

## SILVERCHROME BLACK & WHITE FILM CHEMICALS

SC-PD, SC-SN, SC-D76, SC-PZX, SC-ND, SC-SB II, SC-RF, SC-WA, SC-FWT

SILVERCHROME PANDOL, SELONAL, D76, Phenizon-X and Nanodol developers have been formulated to exploit the full potential of conventional black and white film emulsions in all formats.

### FEATURES

- Easy to handle one part concentrate type or one-part powder type developer.
- For low volume Black and White film processing in spiral tanks, dishes, trays and rotary processors.
- Lineup of developers bring out the best performance of film according to each purpose.

### PHYSICAL PROPERTIES

- **SILVERCHROME PANDOL (SC-PD)**  
SILVERCHROME PANDOL is a PQ type fine grain developer which gives full film speed and produces negatives that are easy to print.
- **SILVERCHROME SELONAL (SC-SN)**  
SILVERCHROME SELONAL is a p-Aminophenol type developer which gives high edge sharpness and low veil. The dilution 1+49 is used most frequently and it gives more possibilities to control the entire development process.
- **SILVERCHROME D76 (SC-D76)**  
SILVERCHROME D76 is a MQ type developer which provides full emulsion speed and excellent shadow detail with normal contrast and produces fine grain with a variety of continuous tone black and white films.
- **SILVERCHROME PHENIZON-X (SC-PZX)**  
SILVERCHROME PHENIZON-X is a PQ type fine grain film developer which gives an effective increase in film speed. It gives a speed increase while retaining much of the grain characteristics associated.
- **SILVERCHROME NANODOL (SC-ND)**  
SILVERCHROME NANODOL is a Metol type extra fine grain film developer which gives excellent image quality.

# SILVERCHROME

## CONVENTIONAL MONOCHROME PHOTO

### DEVELOPMENT TIMES

#### SILVERCHROME PANDOL, SELONAL (20°C)

| FILMS            | dilution | EI  | PANDOL | SELONAL |
|------------------|----------|-----|--------|---------|
| ILFORD DELTA 100 | 1+4      | 100 | 8:15   | –       |
|                  | 1+24     | 100 | –      | 9:00    |
|                  | 1+49     | 100 | –      | 14:00   |
|                  | 1+99     | 100 | –      | 18:00   |
| ILFORD DELTA 400 | 1+4      | 400 | 6:15   | –       |
|                  | 1+24     | 400 | –      | 9:00    |
|                  | 1+49     | 400 | –      | 20:00   |
|                  | 1+99     | 400 | –      | 36:00   |
| ILFORD FP4 PLUS  | 1+49     | 100 |        | 12:00   |
| ILFORD HP5 PLUS  | 1+4      | 400 | 7:00   | –       |
|                  | 1+24     | 400 | –      | 6:00    |
|                  | 1+49     | 400 | –      | 11:00   |
|                  | 1+99     | 400 | –      | 16:00   |
| KODAK T-MAX100   | 1+4      | 100 | 5:30   | –       |
|                  | 1+24     | 100 | –      | 5:30    |
|                  | 1+49     | 100 | –      | 12:00   |
| KODAK T-MAX400   | 1+4      | 400 | 6:15   | –       |
|                  | 1+24     | 400 | –      | 6:00    |
|                  | 1+49     | 400 | –      | 12:00   |

(m : s)

#### SILVERCHROME D76, PHENIZON-X, NANODOL (20°C)

| FILMS            | dilution | EI   | D76   | PHENIZON-X | NANODOL |
|------------------|----------|------|-------|------------|---------|
| ILFORD DELTA 100 | stock    | 50   | –     | –          | 12:00   |
|                  | stock    | 100  | 8:30  | 6:30       | 15:00   |
|                  | stock    | 400  | –     | 10:00      | –       |
|                  | 1+1      | 50   | –     | –          | 13:00   |
|                  | 1+1      | 100  | 11:00 | –          | 17:00   |
| ILFORD DELTA 400 | stock    | 200  | –     | –          | 10:00   |
|                  | stock    | 400  | 9:30  | 6:30       | –       |
|                  | stock    | 800  | –     | 8:30       | –       |
|                  | stock    | 1600 | –     | 10:30      | –       |
|                  | stock    | 3200 | –     | 14:00      | –       |
|                  | 1+1      | 400  | 14:00 | –          | –       |
| ILFORD FP4 PLUS  | stock    | 50   | –     | –          | 9:00    |
| ILFORD HP5 PLUS  | stock    | 400  | 7:30  | –          | –       |
|                  | stock    | 400  | –     | 6:30       | –       |
|                  | stock    | 1600 | –     | 11:00      | –       |
| KODAK T-MAX100   | stock    | 100  | 6:30  | 8:00       | 12:00   |
|                  | 1+1      | 100  | 9:30  | –          | 13:00   |
| KODAK T-MAX400   | stock    | 400  | 8:00  | 7:00       | –       |

2023.11.01

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### Push & Pull processing

If you want to do push processing, extend the development time by 25% per stop.

If you want to do pull processing, reduce the development time by 80% per stop.

### Number of films and Development time compensation when re-using developer

Development time compensation chart when re-using 1000ml of working solution.

#### SILVERCHROME PANDOL

| 135-36exp or 120 roll film | 1st film  | 2nd film | 3rd film | ... | 10th |
|----------------------------|-----------|----------|----------|-----|------|
| development time           | Std. time | +5%      | +10%     | ... | +45% |

#### SILVERCHROME D76, PHENIZON-X, NANODOL

| 135-36exp or 120 roll film | 1st film  | 2nd film | 3rd film | ... | 10th |
|----------------------------|-----------|----------|----------|-----|------|
| development time           | Std. time | +10%     | +20%     | ... | +90% |

### CAPACITY and STORAGE LIFE

#### Useful Capacity

| Developer               | dilution | 135-36ex   |
|-------------------------|----------|------------|
| SILVERCHROME PANDOL     | 1+4      | 10 rolls/L |
| SILVERCHROME SELONAL    | 1+24     | one shot   |
|                         | 1+49     | one shot   |
|                         | 1+99     | one shot   |
| SILVERCHROME D76        | Stock    | 10 rolls/L |
|                         | Diluted  | one shot   |
| SILVERCHROME PHENIZON-X | Stock    | 10 rolls/L |
|                         | Diluted  | one shot   |
| SILVERCHROME NANODOL    | Stock    | 4 rolls/L  |
|                         | Diluted  | one shot   |

#### Storage life

| Developer               | Working solution | Stock solution                    |
|-------------------------|------------------|-----------------------------------|
| SILVERCHROME PANDOL     | 24 hours         | Tightly closed bottle<br>6 months |
| SILVERCHROME SELONAL    |                  |                                   |
| SILVERCHROME D76        |                  |                                   |
| SILVERCHROME PHENIZON-X |                  |                                   |
| SILVERCHROME NANODOL    |                  |                                   |

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### BW FILM processing summary

- **SILVERCHROME STOP BATH II** is an odor free citric acid stop bath suitable for all black and white photographic films. It is recommended that films are rinsed in a stop bath immediately to neutralize the developer to help maintain the activity of the fixer bath.

|                         | FILM |
|-------------------------|------|
| dilution                | 1+29 |
| temp. °C                | 20   |
| time(sec)               | 30   |
| 135-36exp or 120 roll/L | 24   |

- **SILVERCHROME RAPID FIXER** is a non-hardening rapid fixer for black and white films.

|                         | FILM  | T-grain FILM |
|-------------------------|-------|--------------|
| dilution                | 1 + 4 |              |
| temp. °C                | 20    |              |
| time(min)               | 3~4   | 6            |
| 135-36exp or 120 roll/L | 24    |              |

- **SILVERCHROME WASHAID** is a thiosulfate eliminator. It can be used to aid the rapid washing of all black and white films, saving both water and time.

|                         | FILM  |
|-------------------------|-------|
| dilution                | 1 + 4 |
| temp. °C                | 18~24 |
| time(min)               | 2~3   |
| 135-36exp or 120 roll/L | 40    |

- **Washing** The Washing process sequence is given in the following table ;

|                                    | FILM    |
|------------------------------------|---------|
| First wash (running water 18~24°C) | 1 min   |
| SILVERCHROME WASHAID 1+4           | 2~3 min |
| Final wash (running water 18~24°C) | 5 min   |

- **SILVERCHROME FILM WETTING AGENT** is a non-ionic wetting agent for photographic films. It is used as a final rinse before drying films. Use to reduce the risk of drying marks being formed on your film.

|                         | FILM  |
|-------------------------|-------|
| dilution                | 1+199 |
| temp. °C                | 18~24 |
| time(sec)               | 30~60 |
| 135-36exp or 120 roll/L | 35    |

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