



SP-Ultra 4LF

Large Format Film Developer

SP ultra 4LF film developer is optimized for large format black and white film: great tonal separation, high acutance, moderate grain and a true speed increase over the manufacturer's rated speed. For example, when using SP ultra 4LF, we expose Fomapan 200 at ISO 250. Of course, you'll want to experiment and determine what works best for you.

It comes in a oxygen resistant mylar/foil pouch. Just add water.

Mixing the stock solution:

1. Remove the cap and spread the bottom of the pouch apart. Add 500 ml of water (distilled water is recommended), at 125°F/52°C, slowly to the pouch.
2. Replace cap tightly and invert the pouch several times.
3. Let the pouch cool naturally; agitate it every 15 minutes for the first hour. Note: the stock solution may have a slight tan tint. You may still see small flecks suspended in the solution after it cools. These will dissolve when diluting the working solution.
4. As the developer is used up, squeeze the pouch gently to expel as much air as possible. This will help extend the shelf life.

Processing film:

While every photographer develops (pun intended) their own "best practices", here's a starting point for the SP-445 system:

We recommend a 1+9 ratio. Dilute 50 ml of SP-Ultra 4LF stock solution with 450 ml of distilled water.

Fill the tank, tap it firmly on the bench to dislodge any air bubbles and then agitate by inverting the tank, holding it inverted for half a second, then turning it right side up for 1 second. Continue agitation for the first thirty seconds and then for ten seconds every sixty seconds, or as shown in the chart below. *Increasing agitation will increase the contrast.*

When the development cycle is complete, empty the tank of developer and immediately rinse several times with water. (No stop bath required if using SP-Fixer #7 or SP-FastFix.)

Fix for 3:00 – 4:00 minutes with SP-Fixer #7; 4:00-5:00 minutes with SP-FastFix. Save for reuse. (Should be good for 40 sheets of 4x5 film.) Note: some films require a longer fixing times; consult the film data sheet for details.

To test fixer: drop a small piece of undeveloped (but exposed) film into a beaker of fixer. It should turn clear in 30-45 seconds. If not, the fixer should be replaced.

After fixing, wash for 5-10 minutes in slowly running water or follow our fill/agitate/drain scheme <https://shop.stearmanpress.com/blogs/news/film-washing-myths>

After washing the film, add 3-4 drops of SP-H2O Flow wetting agent to 500 ml of distilled water. Remove the lid, fill the tank and let it soak for 30-60 seconds; agitate by raising and lowering the film holders in the tank several times. (Inversion agitation can generate foam that can coat the film and seems to slow down drying.)

Carefully remove the film and hang it to dry. Do not squeegee.

Suggested Processing Times

Here are some suggested starting points for other films. Of course, your results will vary and don't be afraid to experiment with other temperatures and dilutions. All processing at 68°F/20°C.

Film	Suggested ISO Rating	Development time (1+9 dilution)	Agitation (30 +10/X - agitate for the first 30 seconds and then for 10 seconds every X seconds.)
Adox 100	125	6:30	30 +10/60
Bergger 400	400	7:30	30 +10/30
Foma 100	125	7:00	30 +10/60
Foma 200 creative	250	8:00	30 +10/60
Foma 400	400	8:00	30 +10/30
Ilford FP4	160	7:00	30 +10/60
Ilford Delta 100	125	6:30	30 +10/60
TMax 100 pro	125	7:30	30 +10/60
Kodak Tri-X (TXP)	320	6:30	30 +10/60

While SP ultra 4LF is less toxic than many other film developers, we recommend wearing protective gloves. Not only does this protect your skin, it also provides a better grip on the tank during agitation. The gloves also keep your fingers from smelling like a darkroom the next day. After all, the odor of darkroom chemistry has been proven to be an anti-aphrodisiac to non-photographers.

For industrial use only! Keep away from Children!

SP ultra 4LF Contains Hydroquinone CAS# 123-31-9.

Read the MSDS. Exercise care when handling; wear gloves and avoid skin or eye contact. In case of eye contact, flush with water for 15 minutes and call a physician. In case of skin contact, wash with soap and water. Harmful if taken internally. In case of accidental ingestion, drink large quantities of water or milk, induce vomiting and get medical attention immediately.

Notice: While this product will be replaced if defective in manufacturing, labeling or packaging it is sold without express or implied warranty or liability of any kind. The user assumes all risk upon accepting these chemicals. IF FOR ANY REASON YOU DO NOT WISH TO ASSUME ALL RISK, PLEASE RETURN THE CHEMICALS WITHIN THIRTY (30) DAYS FOR A FULL REFUND.

Consult with local sewer and water authorities regarding proper disposal of darkroom chemicals in your area.



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