

English Version (Japanese Translation)

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

general printing | UV-curable type

Raycure PEP-Z (HV)

This is a high-quality, low-cost glossy UV ink for framed PE and PP bottles. It has excellent curing performance even at low light levels, making it ideal for high-speed printing. All colors comply with EN71-3.

Product Features

- It provides excellent adhesion with a single-component solution.
- It has excellent curing performance under low light conditions, enabling high-speed printing.
- The surface is highly hard, making it less likely to scratch.
- Excellent printing accuracy for fine text.
- Does not contain heavy metals or harmful substances such as N-vinylpyrrolidone.
- All colors comply with EN71-3 (European Toy Safety Standard).

Features

- Safety
- print reproducibility
- High-speed printability
- Adhesion
- Low toxicity

Endurance

- Physical Endurance
- Scratch resistance

Recommended Printed Materials

Material

- olefin-based
- Treated Polyethylene [PE]
- Processed PE bottles
- Treated Polypropylene [PP]
- Processed PP Bottles
- Ethylene Vinyl Alcohol Copolymer (EVOH[®]) [EVOH]

Final product

- Polybottle

Finish, Texture, and Visual Effects

finish

- gross

Color & Grade

Standard Colors (Standard Colors)

00 Medium	01 White	02 Yellow	03 Green and Yellow	05 Gold Red	07 High-concentration white		
08 Red	12 Yellow	16 Pink	17 Red	25 Purple	28 Orange	35 Asa Leek	45 Dark Blue
46 Blue	75 Green	90 Black					

Standard Colors (Weather-Resistant Colors)

 06 Cinnabar	 87 Ultramarine
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Specifications

Print area	Lotus form
70~90m ² /kg	1kg Poly Bottle

How to use

- Stir well before use and print as is.
- When reducing viscosity, use the PEP-Z(HV) reducer at a dosage of up to 10%.
- If you want to lower the ink concentration, use medium.
There is no limit to the amount added.
- To improve adhesion, please use 1~3%
JAR-18 or 1~2% hardener JA-950.
- When additives are used, the ink becomes two-component, resulting in a pot-life effect. (Usually usable for 8~12 hours)
- Using the hardener JA-950 shortens the pot's life. (Usually usable for 2~8 hours)
- If additives are used, be careful to stir around the container or on the spatula to ensure no additives remain.
- Printing irregularities may occur immediately after addition, so let it sit for about 20 minutes before printing.
- Please check the adhesion before use.
- For surface treatment, please refer to the attached document "[Surface treatment of polyolefin material](#)" Please refer to the "" section.

print edition

Types of Editions	mesh	Sol thickness
Polyester Edition	Over 350	10 μm 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, 1 lamp	10cm	20m/min	Approximately 120mJ/cm ²

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

Conditions	
printed matter	HDPE (Applies approximately 720 μ N/cm (=72dyn/cm) of wetting resistance through frame processing)
print edition	Polyester screen 350 mesh
hardening conditions	Lamp type: Metal halide lamp Lamp strength: 120W/cm Cooling: Air cooling Conveyor speed: 20m/min Estimated light intensity: approximately 120 mJ/cm²

Results		
Test Items	Test Method	Results
Adhesion	Cross-Cut Cellotape Release Test	100/100 Passing
overprinting property	Adhesion with 3-color overprinting	qualified
alcohol resistance	99.5% Ethanol Usage Peel test after 24 hours of immersion	100/100 Passing
Water Temperature Resistance	Use 40° C warm water Peel test after 24 hours of immersion	100/100 Passing

Weather Resistance List

Grade	color name
5	02HV Yellow 03HV Qinghuang 17HV Red
6	00HV Medium 01HV White 05HV Kinaka 28HV Orange
6-7	12HV Yellow
7	08HV Red
7-8	06HV Kinkaka 16HV Pink 25HV Purple 87HV Ultramarine
8	35HV Asagi 45HV Dark Blue 46HV Blue 75HV Green 90HV Black

- PEP-Z(HV) is only available in select colors.
Please note that colors other than these are made-to-order products.
- When ink is diluted with medium or white ink for printing, its weather resistance drops significantly compared to the primary colors.

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.