RETROPAN 320 soft new
BLACK-AND-WHITE NEGATIVE FILM

In general
RETROPAN 320 soft is a panchromatically sensitized special negative black and white film with fine grain, good resolution and contour sharpness. The film is characterized by a wide range of half tones and soft light which makes it suitable for photography and subsequent contact printing or "retro" style enlarging of negatives (photographs of still lives, architecture, experiments, landscapes, portraits, etc.). The sensitivity of the film is ISO 320/26° but its wide exposure latitude provides very good results also when overexposed by min. 1 EV (ISO 160/23°) and underexposed by 2 EV (1250/32°). For turning into positives variable contrast enlarging papers are recommended – Fornabrom Variant, and papers of warm tones of base and silver – Fomabrom Classic 131, 132, 133. Other types of black and white enlarging papers may also be used. In order to emphasize monochromatic tonality or the vividness and plasticity it is possible to tone the papers – e.g. using Fomatoner Sepia brown toner.

Speed
ISO 320/26°, 26° ČSN

Schwarzschild effect

<table>
<thead>
<tr>
<th>Exposure (seconds)</th>
<th>1/1000–1/2</th>
<th>1</th>
<th>10</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lengthening of exposure</td>
<td>1x</td>
<td>1.5x</td>
<td>6x</td>
<td>8x</td>
</tr>
<tr>
<td>Correction of aperture number</td>
<td>0</td>
<td>-1</td>
<td>-2.5</td>
<td>-3</td>
</tr>
</tbody>
</table>

Processing
Safekeeping: infrared light or total darkness

Development
It is recommended to process RETROPAN 320 in a special developer RETRO SPECIAL DEVELOPER provided by the producer together with this film. It is also possible to use other kinds of developers after setting the optimal developing conditions considering the requested contrast, optical density etc. of the final negative image. 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. After processing 0.8 m² of a film it is appropriate to prolong the exposure time by 10% to each 0.1 m² of a film compared to prior exposure time.

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 25 °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.

Developing capacity
One package of the powder developer RETRO SPECIAL DEVELOPER designed for one litre of a working solution is sufficient to develop 1.3 sqm of film material – following amount of sheet films: 25 sheets of 8x10 inches, minimum of 50 sheets of 5x7 inches, 100 sheets of 4x5 inches; further e.g. 36 m of perforated film of width 35 mm or 25 pcs of 135-36 film.

Base
The following bases are used for manufacturing the particular sorts of the film:
- 120 rollfilm - a clear polyester base 0.1 mm thick, furnished with an antihalo colour backing which will decolourize during processing.
- 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 an antihalo colour backing which will decolourize during processing.

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