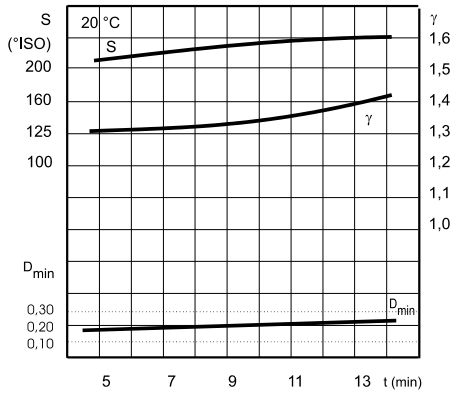


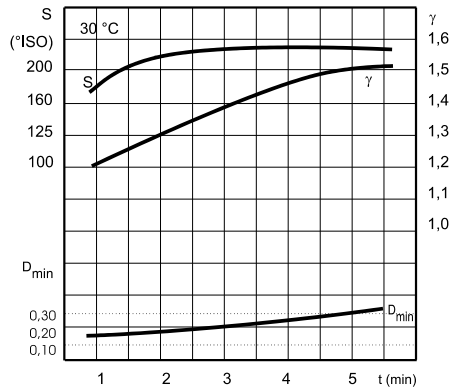
G 251 developer

Dependence of D_{min}, S, γ on the development time at 20 °C (68 °F) and 30 °C (86 °F)

– daylight T_c = 5500 K

– development in developing tank for the first 30 s at a permanent turning over and then with alternate movement for 10 s and quiet for 50 s.



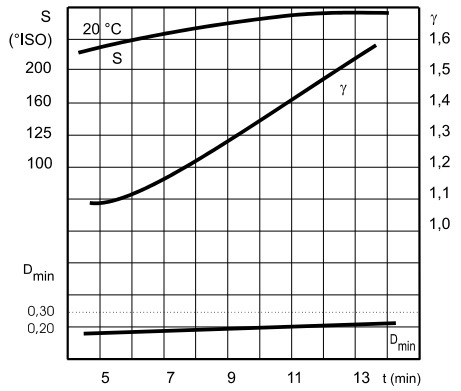


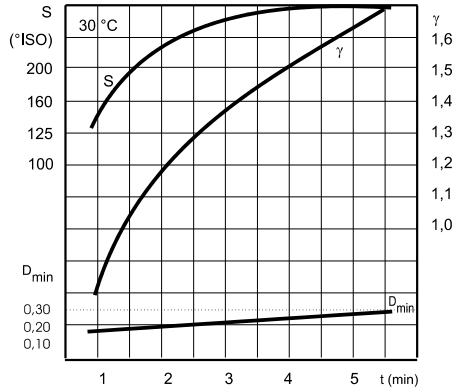
FV 33 developer

Dependence of D_{min}, S, γ on the development time at 20 °C (68 °F) and 30 °C (86 °F)

– daylight T_c = 5500 K

– development in developing tank for the first 30 s at a permanent turning over and then with alternate movement for 10 s and quiet for 50 s.





FOMA 05/09

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