

## COPPER / RED TONER

### FOTOSPEED RT20 Copper/Red Toner

RT20 is a liquid toner, supplied as a two-part concentrate to make a single working solution. It is specifically designed for toning B&W Fiber photo paper but also works well with Resin Coated paper. The two solutions are Ferricyanide Bleach and a Cupric Sulfate Copper Toner. The silver halides are first removed from the print by the bleach and then are replaced by a copper compound to produce Copper Ferrocyanide.

The resulting color change can be anywhere from a copper-brown up to a full red. The type of paper, from cold-tone to warm-tone and even the type of fixer used will affect the final color of a copper toned print.

Copper toner is not a true archival toner, but it can produce dramatic effects, including partial tone-reversal in areas of a print. The tone of the Copper / Red increases in intensity the longer the print remains in the working solution. The typical toning time is 1 to 10 minutes.

### EXPOSURE

Prints to be toned for medium to long duration in Copper / Red toner should be exposed about **1 stop denser** than normal to compensate for the reducing effect of this toner. Contrast will also be reduced with longer toning, so use a **higher filter**. These values vary considerably for different brands of paper.

Very short duration toning (30 seconds) tends to intensify prints, so modification of exposure or contrast may not be needed. Warm-tone papers will produce the most dramatic results. Neutral and cool-tone papers will produce more brownish tones.

Make sure the prints have been **fully** fixed and washed. Any fixer left in the print will cause staining. Fingerprints will also cause stains with this toner.

### MIXING INSTRUCTIONS

Copper Toner does not last long. Use only as much as needed to cover the surface of the prints. Use a flat-bottom tray. Replace the toner after a few prints. Only mix as much toner as will be used in one toning session. The toner part degrades before the bleach part, so an aging batch of toner will just bleach the prints.

Part 1: Mix 1 oz. + 4 oz. water to make half the volume of Bleach solution

Part 2: Mix 1 oz. + 4 oz. water to make half the volume of Toner solution

Pour the two diluted solutions into the same flat-bottom processing tray and mix together well.

### BASIC USE

Copper is a mono-toner, requiring a single solution to both bleach and tone simultaneously. Soak dry prints in water at least one minute to ensure that the emulsion is evenly wet. Put the print into the toner and agitate it **immediately** but gently.

The toning time is anywhere from 1 minute to a maximum of 10 minutes

No further toning will take place after this time.

Toning beyond this endpoint will degrade the emulsion of the print.

The shade of tone changes dramatically with time.

Observe the change in color and remove the print when you like the tone.

Keep an untoned 'reference print' in a tray of water nearby for comparison.

Prints can be re-toned later to further intensify the color.

Fix prints that are 'fully' toned (longer than 2 minutes).

PermaWash all prints to remove any scum or staining.

Wipe the surface of the print with cotton wool to help remove scum and stains.

Wash the print for 15 ~ 30 minutes. (*work prints vs. final prints*)

Dry in the normal manner.

## COPPER / RED TONER, cont'd

### PROCESSING NOTES

Prints that have been 'fully' toned will require re-fixing. Always PermaWash after fixing. Prints toned too darkly can be lightened using a very weak fixer ( $\frac{1}{4}$  the usual strength) and the tone will cool down to a browner color. Shadows can be protected by a light Selenium bath that will resist the copper toner.

### REDEVELOPMENT & RETONING

A more intense red color can be achieved by a placing a print in developer to return it back to black & white. Then re-tone in fresh copper/red toner. Sometimes the developer does not return to a full black. The brown tone that can result may be desirable. Using a dilute developer gives more control of the redevelopment processes. Some papers can turn pink in the highlights when first placed in the next toner bath. Prints can be snatched at this point if desired. This process can be repeated several times, producing a more pronounced effect each time.

### STONE REVERSAL

Prints that have been toned, redeveloped, and then retuned for a full 8 to 10 minutes can have some of the shadow tones reverse.

This effect will intensify each time the cycle is repeated.

A short bath in dilute fixer (1 ~ 2 minutes,  $\frac{1}{4}$  dilution) will lighten the print, but make the tone reversal effects more intense. This, again, is totally dependent on the brand of paper being used.

Some papers will gain a metallic appearance in the shadows with extended processing.

### POST-COPPER TONER BATHS

PermaWash can be used to clear the highlights.

Wiping with cotton wool or a wet paper towel can help remove stains in the borders.

More exotic post-toning baths can be found in Tim Rudman's 'The Photographer's Toning Book'.

### MULTI-TONER TONING

Sepia before Copper : The highlights toned with Sepia will be relatively protected from the effects of the Copper, producing a split-toned print. The split point depends on the amount of bleaching before the Sepia and the duration in the Copper toner.

Copper before Sepia : A long Copper toning followed by a wash and then immersion directly into Sepia without a Bleach step can produce deeper browns.

Selenium before Copper : The shadows toned with Selenium will be protected from the effects of the Copper, producing a split-toned print that is the reverse of a Sepia before Copper print, i.e. Copper highlights with Selenium shadows and possible neutral gray midtones. Use a PermaWash step and a separate Wash bath before the Copper.

Other combinations of multi-toning and redevelopment with re-toning are possible. Be meticulous and write down exactly what you are doing so results can be duplicated. Put numbers on the back of each print before you begin, and then record each toner in the process as you experiment. Work with a friend for better results.

Never touch prints with your fingers! Use tongs only to reduce the possibility of staining.

### STORAGE

Working solutions of Copper toner do not keep. Concentrates keep for at least one year in sealed bottles.