

English Version (Japanese Translation)

- screen ink
- UV-curable ink 'Raycure'
- Common color

general printing | UV-curable type

Raycure PF 4200 Series

This is a matte UV ink that forms a flexible film.
It is ideal for industrial instruments made of polycarbonate that are processed after printing, as well as membrane switches using easy-bond PET film.

Product Features

- A flat matte finish forms a highly flexible film.
- High concentration with excellent concealing power.
- It has strong adhesion and excellent compatibility with layering.
- Even for fine text printing, there is no slack, and the printing reproducibility is excellent.
- The squeegee has minimal swelling and good stability on the plate.

Features

- post-processing
- print reproducibility
- concealment
- punchability
- flexibility
- Onboard stability
- high concentration
- flexibility

Recommended Printed Materials

Material

- paper
- Vinyl
- Rigid Vinyl [PVC]
- Vinyl sticker
- PVC Sticker
- General plastic
- Acrylic [PMMA]
- Acrylic molded products
- Acrylonitrile Butadienestyrene [ABS]
- Acrylonitrile Styrene [AS]
- Polycarbonate [PC]
- polyester-based
- Treated Polyethylene Terephthalate [PET]
- Treated PET Film
- Easy-to-Bond Processing PET Film

Final product

- Industrial Dashboard
- Nameplate
- membrane switch

Post-processing and secondary processing

- punching

Finish, Texture, and Visual Effects

finish

- mat

Color & Grade

Standard Colors (Standard Colors)

 00 Medium	 03 Green and Yellow	 07 High-concentration white	 08 Red	 12 Yellow	 25 Purple
 28 Orange	 45 Dark Blue	 46 Blue	 75 Green	 85 Ultramarine	 92 Black

Standard Colors (Weather-Resistant Colors)

 06 Cinnabar	 13 Qing Huang	 14 Red and Yellow	 18 Red
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Surface Decoration Clear

Matte Clear

For pseudo-etching and non-glare printing.

Strong thixotropic properties, excellent reproducibility of the gauze eyes.

HFT Matte Clear

For flat matte finishes.

The matte finish is close to that of solvent-based inks.

UB-1 Matte Clear

Fine, grainy semi-gloss finish. (High density)

UB-2 Matte Clear

Fine, grainy semi-gloss finish. (Low density)

UB-3 Matte Clear

Contains coarse-diameter beads, so be careful not to cloze.

UB-8 Matte Clear

For highly transparent, pseudo-etching, non-glare printing.

High viscosity and transparency.

Medium

Base for adjusting ink color density and mixing special colorants such as gold and silver powders.

Can also be used for overcoats and undercoats.

For gloss-type inks.

DP-1 Medium

The random surface and the textured texture of the printed grain are pronounced.

Good scratch resistance.

UF-1 Medium

A fine particle type of the DP-1.

The grain is slightly smaller, but the finish is similar to the DP-1.

compand

Adjustment and improvement of printability.

It serves the role of waist-cutting by reducing ink stickiness.

Specifications

Print area	Lotus form
70~80m ² /kg	1kg Poly Bottle

How to use

- After stirring the ink well, remove it from the container and print as is.
- To reduce ink viscosity, add reducer 4200 within 10%.
- Applying ultraviolet light to cure results in a matte finish.
The degree of matting varies depending on irradiation conditions (especially heat exposure) and ambient temperature, but it does not change after curing.
To increase the degree of matting, increase the leveling time.

print edition

Printing Methods & Formats

overprinting

Types of Editions	mesh	Sol thickness
Polyester Edition	300～350	10 μ m or less

Curing Method & Conditions

UV Exposure Conditions

It varies depending on the ink color and type of substrate.

Types of lamps	lamp strength	irradiation distance	Conveyor speed	total luminous amount
Metal Halide Lamp	120W/cm	10cm (illumination distance)	5m/min	Approximately 500mJ/cm ²

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

Conditions	
printed matter	0.5mm thick polycarbonate sheet
print edition	350 Polyester Mesh
Sol thickness	10 μ m
印刷膜厚	10 μ m
硬化条件	ランプ強度：120W コンベアー速度：5m/min 積算光量：500mJ/cm ²

Results		
Test Items	Test Method	Results
Adhesion	Cross-Cut Cellotape Peeling	100/100 Passing
pencil hardness	JIS K-5400 8.4 Pencil Hardness	B~HB
flexivity	JIS K-5400 8.1 Bending Test	excellent
impact resistance	JIS K-5400 8.3 DuPont Impact Test 1/2in、 500g、 50cm	No abnormalities
overprinting property	Adhesion with 3-color overprinting	100/100 Passing
heat resistance	70° C for 240 hours	No abnormalities
moisture resistance	60° C 95% RH 240 hours	No abnormalities
cold resistance	-20° C for 240 hours	No abnormalities
water resistance	40° C warm water for 24 hours	No abnormalities
alcohol resistance	99.5% Ethanol 50 rubbings	gloss loss
weather resistance	Sunshine Weather Meter 400 hours	No abnormalities
keystroke resistance	Based on JIS C-5441, Mechanical repetitive operation according to JIS C-5307	Passed 1,000,000 times Changed the fabric to treated PET film (HYNTHKU-31 (188μ m) manufactured by Higashiyama Film Co., Ltd.)

Weather Resistance List

Grade	color name
6	4214 Red and Yellow 4218 Red 4285 Ultramarine
6-7	4212 Yellow 4228 Orange
7	4200 Medium 4207 White 4208 Red
7-8	4206 Jin Chi 4213 Qing Huang 4225 Purple
8	4245 Dark Blue 4246 Blue 4275 Green 4292 Black

- When ink is diluted with medium or white ink for printing, its weather resistance drops significantly compared to the primary colors.
- We stock only white, black, and medium sizes.
Please note that colors other than these are made-to-order products.

Notes

- For general precautions, please refer to the attached document "[UV ink](#)"Please refer to the detailed information in the "" section.
- 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.