

13 Ink series

(Gloss ink for nameplate)

13 Screen Ink is designed for printing dials such as speed meters related to automobile. 13 Screen Ink solves the fogging problem due to gas caused by residual solvent in acrylic transparent covers of meter dials. 13 Screen Ink has excellent printability and good adhesion to various plastic materials.

Applications	For printing dials of automobile related meters, etc.						
Special Features	<ul style="list-style-type: none"> • Good adhesion to plastic materials such as PC, acrylic, and soft & rigid PVC, etc. • For plastic covers (mainly acrylic plates) set on top of printed materials, it is designed to prevent the problem of fogging on the inside of the cover due to gas generation caused by residual solvent in printed materials. • Ink composition has excellent resistance properties and weather resistance. 						
Substrate	PC, acrylic, and soft & rigid PVC						
Dilution	G-001 SOLVENT (fast dry), G-002 SOLVENT (standard), G-003 SOLVENT (slow dry) and G-004 (extra slow dry), Dilution 15-25% Please use G-001 SOLVENT for spray painting, not for screen printing.						
Additives	SM-40 DEFOAMER 2% (For anti-foam and improving leveling)						
Recommended Cleaner	Screen Cleaner L2 or G-002 Solvent						
Mesh	T150 to 300 mesh (Coverage is 20 to 28 m ² /kg at T250 mesh).						
Drying	Room Temperature (Tack-free) 15 to 25 min. (Standard Solvent) <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;"></td> <td style="text-align: center;"><u>Overprint</u></td> </tr> <tr> <td>*It is necessary to understand the capability of the dryer used and set drying temperature and time according to the printed material.</td> <td>Each layer 60°C-80°C 5-10 min. Final layer 80°C-90°C 60 min.</td> </tr> </table>				<u>Overprint</u>	*It is necessary to understand the capability of the dryer used and set drying temperature and time according to the printed material.	Each layer 60°C-80°C 5-10 min. Final layer 80°C-90°C 60 min.
	<u>Overprint</u>						
*It is necessary to understand the capability of the dryer used and set drying temperature and time according to the printed material.	Each layer 60°C-80°C 5-10 min. Final layer 80°C-90°C 60 min.						
Standard Colors	000 MEDIUM	221 YELLOW	611 WHITE				
	001 VICTORIA	246 LIGHT YELLOW	611C OPAQUE WHITE				
	002 EXTENDER	263 REDDISH YELLOW	672 OPAQUE WHITE				
	033 GEL RETARDER	271 OPAQUE LIGHT YELLOW	SP OPAQUAE WHITE				
	121C OPAQUE SCARLET	277 OPAQUE REDDISH YELLOW	797C OPAQUE GREEN				
	161SCARLET	391C OPAQUE BLUE	821 VIOLET				
	163 RED	525 ORANGE	911 BLACK				
	177 OPAQUE RED	577 OPAQUE ORANGE	911C OPAQUE BLACK No.15				
	182 RED	581 MAGENTA					

Caution

- Adhesion test must be done before printing as quality of plastic may differ depending on manufacturers or lots. It is also recommended to wipe the surface of the printing part with alcohol or mineral spirits to prevent defective print due to static electricity and insufficient adhesion due to plasticizer and additive floating.
- 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: 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.

Resistance

Test Items	Test conditions	Test results
Adhesion	JIS K 5600-5-6:ISO2409(Cross cut method), 1mm interval 6×6 cuts, Cellophane tape and peel	0 (No peeling)
Scratch hardness	JIS K 5600-5-4:ISO 15184(Pencil method), 750g weight, hardness of the pencil which does not make scar	B
Humidity and cool-heat cycling test	JIS K 5600-7-4 80°C(4.5H)~−30°C(4H)~50°C95%RH(14H)~25°C(30 min) 10 cycles, Check appearance of printed ink layer and peeling off from the substrate	No defect
Alcohol	Gakushin scrub tester, cotton-soaked ethanol, 200g weight, 200 back and forth. Check color fading.	No defect
Bend test	JIS K 5600-5-1 ISO 1519 (Cylindrical Mandrel) 2mmΦ. Check crack.	No defect
Falling-weight test	JIS K 5600-5-3 1/4 inch, drop 300g weight from 50cm height	No defect
Accelerated weathering	JIS K 5600-7-7 ISO 11341 Radiant energy 60W/m ² , BP Temperature 63±3°C Raining rate 18 min/120 min, 1000hrs, Check color fade	No defect

*Test conditions 【13-911 Black】 【G-002 Solvent 20%】 【80°C 30min】
【T-250】 【Substrate:Lexan film】

*Above test was conducted after leaving above printed materials for 24 hours at a room temperature.

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

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

Revised : 2023.09.01