# Kodak T-MAX Developers

J-86

## CONTENTS



KODAK T-MAX Developer is a moderately active, liquid black-and-white film developer that offers enhanced shadow detail in normally processed and push-processed films. The same description applies to KODAK T-MAX RS Developer and Replenisher except that it is a black-and-white film developer *and* replenisher. Like KODAK T-MAX Developer, KODAK T-MAX RS Developer and Replenisher produces higher image quality (enhanced shadow detail) than current popular push-processing developers when you process film normally or push it one, two, or three stops.

You can use T-MAX Developer to process **roll sizes** of KODAK T-MAX Professional Films and most other black-and-white continuous-tone films. *Do not* use this developer to process sheet film. You can use T-MAX RS Developer and Replenisher to process all roll and sheet sizes of KODAK T-MAX Professional Films, as well as most other black-and-white continuous-tone films.

T-MAX Developer is intended for use in unreplenished systems. For replenished systems, use T-MAX RS Developer and Replenisher. T-MAX RS Developer and Replenisher is a hydroquinone-based, two-part developer specially formulated for replenished systems, but you can also use it in unreplenished systems.

T-MAX Developer is available as a one-part concentrate in sizes to make one gallon and five gallons of working solution. You can easily mix smaller volumes by mixing one part of the concentrate with four parts water. T-MAX RS Developer and Replenisher is available in convenient sizes to make one gallon and ten gallons of solution; use this solution as a working-tank solution or a replenisher. The ten-gallon size consists of two separate units, each to make five gallons of solution.

**This publication supersedes KODAK Publication No. J-86, dated August 1994.**

# *KODAK T-MAX* RS DEVELOPER AND REPLENISHER

| FEATURES | BENEFITS |
|---|---|
| • Mixed solution used as a working-tank solution or a replenisher | • No need for a separate replenisher solution<br>• No starter concentrate required |
| • Designed for processing sheets and rolls | • No need for separate developers |
| • Liquid concentrates | • Easy mixing |
| • Buffered solution | • Less affected by differences in water supplies |
| • Ideal for large tanks and replenished systems | • Excellent process uniformity |
| • Improved shadow detail | • Better tone reproduction |
| • Excellent storage characteristics for concentrate and working solution | • Longer solution life |
| • Works well with normally exposed film as well as pushed film | • One developer for normal and push processing |

## REPLENISHMENT

Add 1½ fluidounces (45 mL) of solution for each 135-36 or 120 roll or 8 x 10-inch sheet (or equivalent) processed. Stir or recirculate the solution thoroughly after each addition of replenisher solution.

**Note:** *Do not* use KODAK T-MAX RS Developer and Replenisher to replenish KODAK T-MAX Developer.

## PROCESS CONTROL

Use KODAK Black-and-White Film Process Control Strips to monitor the developer activity of KODAK T-MAX RS Developer and Replenisher. For more information about using Black-and-White Film Process Control Strips, see the instructions packaged with the strips.

## STORAGE

You can store working-strength solution in a full, tightly closed bottle for six months, in a half-filled bottle for two months, or in a covered tank for one month. You can store the concentrate for up to two years.

## PROCESSING

The development times in the following tables are starting-point recommendations. They are intended to produce a contrast index of 0.60 for KODAK T-MAX 400 Professional Film and 0.56 for the other films. These development times should produce negatives with a contrast suitable for printing with a diffusion enlarger. To adjust contrast for printing with a condenser enlarger, reduce the development time by 20 to 30%.



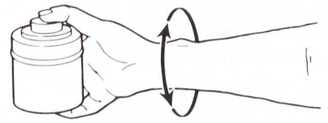


# MANUAL PROCESSING

### Small-Tank Processing (8- or 16-ounce tank)—Rolls

Agitate once every 30 seconds. Drop the loaded film reel into the developer and attach the top to the tank. Firmly tap the tank on the top of the work surface to dislodge any air bubbles. Provide initial agitation of 5 to 7 inversion cycles in 5 seconds, i.e. extend your arm and vigorously twist your wrist 180 degrees as shown below.

Then repeat this agitation procedure at 30-second intervals for the rest of the development time.



**Small-Tank Processing (8- or 16-ounce tank)—Rolls**

**KODAK T-MAX RS Developer and Replenisher**

| KODAK Film | Speed Rating | | Development Time (Minutes) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | EI | ISO | 65°F (18°C) | 68°F (20°C) | 70°F (21°C) | 72°F (22°C) | 75°F (24°C) | 80°F (27°C) | 85°F (29°C) |
| T-MAX 100 Professional | 100 or 200 | — | NR | 8 | 7 | 7 | **6** | — | — |
| | 400 | — | — | 12 | 11 | 10 | **9** | — | — |
| | 800 | — | — | NR | NR | NR | **11½** | — | — |
| T-MAX 400 Professional | 400 or 800 | — | NR | 7 | 6 | 6 | **5** | — | — |
| | 1600 | — | — | 10 | 9 | 8 | **7** | — | — |
| | 3200 | — | — | 13 | 12 | 11 | **9½** | — | — |
| T-MAX 3200 Professional | 400* | — | — | 8 | 7 | 6½ | 6 | 5½ | 5 |
| | 800 | — | — | 9 | 8½ | 7½ | 6½ | 6 | 5½ |
| | 1600 | — | — | 10½ | 9½ | 8½ | 7½ | 7 | 6 |
| | 3200 | — | — | 13 | 12 | 11 | 10 | 9 | 8 |
| | 6400 | — | — | 15 | 14 | 13 | 11 | 10 | 9 |
| | 12,500* | — | — | 18 | 16 | 14 | 12 | 11 | 10 |
| | 25,000* | — | — | NR | NR | 16 | 14 | 13 | 11 |
| PLUS-X Pan<br>PLUS-X Pan Professional | 250 | or 125 | 6½ | **5½** | 4½† | 4† | 3½† | — | — |
| | 500 | — | NR | 9 | 8½ | 7½ | **6½** | — | — |
| TRI-X Pan | 800 | or 400 | 7 | 6 | 5½ | 5½ | **5** | — | — |
| | 1600 | — | — | 9½ | 9 | 8½ | **8** | — | — |
| | 3200 | — | — | 12 | 11½ | 11½ | **11** | — | — |
| TRI-X Pan Professional | — | 320 | **5** | 4† | 3½† | 3½† | 3† | — | — |
| VERICHROME Pan | — | 125 | — | **4**† | 4† | 3½† | 3½† | — | — |

* Make tests to determine if results at these ratings are acceptable for your needs.

† Development times shorter than 5 minutes may produce unsatisfactory uniformity.

NR = Not recommended

**Note:** The development times in **bold type** are suggested starting points.