

ISX-HF(LV) Ink series

(Halogen-free, environmentally friendly, one pack type ink for insert molding)

ISX-HF(LV) ink is an environment-friendly 1 pack type ink series for film insert molding that does not intentionally use halogen compounds (chlorine Cl, bromine Br) in raw materials and does not use polycyclic hydrocarbons (PAHs) such as naphthalene etc.

Applications	Design printed materials for film insert molding *Insert molding products by PC (polycarbonate) resin		
Special Features	• No intentional use of Halogen (Chlorine Cl, Bromine Br) compounds in raw materials. • One-pack heat-drying type with good workability and excellent molding resistance at high temperatures and pressures.		
Substrate	PC sheet		
Dilution	Z-701 SOLVENT (extra fast) Z-703 SOLVENT (fast) Z-603 SOLVENT (standard) C-004 SOLVENT (slow) Dilution: 10 to 25% *Defoamer may separate over time, please stir the ink before use. *Do not use other solvents as they may adversely affect adhesion, stencil stability, and other properties.		
Additives	SM-40 DEFOAMER less than 1% (For anti-foam and improving leveling)		
Recommended Cleaner	Screen Cleaner L2		
Mesh	T 200 to 350 mesh (Coverage is about 35m ² /kg at 250 mesh)		
Drying	90°C 90 min	<u>Overprint</u> Each layer 80°C 10 min(tack-free) Final layer 90°C 90 min	
Standard Colors	HF(LV)001 VICTORIA HF(LV)169 SCARLET HF(LV)179 RED HF(LV)199 RED HF(LV)249 LIGHT YELLOW	HF(LV)279 OPAQUE REDDISH YELLOW HF(LV)399 BLUE HF(LV)529 ORANGE HF(LV)589 MAGENTA HF(LV)679 WHITE	HF(LV)829 VIOLET HF(LV)939NC BLACK HF(LV)989 PIANO BLACK

Caution

- As Halogen compounds and polycyclic aromatic hydrocarbons (PAHs) may be mixed in the ink, 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.
- 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: 36 months from production date, unopened.

Safety

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

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.

Resistance

Test item	Test Conditions	Test results
Adhesion	JIS K 5600-5-6:ISO2409(cross-cut), 1mm interval, 6×6, cellophane tape, peel off	0(no peel)
Pencil Hardness	JIS K 5600-5-4:ISO 15184 (pencil), 750g weight, Hardness of the pencil which does not make scar	F
Heat	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 40°C hot water, check appearance and peel off	No defect
Cool-heat cycling test	JIS K 5600-7-4: 10 cycles, 90°C, 2.5hr~25°C, 0.5hr~-40°C, 2.5hr~25°C, 0.5hr Check appearance and peel off	No defect
Humidity	JIS K 5600-7-2 (Continuous condensation) : 50 °C, 95%RH, 168 hrs., check appearance and peel off	No defect
Water	Soak 168 hrs. in tap 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 peel off	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
Falling-weight test	JIS K5600-5-3 DuPont Impulse tester, drop 500g weight from 50 cm height	No defect
Punching	Punching by press machine	No defect

*Test conditions 【ISX-HF(LV)679 WHITE, 939NC BLACK】 【Z-703 SOLVENT 20%】
【90°C 90 min】 【T 250】 【Substrate: Polycarbonate】

*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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