

## VK Ink series (Semi-Gloss ink for marking film)

VK Ink was developed as ink for automobiles, motorcycles, and outdoor-marking films. The standard colors have excellent weather resistance, and intended resistance can be obtained by using overcoat clear in combination.

<b>Applications</b>	Automobiles, motorcycles, and outdoor-marking films		
<b>Special Features</b>	<ul style="list-style-type: none"> <li>Standard colors with excellent weather resistance are available.</li> <li>Excellent printability and suitable for high-speed printing.</li> </ul>		
<b>Substrate</b>	PVC stickers, polycarbonate, ABS		
<b>Dilution</b>	J-001 SOLVENT (fast) J-002 SOLVENT (standard) J-003 SOLVENT (slow) J-004 SOLVENT (extra slow) Dilution: 5 to 25% *Z-603 Solvent can be used as a thinning solvent, but the solvent may residue on the sheet. Please be sure to dry thoroughly. *Do not use other solvents as they may adversely affect curing, adhesion, stencil stability, or other properties.		
<b>Additives</b>	SM-90 DEFOAMER 2% (For anti-foam and improvement in leveling)		
<b>Recommended Cleaner</b>	Screen Cleaner L2 or J-002 SOLVENT		
<b>Mesh</b>	T 180 to 270 mesh (Coverage is 25 to 35m <sup>2</sup> /kg at 200 mesh)		
<b>Drying</b>	Natural drying 60 min or more Each layer 90-100°C 1 to 2 min Final layer 50-60°C 30 min or more *Drying time may varies depending on the substrate. *It is necessary to know the capacity of the dryer being used and set the drying temperature and time appropriate for the desired printed material.		
<b>Standard Colors</b>	000 MEDIUM	271 OPAQUE LIGHT YELLOW	618 C OPAQUE WHITE
	001 VICTORIA	272 OPAQUE LIGHT YELLOW	797 GREEN
	166 RED	277 OPAQUE REDDISH YELLOW	821 VIOLET
	168 SCARLET	391 BLUE	911 BLACK
	177 OPAQUE RED	516 ORANGE	054TC YELLOW
	190 BRIGHT RED	535 ORANGE	215TC CYAN D
	242 REDDISH YELLOW	581 MAGENTA	135TC MAGENTA
	246 LIGHT YELLOW	611 WHITE	915TC BLACK
	247 LIGHT YELLOW	611 C OPAQUE WHITE	512 MK REDDISH YELLOW

**Overcoat Clear**

- The following overcoat clears are available, use according to your purpose. Printing with T 180 to 225 mesh is recommended. Please refer to product information sheet for each clear.  
SP-3100AU CLEAR: Gloss clear with excellent resistance and weather resistance.  
SP-4500AU CLEAR: Fast drying gloss clear with excellent weather resistance and scratch resistance.

**Caution**

- Adhesion test must be done before printing as quality of PVC sheet may differ depending on manufacturers or lots.
- Adhesion failure may occur if the release agent is adhered to, or if the material has plasticizers or additives floating on it. It is recommended to wipe the surface of the printed area with alcohol, etc.
- 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 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 item	Test Conditions	Test results
Adhesion	JIS K 5600-5-6:ISO2409(cross-cut)、1mm interval 6×6, cellophane tape and peel	0(no peel)
Water	Soak 168 hrs. in tap water, check appearance and peel off	No defect
Alcohol	Gakushin scrub tester, cotton soaked ethyl alcohol, weight 200g, 500 back and forth, check peel off	No defect
Scrub	Gakushin scrub tester, cotton, weight 200g, 500 back and forth, check color fade	No defect
Bending	JIS K 5600-5-1 ISO 1519 (Cylindrical Mandrel) 2mmΦ, check cracks	No defect
Humidity and cool-heat cycling test	JIS K 5600-7-4 80°C(4.5Hrs)~-30°C(4Hrs)~50°C95%RH(14Hrs)~25°C(30 min) 3 cycles, check appearance and peel off	No defect
Accelerated weathering	JIS K 5600-7-7 ISO 11341 Radiant energy - 60W/m <sup>2</sup> , BP Temp.63±3°C Raining rate18 min/120 min,2000 hrs., check color fade and peel off	No defect

\*Test conditions 【VK-911 Black】 【J-002 Solvent 20%】 【50°C 10 min】  
【T 250】 【Substrate: PVC sticker and polycarbonate】

\*Above weathering test was conducted on a PVC sticker with an overcoat of SP-62AU CLEAR.

\*Above test was conducted after leaving above printed materials for 168 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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