

## IMB-HF006 BINDER

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

IMB-HF006 Binder is environmentally friendly Binder for IMD/FIM that does not intentionally use Halogen compounds (Chlorine (Cl), Bromine (Br)) as raw materials and does not contain environmentally hazardous substances such as Benzene, Toluene, Xylene, Isophorone.

<b>Applications</b>	Adhesive layer for FIM (film insert molding) Adaptive resins for injection molding: PC (polycarbonate), PC/ABS, ABS, AS, PMMA (acrylic)
<b>Special Features</b>	<ul style="list-style-type: none"> <li>· This is an adhesive layer between a printed sheet that design is printed with two pack curable ink on PC sheets, treated PET films, etc., and injection molding resin.</li> <li>· As screen printing is possible, pattern coating can be applied to only necessary areas.</li> <li>· One-pack evaporation drying type with good workability.</li> </ul>
<b>Substrate</b>	PC sheet, Treated PET film
<b>Dilution</b>	<p>Dilution is not required</p> <p>*Stir well before use and print ink only after it becomes fluid.</p> <p>*If dilution is necessary, use following solvents.</p> <p>Z-703 SOLVENT(standard) Dilution 0 to 5%</p>
<b>Recommended Cleaner</b>	Screen Cleaner L2
<b>Mesh</b>	T 200 to 250 mesh (Coverage would be 30 to 35m <sup>2</sup> /kg at 200 mesh)
<b>Drying</b>	Final drying should be performed in accordance with the final drying and curing conditions for design printing inks.
<b>Caution</b>	<ul style="list-style-type: none"> <li>· Do not use solvents and catalyst other than the designated ones because of the possibility of contamination with halogen compounds.</li> <li>· Please check the squeegee rubber, emulsion, materials and substrates before use, as they may contain halogen compounds.</li> <li>· 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.</li> <li>· <u>Binder cannot be used by mixing with screen ink.</u></li> <li>· 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.</li> <li>· Ink shelf life: 24 months from production date, unopened</li> </ul>
<b>Safety</b>	<p>UN No.: Not classified in the definition</p> <p>UN Classification: Not classified in the definition</p>

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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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**Formability adhesion test**

## \* Test method

Printed materials of IPX-HF ink and IMB-HF binder made under the following conditions are inserted into a mold for injection molding, and PC resin is injected onto the binder printed surface for insert molding under the following conditions.

## \* Injection molding conditions

Mold clamping pressure : 60 tons

Mold temperature : 80°C, PC (made by Teijin Chemical, Panlite PC L-1225L )

Molded resin temperature : 300°C

Injection speed : 100 mm/sec

Molded item dimension (LxWxH) : 70×70×2 mm

- \* Cut a 1.0 cm-wide slit in the printed sheet side of the test piece, peel it off from the molded resin, and measure the 180° peel adhesive strength (kgf/cm) at a pulling speed of 300 mm/min with a tensile testing machine.

**Test results of formability adhesion test**

Test ink	Test Binder	180°peel adhesion strength
IPX-HF979 Black	IMB-HF006 Binder	5.0~6.0kgf/cm

\*Test conditions (Ink) 【IPX- HF979 Black】 【F-003 Solvent 10%】 【240 Catalyst 10%】  
【80°C 5 min】 【T 250】 【Substrate:PC】

\*Test condition (Binder) 【IMB-HF006 Binder】 【No dilution】 【90°C 60 min】 【T 250】

\*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.

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