

IMB-003 BINDER (Binder for IMD/FIM)

IMB-003 BINDER is a screen printing binder that makes a design printed sheet adhere to injection molding resins during insert molding. In particular, it adheres strongly to injection molding resins such as ABS or acrylic resins.

Applications	Adhesive layer for FIM (film insert molding) Resin adaptive to injection molding: PC (polycarbonate), PC/ABS, ABS, AS, PMMA (acrylic)
Special Features	<ul style="list-style-type: none"> · Adhesive layer between a design printed sheet on PC sheet or treated PET film with 2 pack curable ink and injection molding resin. · Excellent adhesion to general purpose resins such as ABS and PMMA resin. · As screen printing is possible, pattern coating can be applied to only necessary areas.
Substrate	PC sheet, Easy adhesion treated PET film
Dilution	<p>*Stir well before use and print only after it becomes fluid. *If dilution is necessary, use following solvents. F-002 SOLVENT (standard) F-003 SOLVENT (slow) Dilution 0 to 10%</p>
Recommended Cleaner	Screen Cleaner L2
Mesh	T 200 to 250 mesh (Coverage would be 30 to 35m ² /kg at 200 mesh)
Drying	Final drying should be performed in accordance with the final drying and curing conditions for design printing inks.
Caution	<ul style="list-style-type: none"> · Ink should be chosen depending on the printing material and the molding condition, etc. · Selection should be made based on printing material, molding conditions, etc. Use our IPX and INQ inks for PC sheets and treated PET films. · 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. · <u>Binder cannot be used by mixing with screen ink.</u> · Ink shelf life: 24 months from production date, unopened

Safety

UN No.: 1210

UN Classification: Class 3 Flammable Liquids (Flash point is over 23 Degree C)

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 ink and IMB binder made under the following conditions are inserted into a mold for injection molding, and ABS resin is injected onto the binder printed surface for insert molding under the following conditions.

* Injection molding conditions

Mold clamping pressure : 60tons

Mold temperature : 60°C Mold resin:ABS (made by Techno Polymer, 21)

Molded resin temperature: 250°C

Injection speed : 60 mm/sec

Molded item dimension (LxWxH) :60×80×2 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 in a tensile testing machine.

Test results of formability adhesion test (ABS Resin molding)

Tested ink	Tested Binder	180 °peel adhesion strength
IPX-971 Black	IMB-009 Binder	1.6 - 2.8 kgf/cm
	IMB-003 Binder	5.9 - 6.5 kgf/cm

*Test conditions (Ink) 【IPX- 971 Black】 【F-003 Solvent 10%】 【240 Catalyst 10%】
【80°C 5 min】 【T 250】 【Substrate:PC】*Test condition (Binder) 【IMB-003 Binder, IMB-009 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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