

What are suspension powders

The first suspension powder was an aluminium-based powder that was marketed under the name Sticky-Side powder. It was mixed with diluted Kodak Photoflo detergent (into a suspension) and then brushed onto the adhesive side of labels and tapes with a soft brush. After leaving it on for a short time (10-15 seconds) the treated surface was rinsed under running water or in a bowl of water to get rid of (most) of the background that developed.

That process is still used, however the range of powders that can be used in this process has expanded considerably. For the black variant both an iron-oxide as well as a carbon black powder can be used. For the white variant titaniumdioxide is used.

The carbon based and white variant can also be bought as ready-for-use suspensions.

The use of suspension powders also broadened from fingermarks on the adhesive side of tapes and labels to fingermarks and even shoeprint marks on non-porous surfaces as well.

The Kodak Photoflo (based on a mixture of ethylene glycol, water, and Triton X-100) can no longer be used since Triton X-100 (p-tert-octylphenoxy polyethoxyethyl alcohol) breaks down in the environment to 4-tert-octylphenol which has endocrine disrupting properties. Therefore, it came on the list of "Substances of Very High Concern" and can only be acquired and used in Europe if it's use is authorised by the European commission.

We developed an alternative detergent that works equally well (Dactyflo).

Application

1. Place about one teaspoon of suspension powder into a shallow jar.
2. Fill a dropper-bottle half full of water and half full of Dactyflo. Shake well.
Using the dropper, add this solution to the powder in the shallow jar until you have a paste with the consistency of thin paint.
3. Use a small brush to paint the liquid mixture onto the adhesive side of the tape or label.
4. Leave it on for 10 to 15 seconds and then rinse it off with water. The tape can be rinsed under running water, but the preferred method is to gently agitate it in a bowl of water.
5. When most of the solution is rinsed off the tape or label, examine it. Photograph any developed latent prints.
6. If the solution is left on too long, it becomes difficult to rinse off. The solution will adhere too strongly to some tapes and labels. The solution may be applied but it must be rinsed immediately.



Fingerprint on transparent packing tape developed with wet powder black and photographed against a white background.

Ordering information

- B-89320 Sticky-side powder, 50 grams
- B-89311 Dactyflo, 250 ml
- B-89316 Dactyflo, 500 ml
- B-89300 Suspension Powder kit (can be supplied with different powders)
- B-89330 Suspension powder white, titaniumdioxide-based, 50 gram
- B-89340 Suspension powder black, iron-oxide-based, 50 gram
- B-89345 Suspension powder black, carbon-based, 30 gram
- B-89350 Wet Powder black, carbon-based, ready-to-use 250 ml
- B-89350 Wet Powder white, titaniumdioxide-based, ready-to-use 250 ml