

# FOMASPEED 412

## BLACK-AND-WHITE RC ENLARGING PHOTOGRAPHIC PAPER

### In general

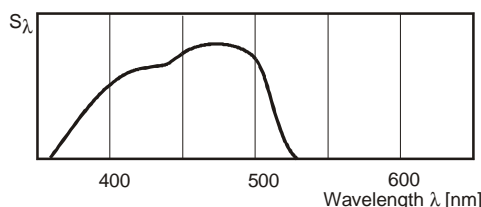
FOMASPEED 412 is a universal black-and-white photographic paper on an extra thin resin-coated paper base, the square weight of which is approximately one half of that used for other Fomaspeedtype photographic papers. FOMASPEED 412 is manufactured using silver chlorobromide emulsion that gives a neutral-to-medium warm tone to the resulting silver image. The paper features a very rich halftone scale ranging from shining whites to deep blacks. Its high speed makes possible the usage of high lens diaphragm numbers even when making large size enlargements (e.g. exhibitions purposes, illuminated billboards etc.). Developing agents incorporated into the emulsion layer facilitate rapid machine processing and a shortening of development times in manual processing to 60 – 90 seconds at 20 °C.

FOMASPEED 412 is manufactured in the normal contrast grade (N) in a matt surface.

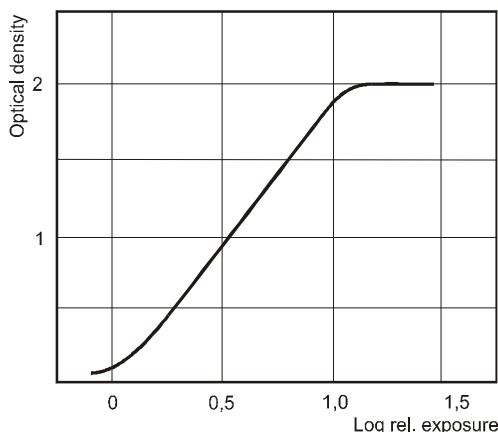
### Packaging

FOMASPEED 412 is available in all usual sizes and in rolls up to the width of 108 cm.

### Relative spectral sensitivity



### Sensitometric curve



### Sensitometric values:

Contrast grade	ISO range R	ISO speed P	D <sub>max</sub>
Normal	80	400	2

### Safelighting

FOMASPEED 412 should be handled and processed under yellowbrown, red or orange safelighting with filters (e.g. Ilford 902, Osram Duka 50, Durst Sanat, Kodak OC, Agfa G7, Agfa Y7J, etc.) in combination with a 15 Watt lamp. Direct light must be diffused by inserting a matt glass. Because of its high speed, FOMASPEED 412 should not be exposed to this safelighting for longer than 3 minutes and 10 minutes at a distance of 0,5 meter and 1 meter respectively.

### Processing

FOMASPEED 412 can be processed manually in trays (due to a thin paper base no processing in common developing machines is recommended). Suitable are common neutral-working or contrast-working developers. The resulting image tone is influenced by developers used.

For common work and a neutral image tone, Fomatol LQN or Fomatol P developers are recommended. Using a special Fomatol PW developer, brown-green image tones can be obtained. From developers of foreign manufacturers, developers such as Kodak Polymax or Dektol, Tetenal Variospeed, Ilford PQ Universal, Agfa Neutol Liquid, etc. are recommended. For fixing, a common acid fixer (e.g. Fomafix P) or Fomafix rapid fixer should be used.

### Manual processing in trays

Processing step	Processing bath	Time	Temperature (°C)
Development	Fomatol LQN (1+7)	60–90 sec.	20
Stopping	2 % acetic acid or Fomacitro (1+19)	10 sec. 10–20 sec.	20 20
Fixing	Fomafix (1 + 5) Fomafix P	90 sec. 3 min..	20 20
Washing	running water	2 min. 4 min.	above 12 below 12

**Drying:** FOMASPEED 412 should be not glazed only dried - either left to dry naturally at room temperature or dried using warm air at temperatures up to a maximum of 85 °C.

### Toning

FOMASPEED 412 can be toned using either a direct toning method (the one-bath one, e.g. by Fomatoner Indigo), or an indirect toning method (the two-bath one, e.g. by Fomatoner Sepia). For a standard process, the indirect method is recommended. The brown image tone is particularly very popular, being obtained using Fomatoner Sepia Set. By changing the temperature of the toning bath, a wide scale of shades from light yellow-brown to dark-brown or violet-brown can be obtained.

Temperature (°C)	Image tone
up to 20	light, yellow-brown
20 - 30	warm, neutral-brown
above 30	dark-brown to violet-brown

A blue tone can be obtained using the Fomatoner Indigo Set. The resulting image tone depends on dilution, temperature and toning time.

### Storage

FOMASPEED 412 should be stored in an intact original packaging in a dry, cold place (temperatures of up to 5–21 °C and relative humidities ranging 40 – 60 %), out of reach of harmful vapours, gases and ionizing radiation..

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