

XIP-HF Ink series

(2 Pack type, Halogen free, environmentally friendly ink for insert molding)

XIP-HF is environmentally friendly two pack type ink for insert molding that does not intentionally use halogen compounds (Chlorine Cl, Bromine Br) in raw materials. It is a High Definition ink with excellent heat resistance for post processing such as film insert molding.

Applications	Film insert products in general such as automobile interior, home appliance nameplate.		
Special Features	<ul style="list-style-type: none"> • Halogen compounds, Chlorine (Cl), Bromine (Br) are not intentionally used in raw materials. • 2 pack type ink forms ink layer with excellent heat resistance • Enables extremely high precision printing such as 100μm width fine lines and dots, etc. • Excellent printing stability and high-speed printability. • By combining with IMB-HF Binder, insert molding with PMMA (Acrylic), ABS, PC/ABS, PC (polycarbonate) resin, etc. is possible. 		
Substrate	PC sheet. Easy adhesion treated PET film		
Dilution	XZ-705 SOLVENT Dilution: 0 to 5% *Defoamer may separate over time, stir well before use. *Do not use other solvents as they may adversely affect curing, adhesion, stencil stability, or other properties.		
Catalyst/Promoter mixing	X-106 CATALYST 11% (to improve adhesion) X-240 CATALYST 8%(standard) X-200 CATALYST 13% (extra soft)	Pot life: 2 to 3 hrs. Pot life: 4 to 5 hrs. Pot life: 4 to 5 hrs.	
Additives	XSM-40 DEFOAMER 1% (For anti-foam and improving leveling)		
Recommended Cleaner	Screen Solvent L2		
Mesh	L 355 Mesh (Coverage of 939 NC Black is about 80m ² /kg at L-355 mesh) *Recommendation: L-screen 355 mesh made by NBC Meshtec *T 350 mesh can also be used for printing		
Drying	90°C 60 min	<u>Overprint</u> Each layer 80°C 10 min(tack-free) Final layer 90°C 60 min(after printing binder)	
Standard Colors	HF001 VICTORIA HF169 SCARLET HF179 RED HF239 LIGHT YELLOW HF279 REDDISH YELLOW	HF399 BLUE HF529 ORANGE HF589 MAGENTA HF679 WHITE HF829 VIOLET	HF939 NC BLACK HF979 BLACK HF90401 HIGH CONCEALMENT BLACK

- Due to the possibilities of contamination with halogen compounds, only designated solvents and catalysts can be used.
- Please check the squeegee rubber, emulsion, materials and substrates before use, as they may contain halogen compounds.
- Be sure to print a binder as an adhesive layer with the molding resin.
 ⇒IMB-HF009 BINDER: For MIR Ink, PC resin, and PMMA resin molding
 ⇒IMB-HF006 BINDER: For molding of general-purpose resin such as ABS, PMMA, AS, etc.
- When printing a binder, if the underlayer ink is excessively dry, peeling strength will be reduced. Be sure to print continuously up to the binder and conduct final drying.
- In the forming process such as vacuum forming, pressure air forming, and mold forming, as well as in insert molding processes that integrate injection molded resin, a complex set of factors affect the performance of the final product, including the selection of printing materials and inks for design printing, printing conditions, printing sequence, drying method and conditions, selection of molding resin, mold design (gate shape, type and position, number of gates), and conditions set during injection molding.
- Preliminary testing under actual conditions is strongly recommended before a commercial run.
- Ink shelf life: 24 months from production date, unopened.

Caution

Safety UN No.: Not classified in the definition
 UN Classification: Not classified in the definition

- Use safety gloves and eyeglasses to protect skin and eyes. If the ink comes in contact with skin, wash with soap and plenty of water (or lukewarm water) and consult with a doctor.
- Containers should be closed tightly after use and stored in a cool and dark place.
- SDS is available upon request. Please request a copy and read it carefully before handling the products.

Handling

Resistance

Test item	Test Conditions	Test results
Adhesion	JIS K 5600-5-6:ISO2409 (cross-cut) 、 1mm interval 6×6、 cellophane tape and peel	0(no peel)
Heat	JIS K5600-6-3:ISO 3248: 90°C、 400 hrs., check appearance and peel off from the substrate	No defect
Hot Water	JIS K 5600-6-2: ISO 2812-2, Soak 48 hrs. in 50°C hot water, check appearance and peel off from the substrate	No defect
Acid	Soak 7 hrs. in 5% H ₂ SO ₄ , check appearance and peel off from the substrate	No defect
Alkaline	Soak 7 hrs. in 5% NaOH, check appearance and peek off from the substrate	No defect
Alcohol	Gakushin scrub tester, cotton soaked ethyl alcohol, weight 200g, 50 back and forth, check peel off	No defect
Scrub	Gakushin scrub tester, cotton, weight 500g, 500 back and forth, check color fade	No defect

*Test conditions 【XIP-HF679 White】 【X-240 CATALYST 8%】 【90°C 60 min】
 【L 355】 【Substrate: Polycarbonate sheet】

*Above resistance test results are measured results in our laboratory and they are not guaranteed values.

*Information contained in this catalog may change without prior notice.

Revised :2022.07.19