

VAR-NF Ink series

(Gloss ink for Acrylic, Rigid PVC, ABS, and PC)

VAR-NF Ink series is a naphthalene-free type screen ink that does not intentionally use naphthalene as a raw material. It has superior adhesiveness to plastic such as Acrylic plates and Rigid PVC, etc. and solvent resistance, and is suitable for screen printing on instrument panels for automobiles and home appliances and various display boards.

Applications	Outdoor signage, instrument panels for automobile and home appliances, and various display boards.		
Special Features	<ul style="list-style-type: none"> • Naphthalene is not intentionally used as a raw material. • By using NF solvent, a naphthalene-reduced diluting solvent, in combination, excellent adhesion can be obtained to the following materials. • It has particularly excellent surface hardness and is not easily scratched. • Excellent alcohol resistance and solvent resistance to common thinners. 		
Substrate	Acrylic, Soft & Rigid PVC, ABS, Polycarbonate		
Dilution	NF-001 SOLVENT (fast) NF-002 SOLVENT(standard) NF-003 SOLVENT (slow) NF-004 SOLVENT (extra slow) Dilution 15% to 20% *Due to the possibilities of contamination with naphthalene, use designated solvents NF SOLVENT.		
Additives	SM-40 DEFOAMER 2% (For anti-foam and improvement in leveling)		
Recommended Cleaner	Screen Cleaner L2 or NF-003 SOLVENT		
Mesh	T 150 to 300 mesh (Coverage is 20 to 28m ² /kg at 250 mesh)		
Drying	Each layer 60°C 10 min Final layer 60°C~80°C 60 min		
Standard Colors	000 MEDIUM	221 YELLOW	675 OPAQUE WHITE
	001 VICTORIA	271 OPAQUE LIGHT YELLOW	795 GREEN
	003 BRIGHT RED	277 OPAQUE REDDISH YELLOW	821 VIOLET
	161 SCARLET	391 BLUE	911 BLACK
	177 OPAQUE RED	525 ORANGE	

Caution	<ul style="list-style-type: none"> Adhesion test must be done before printing as quality of plastic may differ depending on manufacturers or lots. It is also recommended to wipe 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. The can tends to rust due to moisture. Please use as soon as possible after opening. Since naphthalene is present in all petroleum products, its complete removal is difficult. The amount of naphthalene in this product is not a guaranteed value. Please handle squeegees and cleaning solvents with care. Checking before production: 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 below 23 Degree C)
Handling	<ul style="list-style-type: none"> 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, cellophane tape and peel off	0(no peel)
Pencil Hardness	JIS K 5600-5-4:ISO 15184(pencil)、Weight 750g, Hardness which does not make scar	3H
Heat	JISK5600-6-3 : ISO 3248: 150 °C、2hrs., check appearance and peel off from the substrate.	No defect
Hot water	JIS K 5600-6-2: ISO 2812-2, Soak 24 hrs. in 60°C hot water, check appearance and peel off from the substrate.	No defect
Acid	Soak 24 hrs. in 5% H ₂ SO ₄ , check appearance	No defect
Alkali	Soak 24 hrs. in 5% NaOH, check appearance	No defect
Alcohol	Gakushin scrub tester, cotton soaked ethyl alcohol, weight 500g, 300 back and forth, check peel off	No defect
Oil	Gakushin scrub tester, cotton soaked engine oil, weight 500g, 300 back and forth, check peel off	No defect
Solvent	Gakushin scrub tester. Cotton soaked MIBK, weight 500g, 20 back and forth, check peel off	No defect
Gasoline	Gakushin scrub tester. Cotton soaked High octane gasoline, weight 500g, 20 back and forth, check peel off	No defect
Scrub	Gakushin scrub tester, cotton, weight 500g, 300 back and forth, check color fade	No defect
Vacuum forming	Check cracks after forming by vacuum forming machine.	No defect
Accelerated weathering	JIS K 5600-7-7 ISO 11341 Radiant energy 60W/m ² , BP Temp.63±3°C Raining rate 18 min/120 min, check color fade	(800-2000hrs) No defect

*Test conditions 【VAR- NF675 Opaque White, For formability, 391 Blue, 611 White】 【60°C 30 min】
 【NF-002Solvent 20%】【T 250】【Substrate: SHINKOLITE™ (Acrylic Sheet) E(extrusion)】

*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 they are not guaranteed values.

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

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