

English Version (Japanese Translation)

screen ink

Evaporative Drying Ink

general printing | Evaporative drying type

# PET Ink 9000 Series

A matte ink for printing membrane switches using polyester film, mainly used for backing.

## Product Features

- Excellent adhesion to polyester film and excellent printing workability.
- It offers excellent printing performance and enables fine printing.
- It enables high-density printing and excels in high-speed printing.
- It has strong adhesion, flexible printing films, and excellent post-processing suitability.
- It has excellent resistance to oil, gasoline, alcohol, and chemicals, as well as excellent weather resistance.
- Color mixing stability is excellent.
- It has a flat matte finish and excellent scratch resistance.

### Features

- post-processing
- print reproducibility
- printability
- high concentration
- flexibility
- Adhesion
- Late-drying
- Color Stability

### Endurance

- Chemical resistance
- solvent resistance
- alcohol resistance
- Gasoline resistance
- oil resistance
- Physical Endurance
- weather resistance
- Scratch resistance

## Recommended Printed Materials

### Material

- polyester-based
- Untreated Polyethylene Terephthalate [PET]
- PET Stickers
- PET film
- PET Membrane Switch
- PET Meter
- PET nameplate

### Final product

- Nameplate
- membrane switch

## Finish, Texture, and Visual Effects

### finish

- mat

### surface decoration

- Flat surface

## Color & Grade

### Standard Colors (Standard Colors)

|                                                                                           |                                                                                                       |                                                                                                |                                                                                                               |                                                                                            |                                                                                                   |                                                                                               |
|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
|  02 Yellow |  03 Green and Yellow |  05 Gold Red  |  07 High-concentration white |  08 Red |  16 Pink       |  25 Purple |
|  28 Orange |  35 Asa Leek         |  45 Dark Blue |  46 Blue                     |  75 Green |  85 Ultramarine |  92 Black  |

### Standard Colors (Weather-Resistant Colors)

|                                                                                             |                                                                                                 |                                                                                             |                                                                                          |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
|  06 Cinnabar |  13 Qing Huang |  14 Yellow |  18 Red |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|

## Specifications

**Lotus form**  
1kg Ink Can

## How to use

- The ink is diluted with Tetron solvent (standard, slow-drying) before printing.
- If you want to slow down the drying even further, use a Tetron retarder or PET retarder.
- For PET ink, you can use curing agents JA-960 (fast reactivity, resistant to yellowing) and JA-950 (slow reactivity, no yellowing).  
Adding about 10% hardener to ink significantly improves adhesion and film properties (heat resistance, abrasion resistance, etc.).  
However, using curing agents can cause visible time for the ink.
- PET ink is designed to slow down evaporation drying to prevent clogging.  
Be sure to heat dry the food thoroughly.

## print edition

### Printing Methods & Formats

|                                                                                              |                                                                                                         |
|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|  backprint |  High-speed printing |
|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|

| Types of Editions  | Cleaning               | Recommended Printing Film Thickness |
|--------------------|------------------------|-------------------------------------|
| photographic plate | Vinyl cleaning solvent | thick                               |

## Curing Method & Conditions

Tetron Slow-Drying Solvent 10% Dilution, 270 Mesh, For Betta Printing

### Evaporative Drying Conditions

| Dry fingertips                                                                                                                                  | completely dry                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>50° C warm air drying: about 80 seconds</li><li>80° C warm air drying: approximately 40 seconds</li></ul> | <ul style="list-style-type: none"><li>120° C far-infrared drying: about 90 seconds</li></ul> |

Test data (environment, physical properties, weather resistance, performance, etc.)

| Conditions      |                                                                                          |  |
|-----------------|------------------------------------------------------------------------------------------|--|
| Ink             | PET 9007 High Concentration White                                                        |  |
| diluent solvent | Tetron Slow-Drying Solvent                                                               |  |
| print edition   | T-270                                                                                    |  |
| base material   | 125 μ m Untreated Polyester Film                                                         |  |
| dry             | After heating and drying at 100° C for 60 seconds, leave at room temperature for one day |  |

| Results             |                                                                                 |                                                 |
|---------------------|---------------------------------------------------------------------------------|-------------------------------------------------|
| Test Items          | Test Method                                                                     | Results                                         |
| Adhesion            | Cross-Cut Cellotape Release Test                                                | 100/100 Passing                                 |
| hardness            | JIS K5400 8.4 Pencil Hardness Test                                              | H~2H                                            |
| weather resistance  | Sunshine Weather Meter 700 hours                                                | No abnormalities                                |
| alcohol resistance  | 99.5% Ethanol - 50 rubbings                                                     | No abnormalities                                |
| Alkali resistance   | NaOH 5% aqueous solution, soaked for 48 hours                                   | No abnormalities                                |
| acid resistance     | H <sub>2</sub> SO <sub>4</sub> 5% aqueous solution, soaked for 48 hours         | The surface is slightly whitened.               |
| oil resistance      | Hand Cream (Kao Nivea) 50 rubbing sessions                                      | No abnormalities                                |
| abrasion resistance | Eraser (Lion PL-50)<br>Load capacity 500g, stroke 80mm, 500 round-trip friction | slightly scratched<br>No adhesion abnormalities |

Weather Resistance List

| Grade | color name                                                                                 |
|-------|--------------------------------------------------------------------------------------------|
| 5     | 9005 Gold Red                                                                              |
| 6     | 9003 Qing Huang<br>9018 Red<br>9085 Ultramarine                                            |
| 6-7   | 9002 Yellow                                                                                |
| 7     | 9001 White<br>9008 Red<br>9035 Asagon                                                      |
| 7-8   | 9006 Gold-Red<br>9013 Qing Huang<br>9014 Yellow<br>9016 Pink<br>9025 Purple<br>9028 Orange |
| 8     | 9045 Dark Blue<br>9046 Blue<br>9075 Green<br>9092 Black                                    |

- Generally, color-mixing products perform worse than primary colors.  
Be especially careful with smoke and light colors, as they significantly diminish.

Notes

- If the number of reprints increases, the standard drying time may be insufficient.  
In such cases, please set the drying time even longer.
- The PET ink series includes the semi-gloss type "9100PL Series PET Ink."  
For front printing, please use the 9100PL series.
- The 9000 series and 9100PL series can be mixed, but since the types of defoamers used differ,  
Sometimes 'Hajiki' (a type of spinning) can occur.
- For safety precautions when using the product, please refer to the product's Safety Data Sheet (SDS).
- The contents provided in this information may be changed or revised without prior notice.
- This characteristic data is based on the evaluation results conducted by our company and  
does not guarantee the product's characteristics during customer use.
- When using the device, please thoroughly consider the conditions based on the evaluation results of the equipment  
and substrate actually being used.