



# POLYWARMTONE<sup>®</sup> EMULSION



HANDMADE IN GERMANY & SWITZERLAND

*Master Edition*

## - POLYWARMTONE® -

Originally a legendary paper from Forte, its recipe would have been lost in the digital revolution, if not for ADOX saving the production technology. It took the company ten years to recreate this naturally warm, beige-green, rich, extremely vintage-looking and toners-responsive emulsion – and now it is available for artistic work on a variety of surfaces.

## - EMULSION -

A photographic emulsion is a mix of gelatin and silver halides. Those silver halide crystals are treated, shaped and sensitised by professional emulsionists, creating a unique “look”: certain grain shape, size, and tone. This emulsion can then be theoretically coated onto any base, but analog photo companies coat them on either film or paper support, ensuring a perfect even layer and repeatable results.

With the Polywarmtone emulsion, it becomes possible to create unique warm-tone papers with authentic brush strokes, or print on alternative materials, while keeping all the characteristics a quality paper would have.

## COATING WITH THE POLYWARMTONE® EMULSION (PWE): OVERVIEW

The PWE, while stored, is soft and jelly-like.

To become usable, it has to:

1. Have a good support it can adhere to
2. Melt
3. Be properly coated
4. Dry well
5. Harden (become less soft, more resistant to touch)

## - ADHERENCE -

The best binding substance is gelatin. It ensures that the emulsion sticks well. It is used to pre-coat everything: all types of paper, glass, textile, and even bricks or walls!

Fabric can be coated without a gelatin layer, but the emulsion will be harder to spread and more will be used, because it soaks into the textile. Some papers also soak the emulsion, which makes the distribution uneven. Some papers are perfect as they are - it has to be tested individually.

**ADOX Colloida C** is a premium-level pure photographic gelatin. Regular food gelatin is likely to fog the emulsion. Colloida C is very easy to melt and apply, and ensures a good even base for the future prints. It is coated and dried in daylight.

Alternatively, the **ADOX Art Baryta** paper is already coated with gelatin, so the PWE can be applied to Art Baryta straightaway.

## - MELTING -

***!DO NOT OPEN THE POLYWARM TONE EMULSION  
UNDER ANY OTHER LIGHT BUT RED!***

The emulsion melts at 45°C/113°F. Exceeding 55°C/131°F can lead to emulsion fogging. Re-melting the same emulsion more than 3 times is not recommended.

It is best to take only necessary amounts with a clean fork (the emulsion is jelly-like and will slide off a spoon) from the PWE jar, and melt it in a light-proof container (sold at Fotoimpex separately) in a 45°C/113°F water bath.

Do not microwave the emulsion.

## - APPLICATION -

Various brushes create different “looks” of the strokes. A Hake brush is the one used most for alternative processes. It exists in various sizes, and it’s softness ensures no damage to previous layers. Alternatively, synthetic flat brushes are used as well as plastic rods and more sophisticated systems.

If more bubbles are desired for a very authentic “handmade” look, stirring vigorously before coating creates this effect. Otherwise, fast movements that would “whip” the emulsion should be avoided. It should be poured slowly on the support. A syringe can be used to measure the exact amount needed. A 13x18cm print requires from 1,5 to 2ml of emulsion for a single layer, depending on the way of coating. One layer on paper and textile is usually sufficient. A second layer can be applied after the first one is dry to touch.

## - DRYING -

The emulsion must dry in complete darkness, preferably overnight. Time indications depend on variables like the support and the room humidity. It is best to do an experiment and check the PWE every 30 minutes to determine a time for a given setup. In a very dry-air room the emulsion can become usable in 1,5 hours, but in a humid environment it might need up to 7 hours, especially on textile.

Do not leave to dry under red safelight, as even red light eventually fogs emulsions (see safelight section). When there is no possibility to light-isolate a drying room overnight, a good option is using empty photo paper boxes. The cardboard takes humidity quite well, but make sure the boxes are sturdy and won't sag in the middle. Those boxes are not super light-tight, so taping/covering the borders could be necessary. Do not leave them in broad daylight. Under the bed or inside a cupboard is a good spot. Light-tight paper safes are a more professional option. Make sure to wipe the inside residual moisture after drying papers.

Textiles dry best when hanging. If that is not an option, make sure to have a plastic support underneath (plastic bag or a piece of plexiglass). Otherwise the emulsion will soak through the textile and adhere to any other support. This is where gelatin pre-coating helps too.

## - HARDENING-

When coating on paper and not doing any further artistic manipulations, hardening is not always needed. The emulsion dries and stays very well. However, in every other case, a hardening additive, like **ADOX EMH-1**, is necessary.

It is an acidic chemical, which should be added to the stop bath. If emulsion damage occurs in the developer, the ADOX EMH-1 can be used as a pre-bath. However, the paper/textile should be rinsed well before going into the developer.

A hardening fixer of choice can be used too, but with unusual surfaces the earlier the emulsion gets hardened, the better.

## - PROCESSING -

Processing is done as usual: developer, stop bath (+hardener), fixer. The chemicals can also be applied with a sponge, in case of some alternative supports that don't fit into trays. At least 10 minutes of washing in cool water is recommended.

## - SAFELIGHT FOGGING -

The PWE shows no signs of fogging under the **ADOX Supersafe light** for 15 minutes. Other safelights could fog the emulsion faster. The distance to the red light, is, of course, a factor. All the time the emulsion spends under red light, including melting, coating and processing - counts. A good practice is keeping red lights at a decent distance, not shine them directly into the emulsion and process prints face down until the fix bath.

## - CONTRAST -

The contrast 3 was chosen as a perfect balance for most negatives. It can be lowered with the pre-flashing technique.

## - TONING -

The Polywarmtone emulsion gives a strong response to all toners. When using toners requiring bleach (like a two-bath sepia), hardening is strongly advisable.

## - CAPACITY -

One jar of Polywarmtone emulsion covers from 2,5 to 3 sqm (26-32 sqft) of paper, depending on the coating thickness.

## - STORAGE -

The emulsion is best stored at lower room temperatures or in the fridge. After a year of storage, or improper storage conditions (too high temperature), it remains usable but loses a step in contrast and a stop in speed.

## - SAFETY -

When processing textiles or other materials requiring hands to be in contact with chemistry, rubber gloves should be worn.

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