

## IMB-HF005 PP BINDER

(Halogen Free, Environmentally Friendly Binder for IMD/FIM)

IMB-HF005 PP Binder Ink provides a binder function that makes PP resin adhere to a design printed sheet when manufacturing decorative molded products using PP resin in Film Insert Molding (FIM).

<b>Applications</b>	Adhesive layer for FIM (film insert molding) Resin adaptive to injection molding: PP resin	
<b>Special Features</b>	<ul style="list-style-type: none"> <li>Adhesive layer between a design printed sheet on treated PP with 2 pack curable ink and injection molding resin.</li> <li>Applicable to film insert molding of PP resin, which is a difficult material to adhere to.</li> <li>As screen printing is possible, pattern coating can be applied to only necessary areas.</li> <li>According to the raw material and product specifications, our molding inks can be used. For treated PP, INQ-HF ink is recommended.</li> </ul>	
<b>Substrate</b>	<ul style="list-style-type: none"> <li>Treated PP</li> <li>Please print INQ-HF000 MEDIUM as an under layer when printing on the transparent area of PC and treated PET substrate.</li> </ul>	
<b>Dilution</b>	<p>Dilution is not required. If dilution is required due to printing conditions, use SCREEN CLEANER PP within 5% *Stir well before use.</p> <p>Ink may be jelly after opening especially when the temperature is low, but it will return to liquid when the container is immersed in 30 to 40°C warm water. Before use, please stir binder ink in the container after ink turns into liquid. *Do not use other solvents as they may cause contamination of halogen compounds and may adversely affect curing, adhesion, stencil stability, or other properties</p>	
<b>Recommended Cleaner</b>	SCREEN CLEANER PP	
<b>Mesh</b>	T 150 Mesh An ink layer thickness of 5 to 10µm is optimal.	
<b>Drying</b>	<u>Tack free</u> 80°C 10 min (30 min for 60°C)	<u>Final drying</u> Please dry under the final drying conditions of under layer ink, (INQ-HF: 80°C 60 min)

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**Caution**

- Do not use solvents other than the designated ones because of the possibility of contamination with halogen compounds.
  - Please check the squeegee rubber, emulsion, materials and substrates before use, as they may contain halogen compounds.
  - 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.
  - Binder cannot be used by mixing with screen ink.
  - 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.
  - Residual solvent in the ink layer may cause poor adhesion to the molding resin. Be sure to conduct heat drying including drying and curing of design printing inks.
  - Use our SCREEN CLEANER PP for cleaning stencil.
  - Checking before commercialization: Adhesion and resistance properties may change due to differences in substrates, processes, printing and drying conditions. Be sure to check the adhesiveness and resistance properties before mass production printing
  - Ink shelf life: 12 months from production date, unopened
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**Safety**

UN No.: 1210  
UN Classification: Class 3 Flammable Liquids (Flash point is over 23 Degree C)

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**Handling**

- 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.
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**Test results of formability adhesion test**

Molded resin	Resin temperature	Mold temperature	180° peel adhesion strength
PP Resin (PP 99%)	240°C	50°C	30~40 N/cm

\*Used substrate :Pure Thermo™ (Idemitsu Unitech made)

\*Underlayer ink :INQ-HF979 BLACK, 200 CATALYST 6%, F-003 SOLVENT 15%, T-250 Two layers printing

\*Mesh : T-150

\*Final drying : 80°C 60 min

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

\*Please conduct trial tests sufficiently with your specifications and confirm product performance.

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

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