

TECHNICAL INFORMATION/USER INFORMATION

HARMAN SELENIUM

TONER

TONER FOR THE DISH/TRAY TONING OF BLACK AND WHITE PHOTOGRAPHIC PAPERS

HARMAN SELENIUM TONER is a liquid concentrate toner, designed for the dish/tray toning of all black and white photographic papers both resin coated (RC) and traditional fibre based (FB). This toner provides a simple and effective approach for the user wishing to produce Selenium toned prints. It is designed to be used at ambient room temperatures, nominally 20°C/68°F.

HARMAN SELENIUM TONER enhances the archival stability, and maximum density of prints. The colour and degree of tonal changes achieved will vary according to the type of paper: ranging from cool chocolate-brown, through purplish brown, to little discernable change. Warm tone papers usually produce the most visible effects. The toner is versatile and convenient to use, with a long working dish/tray life.

Health and Safety Information

Toxic if swallowed. May cause sensitisation by skin contact. Keep away from FOOD, DRINK AND ANIMAL FEEDING STUFFS. Avoid contact with skin. In case of accident or if you feel unwell, seek medical advice immediately (show label where possible). Wear suitable gloves and eye/face protection. Keep locked up and out of reach of children. Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

Additional Safety Information

HARMAN SELENIUM TONER is a toxic chemical and therefore it must be handled with appropriate care. When using this product, we strongly recommend that you always work in a well-ventilated area, preferably with some form of air extraction system. You should also ensure that you wear rubber gloves in all use and disposal of this product.

Preparation Instructions

Note: Please read this document for the health and safety information and recommendations. A material safety sheet for each product can be obtained from your ILFORD Photo agent or directly from the ILFORD Photo web site at www.ilfordphoto.com. Always wear gloves, glasses and an apron whilst preparing and using chemicals. You will require three separate dishes/trays for toning prints. The dish/tray in the centre will hold the HARMAN SELENIUM TONER. The dishes/trays either side of this will hold plain water, 4°C warmer than the HARMAN SELENIUM TONER.

Stop, Fix and Wash

Prior to toning, your print should be properly fixed and fully washed. The following chemicals are recommended for these processes:

ILFORD ILFOSTOP stop bath 1+19 for 10 seconds at 18-24°C (64-75°F).

Fixer 18-24°C (64-75°F).	RC paper Time (min)	FB paper Time (min)
ILFORD RAPID Fixer 1+4	½	1
ILFORD RAPID Fixer 1+9	1	2
ILFORD HYPAM Fixer 1+4	½	1
ILFORD HYPAM Fixer 1+9	1	2

USER INSTRUCTIONS

Wash RC papers for 2 minutes in fresh running water above 5°C/41°F.

Wash FB double weight papers for 1 hour in fresh running water above 5°C/41°F.

Alternatively, use the ILFORD wash sequence for optimum permanence.

Water above 5°C/41°F	5 minutes
ILFORD WASHAID1+4 @20°C/68°F (with intermittent agitation)	10 minutes
Water above 5°C/41°F	5 minutes

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When washing is complete, place the prints in a holding dish/tray of water, approximately 4°C/39°F warmer than the temperature of your working strength solution of HARMAN SELENIUM TONER.

If this is your first experience of toning prints, we suggest that you first make two identical prints and leave one in the holding dish/tray of water to refer to during the toning process. This will help you identify changes in the density and colour as the toning progresses. As you gain experience in toning, you will not find it necessary to use a reference print.

Mixing Instructions

To make working strength toner for normal toning applications dilute HARMAN SELENIUM TONER concentrate 1+3 with water. Where the primary reason is for protection of the image, with minimal tone change, dilute the concentrate 1 + 20 with water. When mixing process solutions always stir them thoroughly before use. The working strength toner should be used at room temperature, nominally 20°C/68°F (+/- 1°C/2°F).

Mix your HARMAN SELENIUM TONER to the desired dilution and temperature. Be sure to prepare sufficient solution. As a guideline, 3 litres of working solution will be sufficient to use in a dish/tray measuring 12"x16" (30.5x40.6cm). You are now ready to commence toning.

Toning

Using both hands, take hold of your print by the top corners, lifting it from the holding dish/tray of water. Quickly slide it into the toning solution and then agitate for the whole period of toning by gently rocking the dish/tray.

Protection of the image (as above at the 1+20 dilution) will be complete in 2–4 minutes.

In order to judge any colour changes, do not continually observe the print in the toner as this makes it harder to observe the subtle changes occurring. During the toning process, regularly compare this print to your reference print in the holding dish/tray.

When you are satisfied your print has achieved the desired tonal colour, remove it from the dish/tray and place it into your second holding dish/tray of water. Agitate the print for 30 – 40 seconds, to stop the toning action. If it requires additional toning, simply place the print back into the toning solution and continue as before. When you have achieved the desired level of toning, wash RC prints for a further 2 minutes, fibre prints for at least 30 minutes in fresh running water above 5°C/41°F. Alternatively for fibre base prints repeat the ILFORD optimum permanence wash sequence.

Capacity

The capacity of the working strength solution is in practical terms limited by the time it takes for the toning effect to be completed. As the solution is used and/or ages, the rate of tonal change will become progressively slower.

As a general guideline, at the standard dilution of 1+3, the capacity of the toning solution is at least the equivalent of 25 sheets of 20.3x25.4cm (8"x10") per litre.

Working Solution Life

Working strength solutions will normally last for up to 6 months in full, tightly capped bottles, 1 month in half tightly capped bottles, and up to 7 days in an open tray.

Storage

Full, unopened bottles of HARMAN SELENIUM TONER stored in cool conditions, 5-20C (41-68F) will keep for 2 years. Once opened, use completely within 6 months, and keep all bottles tightly sealed until used.

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