

GLS-HF Ink series (Halogen Free Ink for Glass)

GLS-HF ink series has very good printing stability, adhesion, and resistance, which are indispensable for glass printing. A wide range of color variations is available, which can be expanded to metallic, pearl, and other functional inks.

Applications	Decorative printing on glass materials for smartphones, tablets, etc.		
Special Features	• Halogen compounds such as Chlorine (Cl) and Bromine (Br) are not intentionally used in raw materials. • A wide range of color variation enables the creation of colorful printed materials. • It has excellent adhesion to glass and various types of resistance, and it can be used in a wide range of fields.		
Substrate	Glass plate		
Dilution	Z-705 SOLVENT(slow) DILUTION 3 to 10% *Do not use other solvents as they may cause contamination of halogen and may adversely affect curing, adhesion, stencil stability, or other properties		
Catalyst/Promoter mixing	Be sure to add 0.5% of GLS GLASS PROMOTER Pot life: 6 hrs. *The ink will not turn to gel after the pot life (6 hrs.) has expired. Due to its poor adhesion and resistance, be sure to mix only enough to use.		
Additives	SM-40 DEFOAMER less than 2% (For anti-foam and improvement in leveling)		
Recommended Cleaner	Screen Cleaner L2		
Mesh	T 200 to 300 mesh (Coverage would be, Black 35 to 40m ² /kg, White 30-35m ² /kg at 250 mesh)		
Drying	160°C 30 min *Ensure sufficient drying	<u>Overprint</u> Each layer 160°C 10 min (tack-free) Final layer 160°C 30 min	
Standard Colors	HF000 MEDIUM HF001 VICTORIA HF169 SCARLET HF189 RED HF239 LIGHT YELLOW HF249 LIGHT YELLOW HF399 BLUE	HF529 ORANGE HF589 MAGENTA HF619 WHITE HF679 WHITE HF689 WHITE HF829 VIOLET HF919 BLACK	HF929 BLACK HF939 NC BLACK HF979 BLACK HF989 PIANO BLACK HF999 BLACK

Caution	- As Halogen compounds 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. - 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.
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 method)、1mm interval 6×6、cellophane tape peeling, no peeling off the substrate	0(no peel)
Pencil Hardness	JIS K 5600-5-4:ISO 15184(pencil)、weight 750g, Pencil hardness which does not make scar.	2H
Heat	80°C、1000H、Check appearance & peel from the substrate	No defect
Hot water	Soak in 60°C hot water、72 時間 hrs. Check appearance and peel from the substrate	No defect
Humidity	60°C,95%RH 1000 hrs.、Check appearance and peel from the substrate	No defect
Boiling water	Boiling water 24 hrs.、Check appearance and peel from the substrate	No defect
Scrub	Gakushin scrub tester, with cotton, 500g weight, 1000 back and forth, check color fade	No defect
Accelerated weathering	(Xenon lamp) Weather meter, 1000 hrs., BP temp. 63+/-3°C:Rain rate 18 min/120 min、check color fade and peeling off	No defect
Light fastness	(Caron arc) Fade meter, 600 hrs., BP temperature 63+/-3°C, check color fade and peeling off	No defect

*Test conditions 【GLS-HF 919 BLACK】【GLS GLASS PROMOTER 0.5%】【T-250】
【Z-705 SOLVENT 10%】【160°C 30 min】【Substrate: GLASS PLATE】

*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 : 2025.07.07