




## Good Housekeeping with PERMASET® Inks: Ink Hygiene

**PERMASET AQUA®** Screen Printing Inks were developed in 2003/04, one of the first 100% solvent free textile screen printing inks in the world.

Old technology inks such as plastisol and early water-based inks that contained 10–35% white spirit (distillate) were almost bullet proof when it came to microbial attack and shelf life. Water-based inks are definitely eco-friendly, but the flip side of that coin is that they can actually sustain microbial life and in a print studio, manifested as mould and bacterial infestation.

So, in much the same way that good hygiene should be maintained in food preparation areas, so too in a screen printing environment with eco-friendly **PERMASET AQUA®** Inks. This guide outlines some key housekeeping practices that will help you produce not only brilliant screen prints but will also help you, help your family (if printing at home), help your students (if on campus), your staff and of course, the environment.

### Ink management

When preparing for your print job, ensure that you have sufficient ink on the screen, but not too much. Knowing how much is enough will come with experience, but particularly with longer jobs, it is much better to keep adding ink to the screen as needed rather than trying to load the screen up with all the ink that you need for the entire job at the start.

Water-based inks are more sensitive to shear on the screen and water evaporation over time, particularly when the ambient humidity is low. As a result, the inks are likely to thicken up. Two handy hints can help here. First, keep a spritzer bottle handy and spray a fine mist over the ink film following the flood stroke. Second, keep topping up the reservoir of ink on the screen with fresh ink.

### Reusing screen print inks

Unlike with plastisol printing, you'll need to factor in clean up time at the end of every print job and/or printing shift. Once the print job is finished and you're ready to clean the screens, leave each screen well flooded, perhaps with yet another spray of water, until you can give it your undivided attention. DO NOT work on more than one screen at a time. This is because a thin film of ink on otherwise bare screen printing mesh can dry in and become a lot more difficult to remove. So, save yourself some work by leaving the screen flooded to prevent this from happening.

Once you do start to clean up<sup>1</sup>, it's important to work quickly. DO NOT return used ink to the original pail or tub. Have on hand a good collection of clean (possibly sterilised), resealable, air-tight containers and a permanent marking pen.

Using the squeegee, remove as much ink as possible from the screen and scrape into the clean tub. Then use a card or smaller spatula to retrieve ink from the harder to get at

<sup>1</sup> See also the PERMASET Product Information Guide on Responsible Disposal of Inks



corners. Place the now scraped down screen in the washout area and saturate, ideally immersed until you get back to it.

With the recovered ink, record on the outside of the tub the date, recipe, job number (if relevant), approximate quantity and operator initials. Ensure that the lid is secure and that the seal is air-tight. Store in a cool, well ventilated area and out of direct sunlight. If well stored, this recovered ink can be used years later, although as the years get on, it would be increasingly advisable to run a test print and check for adequacy of cure with a quick wash and rub test.

## How long can you store screen printing inks?

Once opened, **PERMASET AQUA®** Screen Printing Inks and mixes should last up to 12 months and sometimes longer if well stored. What's most important is to ensure that the lids have an airtight seal and that no biological contaminants have entered the ink. As above, we recommend labelling inks with the date, mix formula, the job number if relevant and the operator initials to help you keep track of batches.

Inks older than 12 months can still be used, but with increasing age comes increasing risk around wash resistance and other durability measures. Thus, it is good practice to run a test print and check for adequacy of cure as above.

## Tips for extending the life of screen printing inks

- Ensure ink lids are kept on tightly, and wipe any debris or dried ink from the rim before resealing containers.
- If recovering ink from screens, store this in a clean, spare container, separate to the original and use this batch at the start of the next run.
- Aim to keep humidity in the print room above 40% R.H. and ideally over 50% R.H. so inks are less likely to dry out in the screen.
- **PERMASET® Print Retarder** can be used to slow the drying of **PERMASET®** Inks and other screen printing inks, which may increase the amount you can reuse.
- Store your inks in a cool, dry, well-ventilated place, out of direct sunlight and away from sources of heat. Try to find somewhere with minimal diurnal temperature fluctuation. This is very important and will go a long way to ensuring the longest possible life of your recovered and stored inks.
- The biggest source of water-based ink spoilage is biological contamination, so the proactive practice of good hygiene will help minimise ingress of contaminants and the resultant ink waste from such infestation.



## Screen printing safety & hygiene

### Hand hygiene

It's good practice to wash hands both before and after working with any screen printing inks, even if they are non-toxic like **PERMASET®** Inks. Not only can good hand hygiene minimise biological contamination, but it also avoids ink spreading to where it's not wanted.

### Flaking from lids

If you're noticing flakes of dried up pigment concentrate when you open up an older container of concentrate, you may wish to wear a mask to block any particulates. Flaking can be minimised by wiping the neck of the bottle with a clean rag before sealing the cap each time.

### Odours with older mixes

Sometimes premixed screen printing inks can give off an odour that is different after being stored than when they are newly opened. The odour may indicate biological contamination and that may affect durability and wash resistance. If in doubt run some test prints. Though **PERMASET®** Inks remain free of PVC, phthalates and hydrocarbons, it is still good practice to keep a window open or use a ventilation system.

### Films on the top of the paste

If you notice a film has formed on top of the paste, this may be a sign of biological contaminants. You can choose to scoop out this film and use the ink beneath, but keep in mind this contamination may affect durability and wash resistance.

NOTE: The information and recommendations contained in this Product Information Sheet, as well as technical advice otherwise given by representatives of our business, whether verbally or in writing, are based on our present knowledge and believed to be accurate. However, no guarantee regarding their accuracy is given as we cannot cover or anticipate every possible application of our products and because manufacturing methods, printing stocks and other materials vary. For the same reason, our products are sold without warranty and on condition that users conduct their own tests to satisfy themselves that they will fully meet their particular requirements. Our policy of continuous product improvement might make some of the information contained in this Product Information Sheet out of date and users are requested to ensure that they follow current recommendations.

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