



ICE CREAM SMOOTH®

GELLY ROLL®

Gel ink was invented by Sakura over 30 years ago in 1984. Learn more about the invention of this incredible ink and the journey of developing the special effects and colors available today.



***THIXOTROPIC** means that when gel is disturbed, its viscosity decreases and it becomes more liquid. The idea behind a gel ink is that the solidity of a gel combined with the property of thixotropic action will ensure that the gel ink flow remains consistent for the life of the pen.



INSPIRATION

Considering any materials with the properties of jelly, the R&D team tested more than a thousand materials in an attempt to develop the ideal gel ink. They initially tried agar, grated yam, and even egg whites!



CENTRIFUGING

The process, still used today, involves centrifuging (spinning rapidly) each barrel insert for a precise amount of time. Inoue explained, "Even the length of time and the speed of spinning needs to be precise to obtain the desired writing performance."



This Japanese ad campaign from the early 1980s predicts that Sakura's new Ballsign (Japanese brand name for Gelly Roll) will be the next big thing. They were right!

INVENTION OF GEL INK

In the late 1970's many companies produced a new technology known as the rollerball pen. Rollerball pens used a water-based fluid ink in comparison to the then popular ballpoint pen which used a thick oil-based ink. In Japan, there were already several strong rollerball competitors, as well as numerous overseas brands. The Sakura Color Products Corporation, located in Osaka, Japan, also wanted to develop a rollerball pen, but wanted to advance the technology further than competitors by trying what no other company had been successful in creating - a gel-based ink. Within the industry, gel inks were considered revolutionary, but no R&D team had yet successfully achieved a working formulation.

THIXOTROPIC

In the early 80's, Sakura put together a team of four technicians from the laboratory to research gel ink. Oil-based ballpoint ink is always sensitive to gravity. If a ballpoint pen is stored incorrectly, ink collects at one end of the pen, causing inconsistent ink density and color. To combat this, the R&D team focused on a unique property of gel called thixotropic* action. As gel stands still, its viscosity increases and it solidifies.

Mr. Shigeyasu Inoue, one of the original members of the team, remembers the frustrating process of discovering a formula. "In the beginning, we failed many times. Each time we developed a new prototype, a whole new set of problems would arise. We spent endless hours studying each problem, resolving them one-by-one. There were many ideas---many led to deadends. Others had merit, but could only be tried once we resolved other issues. It was a difficult process."

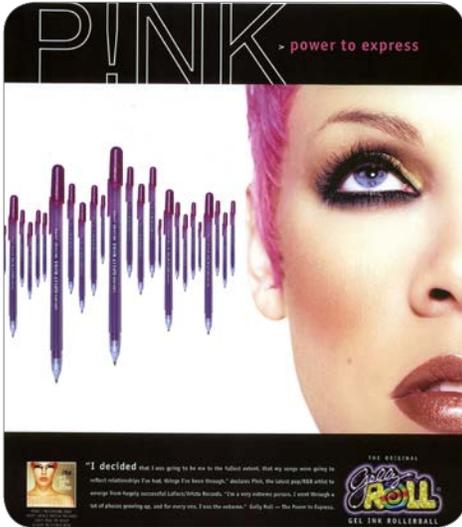
The team knew they were close to finding an answer, but a key ingredient was missing in perfecting thixotropic action in the gel ink. Inoue relates the team's building anticipation, "Every day, we checked newspapers, magazines, literature, and catalogs for information that might lead to a solution. We questioned everything we looked at and read."

Then one day while Inoue flipped through a chemical trade publication, he saw an ad for an ingredient called xanthane gum, a food-additive in jam and instant soup. Perhaps meaningless to most people, Inoue still vividly remembers the moment: "My eyes suddenly focused on the words and the solution flashed across my mind!" The R&D team quickly researched this new ingredient and successfully developed a working gel ink with the advantages of both water-based and oil-based inks! Sakura applied for a patent in Japan on October 20, 1982.

INK TO PENS—NOT AS EASY AS YOU THINK

Gel ink is water-based and becomes liquid when the ink is disturbed, which creates complications when inserting the ink into the barrel of a pen. The problem is that gel ink needs to be placed into the barrel as a solid. As a result, the engineers and chemists at Sakura had to develop a new method for manufacturing gel ink pens.





This American ad from the 1990s features pop singer P!nk. Gelly Roll's vivid colors give teens a perfect way to express themselves.

MAKING IT HAPPEN

For the next 2 years, Sakura worked on barrel designs for its revolutionary ink. The small ball used in existing ballpoint pens was not sufficient for use with gel inks. "Sakura had to work with the ball part suppliers to develop a new, smoother surface sphere. This also affected the nib holder which also had to be improved. Since each part works interdependently with other parts, we essentially had to re-engineer the entire assembly," Inoue said. Finally, in 1984, Sakura surprised the pen industry with its technological breakthrough. They named the pen Ballsign®, combining the terms Ballpoint pen and Sign pen (which is the generic Japanese name for water-based, felt-tip pens.)

THE BEST INK

Ballsign's ink was then upgraded from a dye-based ink to a pigment-based formula. This was an advantage over most writing instrument manufacturers, who used inexpensive dyes and had little, if any, knowledge of the properties of pigments. The pigment-based gel ink is waterproof, fade resistant, and does not bleed through paper, giving it superior quality over non-gel rollerballs. Ballsign quickly became the gel pen of choice in Japan.

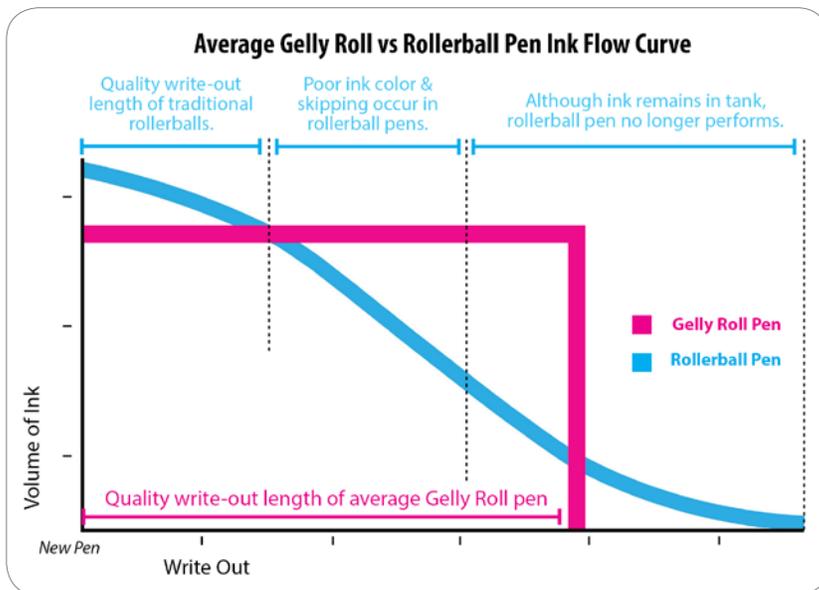
THE GELLY ROLL® NAME

In late 1988 Sakura approached Sakura of America, their newly established affiliate, to offer BallSign in the office supply category in the United States. However, market research showed that U.S. consumers were satisfied with existing, non-gel rollerball pens and would be hesitant to trying something new. So, Sakura of America built and created a new pen category rather than fight market share away from existing rollerball suppliers. Instead of using the Japanese brand name, Sakura of America created the new name, Gelly Roll®.

Peter Ouyang, Sakura of America's VP of Marketing explains, "Not only were we building a brand, but a whole new pen category. Many names went back and forth between Japan and America--we wanted to capture the qualities and essence of this pen in a catchy and descriptive way. We crossed our fingers when we decided on the brand name of Gelly Roll and now everyone agrees, that Gelly Roll is the standard for a gel-based rollerball pen."

MORE INK COLORS & SPECIAL EFFECTS

Popularity surged when Sakura introduced Gelly Roll Metallic's opaque reflective colors in 1997. This new ink had the ability to write on both white and black paper. In 1999 Sakura debuted Gelly Roll Lightning® (now Gelly Roll Silver Shadow®) which outlines colors in metallic silver. In 2000, Sakura introduced Gelly Roll Stardust® glittering gel pens.



Although there are now many suppliers who offer a variety of gel pen products, Sakura was officially recognized as the first and original inventor of the gel pen. In 2000, Sakura Color Products Corporation, received the Award of Director General of the Japanese Patent Office for the invention of the gel ink roller ball.



Sakura continues to introduce innovative gel colors and styles. Since 2001, many new colors and special effects have been introduced including luminescent Moonlight®, dual color Gold Shadow®, and a reformulated Metallic line for extra shine.

NEWEST ADDITION!

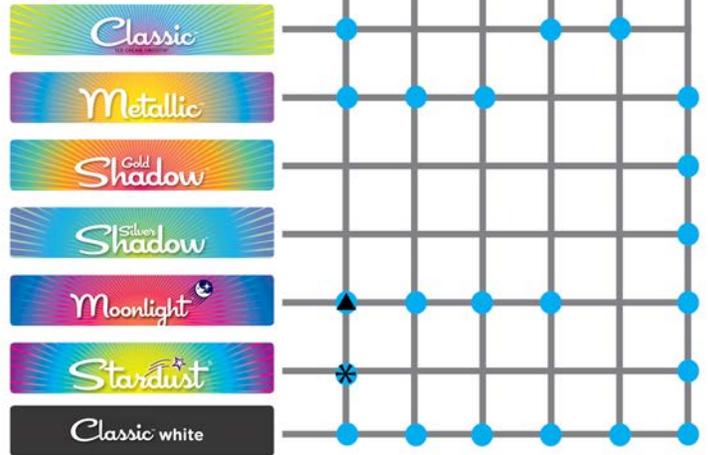
Gelly Roll Classic White

Now available in 3 sizes:

- 05 Fine
- 08 Medium
- 10 Bold

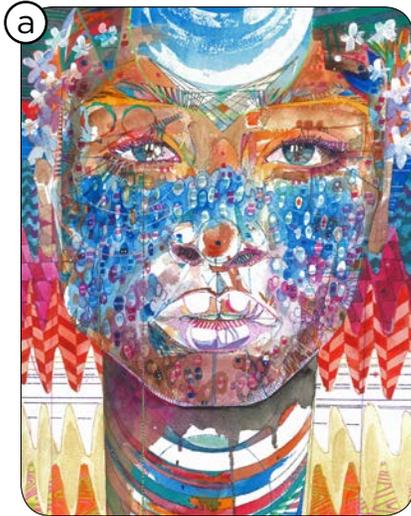


VARIETIES AND NIB SIZES



▲ fluorescent colors not archival
* glitter not archival

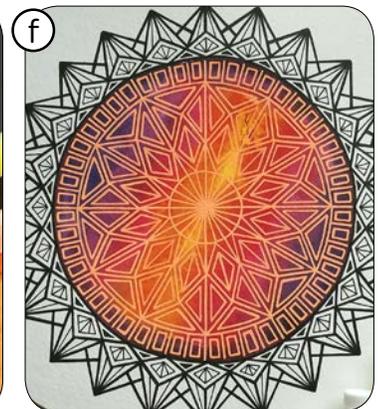
Due to vast consumer demand for this technology, other companies attempted to create their own gel ink pens or import poor quality gel pens that only work the first few times they were used. Manufacturers marketed these inferior gel ink pens in multiple brand names damaging the reputation of the gel inks. Since then consumers have abandoned these inferior brands, putting many gel ink manufacturers and importers out of business. Not surprisingly, Sakura's high quality line of Gelly Roll pens are still going strong, thanks to the careful engineering of Inoue's team in Osaka, over 30 years ago and the continued improvements and innovation in gel ink technology.



THE POWER TO EXPRESS®

We're proud to have contributed to the creativity of the many artists who have used our products for so many years. To view more fine examples please visit: www.SakuraofAmerica.com and www.GellyRoll.com

Be sure to use #GellyRoll in your Instagram posts!



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