

UV Inks

UV HY-BD HS-2 Series

"UV HY-BD HS-2" is suitable for UV offset presses adopting newly developed ink resin or UV monomer. It is designed to enable easy transition from oil-based ink printing to UV printing. Further, it is ECO-MARK certified product with excellent deinking property that enables paper recycling.

■ Features

- ▶ Its ink-water balance is very close to that of oil-based inks.
- ▶ Excellent printability along with great press stability.
- ▶ No skinning due to oxidative polymerization.
- ▶ Applicable not only to paper, but to synthetic paper and some types of film stocks as well.
- ▶ Resistant to cracks by rule bending.
- ▶ UV varnish coats hardly cause any gloss back.

■ Handling Instructions

- ▶ It is different from oil-based and some hybrid inks in that it does not dry due to oxidative polymerization. It cures and dries only by photo radical polymerization of UV light irradiance. In general, use UV ink applicable printing materials and cleaning agents only.
- ▶ Take precautions against excessive ink application as it causes curing and adhesion defects. Furthermore, make sure to check the adhesion to the stock beforehand.
- ▶ Do not mix it with other oil-based or UV inks as this may cause curing, printability and other physical properties to deteriorate.
- ▶ For viscosity adjustments, use "UV DG Reducer" within 0-5%.
- ▶ This ink uses low resistant alkali blue toner pigments as toning agent. Therefore, conduct pre-use tests to ascertain the suitability of the product for post-printing process, such as PP lamination, and printing products that are retort processed.
- ▶ Conduct pre-use tests to ascertain suitability when post printing processes, such as foil stamping, are planned.
- ▶ Exposure to ultraviolet light or heat causes the ink to polymerize. Therefore, put the ink in a sealed container and store in a designated place. The place must be ventilated, cool and dark. Comply with The Fire Prevention Ordinance if storage quantity exceeds the max-allowed limit.
- ▶ Leaving a non-absorbent stock print outdoor, or exposing it to water (including dew) causes adhesiveness to deteriorate to the extent that the printed object will peel-off even by a nail scratch.

- ▶ If the ink gets in the eyes, immediately flush them with plenty of water for more than 15 minutes. Consult an ophthalmologist. In case the ink gets on the skin, first wash the stains off the contaminated clothes and shoes, and then wash the stains off the skin with liquid-soap and plenty of water. Seek immediate medical attention if itching or inflammation of skin is caused.
- ▶ When handling the ink- take precautions against flammables, ventilate the workplace sufficiently and avoid ultraviolet light and direct sunlight; wear proper protective gear to avoid inhaling and letting the eyes, skin and clothes come into direct contact of the ink; in case the work-clothes get contaminated, immediately wash the stains off and change to different clothes to avoid prolonged contact. Further, wash the hands thoroughly and gargle sufficiently after handling the ink.

■ Resistance Table (Pigment Wise)

Product Name (Standard Colors)	Lightfastness		Heat Resistance	Soap Resistance	Solvent Resistance
	Dark Color	Light Color			
UV HY-BD Yellow HS-2	5	3	4	5	5
Magenta HS-2	4~5*	3*	4	2	4
Cyan HS-2	8	7	5	5	5
Black HS-2	7~8	5	5	5	5
Transparent White HS-2	8	-	5	5	5
Opaque White HS-2	8	7	5	5	5
Warm Red HS-2	3*	2*	4	1	3
195 Rhodamine Red HS-2	4*	2*	2	1	2
Violet HS-2	7~8	7	5	5	5
Green HS-2	8	7~8	5	5	5
Lightfast Warm Red HS-2	4~5	3	4	3	4
Super Lightfast Yellow HS-2	6~7	5~6	5	5	5
Super Lightfast Warm Red HS-2	6~7	5~6	5	5	5
Super Lightfast Magenta HS-2	6~7	5~6	5	5	5

Lightfastness 8(excellent)⇔ 1 (poor); Other Resistances: 5(excellent)⇔ 1 (poor)

Lightfastness...Conducted FADE-O-METER exposure test on print samples. Classified resistance on a scale of 1 to 8 on the basis of exposure time and degree of fade. Dark colors were tested without dilution, and light colors by diluting them 5 times in a medium. (* Lightfastness deteriorates significantly when wet with water.)

Heat Resistance...Exposed print samples to 150°C heat in a drying oven for 10 minutes. Classified resistance on a scale of 1 to 5 on the basis of fade.

Soap Resistance...Applied 10% soap gel to print samples for 1 hour. Classified resistance on a scale of 1 to 5 on the basis of degree of fade and bleed in the soap gel.

Solvent Resistance ...Immersed print samples in a mixture of toluene and acetone in 1:1. Classified resistance on a scale of 1 to 5 on the bases of degree of fade and bleed in the mixture.



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- ▶ The data contained herein are based on the results of the tests conducted in accordance with the in-house test methods, and are not standard values. Always conduct pre-use tests to ascertain the suitability of the product to your requirements. Nothing contained herein is to be construed as a recommendation for use in violation of any patents, applicable laws or regulations. It is the responsibility of the user to comply in all respects with applicable laws and regulations.
- ▶ Owing to product improvement the information contained herein may be modified without any prior notice.
- ▶ Make sure to read MSDS thoroughly before using the product.