Kodak T-MAX

PROFESSIONAL FILMS

'Kodak' T-MAX Professional Films are part of a wide range of 'Kodak' Black-and-White Films designed to meet the needs of the professional or commercial photographer or the photo-journalist. These films offer the advantage of 'Koda[illegible]mulsion technology – an [illegible] the traditional [illegible]nship for photographic films. [illegible]se films provide is higher speed **and** finer grain than was previously thought possible. The benefits are better quality pictures and films of such high speed that low-light photography is now commonplace.

*Pushing exposure results in slight losses of quality compared with normal exposure and normal processing. You can also use other Kodak developers for pushing these films; however, T-MAX Developer produces higher-quality tone reproduction (better shadow detail) under these conditions.
For high-contrast scenes, such as spotlighted performers under harsh lighting, expose and process as indicated in the table. However, when detail in the deep-shadow areas is important to the scene, overexpose by 2 stops and process your film normally.
†Pushing exposure and processing by 3 stops increases contrast and graininess and decreases shadow detail further. Expose and process a test roll to determine if the results are acceptable for your needs.

▶ Technical Data on 'Kodak' Black-and-White Professional Films

Features	Benefits
• **T-MAX 100 Film — excellent for use in copy applications with normal exposure and processing**	• **No need for contrast adjustment or special processing**
• **T-MAX 100 Film — high quality black-and-white slides with processing in the T-MAX 100 Direct Positive Film Developing Outfit**	• **Reversal applications with shorter processing times**
• 'Kodak' T-GRAIN emulsion that reshapes pebble-like crystals into a tabular form with more surface to catch light	• Allows films with extremely fine grain to be made faster; high speed films have finer grain. T-MAX Films offer the best of both worlds: high speed and fine grain
• Improved sharpness	• Maintains subject detail in prints at higher degrees of magnification than conventional films
• Expanded exposure latitude	• Greater "forgiveness" with over-exposure errors; quality prints from moderately under- or over-exposed negatives • Better highlight separation
• Improved reciprocity at long and short exposure times	• Less compensation required than with conventional films
• 120 size film coated on a thicker (4.7 mil) base than other black-and-white roll films	• Improved dimensional stability; easier darkroom handling
• Virtually no difference between the daylight and tungsten film speeds	• No need to adjust exposure for different light sources
• More responsive to zone-system development changes	• Smaller time adjustments needed
• No increase in processing time required for one stop "push"	• No need to segregate one stop pushed film from normally exposed film. You can mix normal exposures and one stop pushed exposures on the same roll
• Less development time increase required for film pushed by two or more stops than with conventional films	• Saves processing time
• Processed in standard developers, including 'Kodak' T-MAX Developer and 'Kodak' T-MAX RS Developer and Replenisher	• No need for a special developer. You can process T-MAX Films with other black-and-white films

'Kodak' T-MAX 100 Professional Film is a continuous-tone panchromatic black-and-white negative film for general outdoor and indoor photography; it is especially useful for detailed subjects when you need maximum image quality. It is excellent for copying black-and-white photographs, for making black-and-white copies from colour transparencies and for photomicrography. This film features medium speed (EI 100), extremely high sharpness, extremely fine grain and very high resolving power. It allows a very high degree of enlargement.

You can also use T-MAX 100 Professional Film to produce high quality slides from continuous-tone photographs, drawings, artwork and radiographs when you process it with the 'Kodak' T-MAX 100 Direct Positive Film Developing Outfit. The T-MAX Outfit also lets you use this film to produce copy negatives from black-and-white or colour negatives, to duplicate black-and-white slides or to make black-and-white slides from colour slides.

Key Features

- High quality, medium speed, black-and-white film incorporating 'Kodak' T-GRAIN emulsion technology.
- Extremely fine grain and extremely high sharpness; very high resolving power.
- Ideal for architectural, commercial, industrial and landscape photography. Also for product photography in the studio, fashion illustrations, and for copying flat artwork, line drawings and renderings.
- Ideal for display prints, due to its fine grain and good tonal range; also ideal for making black-and-white negatives from colour transparencies and black-and-white positive slides.
- Superb results with daylight, electronic flash or tungsten lighting.
- Wide exposure latitude (−1 to +3 stops) and no increase in processing time with 'Kodak' T-MAX Developer for one stop under-exposure.
- Can be processed in a wide range of developers, especially 'Kodak' T-MAX Developer and T-MAX RS Developer and Replenisher.
- Improved reciprocity characteristics for both long and short exposure times.
- Excellent archival characteristics.
- Available in a wide range of formats.

Exposure

The nominal speed of 'Kodak' T-MAX 100 Professional Film is EI 100. It was determined in a manner published in ISO standards. Exposing the film at EI 100 should usually lead to the minimum exposure required to produce negatives of very high quality. (See the following table.) This film has good latitude and responds well to changes in development time. For consistent results, use the rated speed or make tests to determine a speed rating that meets your needs. For information on methods of determining your best exposure and developer combination, see 'Kodak' Publication No. F-5, *'Kodak' Professional Black-and-White Films.*

When you use T-MAX 100 Film for reversal applications, expose it at EI 50. For more information on reversal processing, see 'Kodak' Publication No. J-87, *'Kodak' T-MAX 100 Direct Positive Film Developing Outfit.*

The speed numbers for these films are expressed as Exposure Indexes (EI). Use these exposure indexes with meters or cameras marked for ISO/ASA or ISO°/DIN speeds in daylight or artificial light.

The developer you use to process these films affects the exposure index. Set your camera or meter (marked for ISO/ASA or ISO°/DIN speeds) at the speed for your developer given in the table.

Exposure Index (EI)	
'Kodak' Developer or Developer and Replenisher	T-MAX 100 Professional Film
T-MAX	**100/21°**
T-MAX RS	**100/21°**
D-76	**100/21°**
D-76 (1:1)	**100/21°**
HC-110 (Dil B)	100/21°
MICRODOL-X	50/18°
MICRODOL-X (1:3)	100/21°
DURAFLO RT	80/20°

Note: *The developers and exposure indexes in* ***bold type*** *are the primary recommendations.*

Under most conditions, you'll obtain highest quality with normal exposure at the rated exposure index and normal development. For high contrast scenes, you'll obtain highest quality if you increase exposure by one or two stops and process the film normally.

If normal development produces negatives that are consistently too low in contrast, increase the development time slightly (10 to 15 percent). If negatives are too contrasty, decrease the development time slightly (10 to 15 percent). See "Adjusting Film Contrast" on page 7.

If your negatives are too thin, increase exposure by using a lower exposure index; if too dense, reduce exposure by using a higher exposure index.

Pushing Exposure[1] with 'Kodak' T-MAX Developer and 'Kodak' T-MAX RS Developer and Replenisher

1 Stop Push	2 Stop Push	3 Stop Push[2]
EI 200/24° Normal Processing	EI 400/27° 2 Stop Push-processing	EI 800/30° 3 Stop Push-processing

Note: *See page 6 for processing times.*

[1] *Pushing exposure results in slight losses of quality compared with normal exposure and normal processing. You can also use other 'Kodak' developers for pushing these films; however, T-MAX Developer and T-MAX RS Developer and Replenisher produce higher quality tone reproduction (better shadow detail) under these conditions.*

For high contrast scenes, such as spotlighted performers under harsh lighting, expose and process as indicated in the table. However, when detail in the deep shadow areas is important to the scene, increase exposure by 2 stops and process your film normally.

[2] *Pushing exposure and processing by 3 stops increases contrast and graininess and decreases shadow detail further. Expose and process a test roll to determine if the results are acceptable for your needs.*