



Pigma ink, invented by Sakura over 25 years ago, continues to be the most reliable permanent ink on the market today. In the early 80's, Sakura's labs identified the need for an inexpensive drafting tool that used superior pigment-based ink instead of low-grade dye inks. The breakthrough came with the discovery of how to reduce the pigment particles to submicron size so that the ink flows evenly through the narrowest of pen nibs. Pigma easily outlasts and out-performs inks made by competitors who have tried to duplicate our ink technology. Having such a long history with this specialized ink, Sakura has been able to constantly improve on our formula resulting in the smoothest flow, the most pleasant colors, stable pigments, and practical writing instruments. Pigma has become the standard for what is defined as permanent ink, relied upon by those whose jobs depend on marks and notations that stand the test of time. The properties of Pigma ink create magic on paper for millions of users.

## PIGMENT BASED VS. DYE BASED

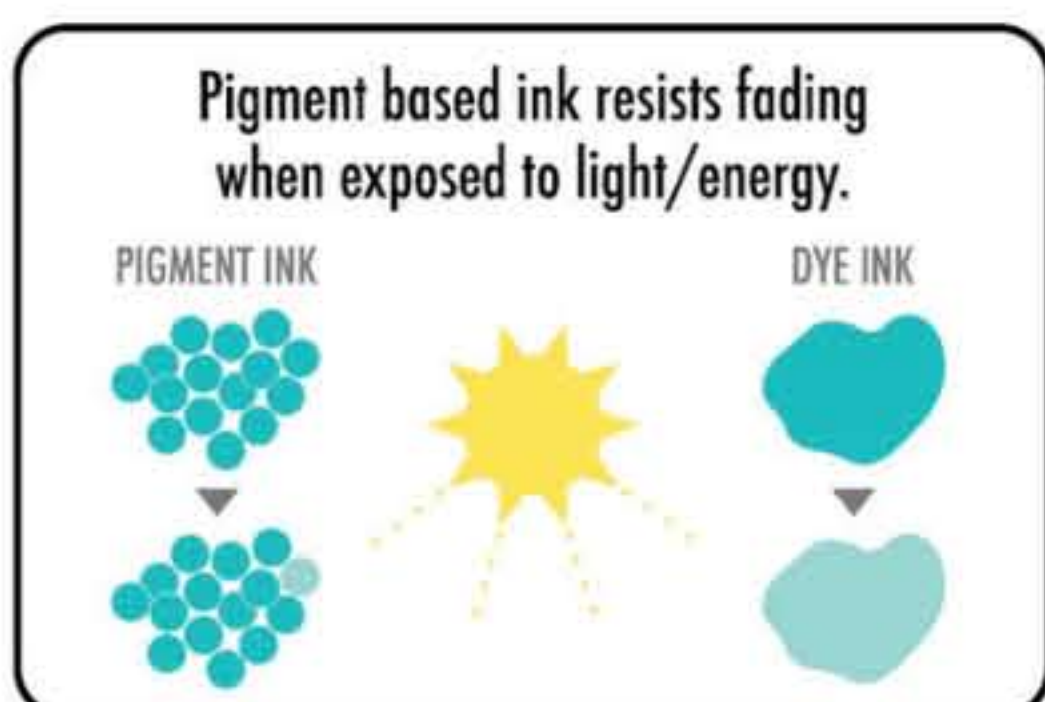
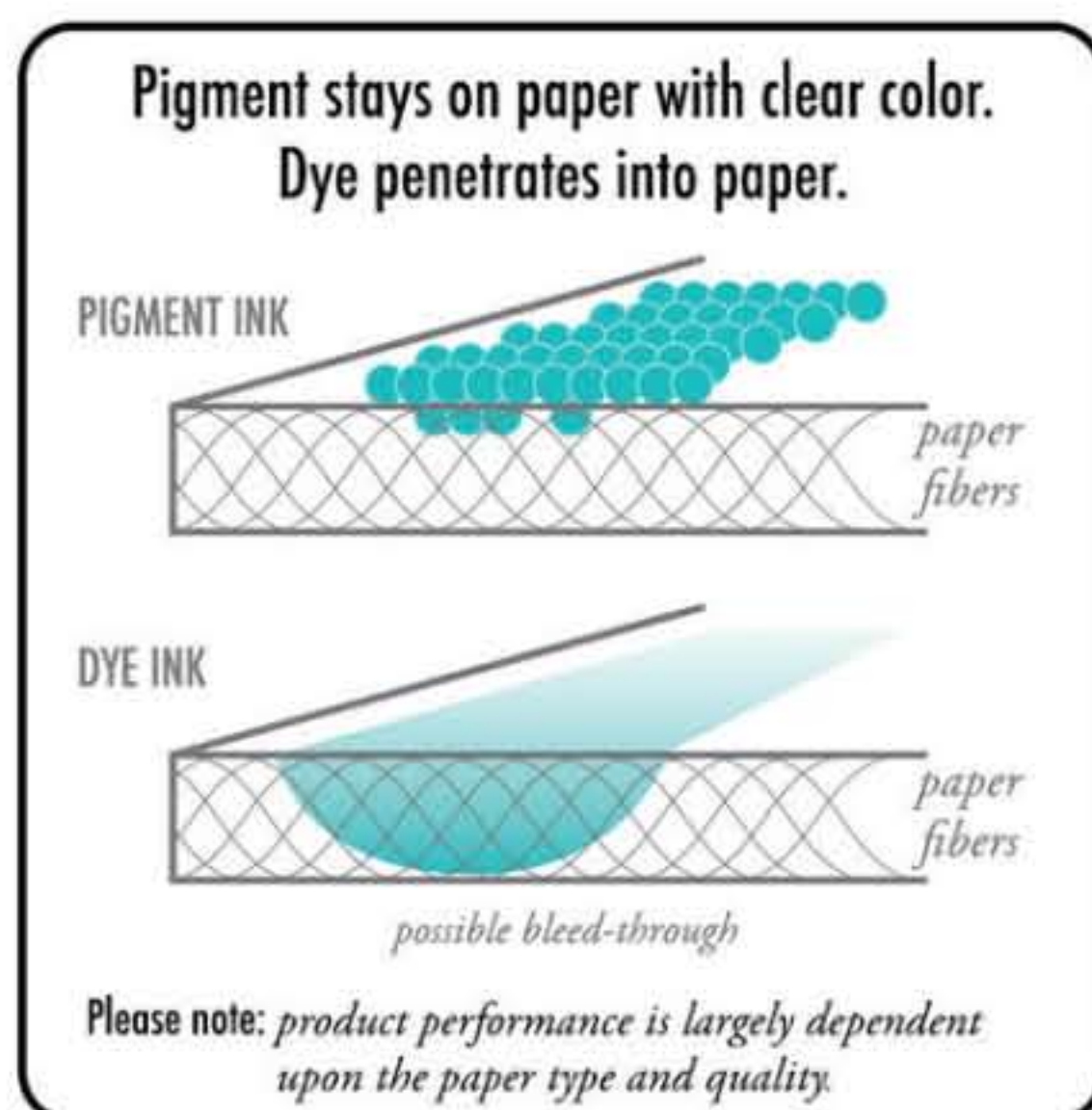
What makes Pigma ink so special?

In the early 80's, Sakura's scientists invented pigment-based Pigma ink to improve upon unstable dye-based inks available at the time. The superior pigment-based inks are more chemically complex and 100 times larger than dye molecules making the ink less susceptible to damage from :

- UV rays
- chemical degradation
- pollution from contact with oils and other chemicals on papers

Formulating a practical application for these larger pigment particles, however, was the obstacle that the researchers at Sakura had to overcome.

Once the process was discovered how to reduce these particles to submicron size (1/25,000 of an inch), which allowed the ink to flow evenly through the narrowest of pen nibs, Pigma ink technology was created.



Research and development helped to create the perfect ink. Sakura then further developed their ink to be technologically superior. Single color pigments are used to eliminate pigment separation, which translates to less fading and changing of color. The ink dries to a neutral pH, neither acidic nor alkaline, which protects the paper or material it is being used on. Since pigments by themselves do not guarantee that an ink is permanent, resins are added to make it waterproof which also make it universally compatible with other media such as watercolors, oils, acrylic paints, etc. The micron particles

are small enough to remain stable within its water-based solvent, which promotes color shade consistency and smooth ink flow.

The final result, is archival quality Pigma ink that stands the test of time.

