

## UV FIL Ink series (UV Curable Ink)

UV FIL Ink is a UV curable ink that is extremely flexible and highly resistant. The ink has excellent adaptability to flexible material.

|                            |   |   |   |
|----------------------------|---|---|---|
| <b>Applications</b>        | Stickers, membrane  |   |   |
| <b>Special Features</b>    | <ul style="list-style-type: none"> <li>• Flexible, tough and widely adaptable to flexible materials.</li> <li>• Excellent weather resistance</li> <li>• Low odor, low skin irritation</li> <li>• Excellent solvent resistance</li> </ul>  |   |   |
| <b>Substrate</b>           | Soft & rigid PVC, PVC stickers, Easy adhesion treated PET, Paper  |   |   |
| <b>Dilution</b>            | Dilution is not required (Use RE-801 or RE-802 REDUCER within 5% when required)<br>RE-801: Rapid cure Reducer<br>RE-802: Standard type Reducer  |   |   |
| <b>Additives</b>           | SM-269 DEFOAMER 0 to 1% (if foaming or repelling occurs)<br>SM-301 FLOW AGENT 0 to 1% (if surface leveling improvement are required)  |   |   |
| <b>Recommended Cleaner</b> | <ul style="list-style-type: none"> <li>• Screen Cleaner L2</li> <li>• Applicable to machine cleaning with less hazardous glycol ether types (Glycol ether type cleaning may not be suitable for some types of stencil emulsions, so please be sure to test it beforehand.)</li> </ul>   |   |   |
| <b>Mesh</b>                | T 300 to 420 mesh (Coverage is 60 to 90m <sup>2</sup> /kg)  |   |   |
| <b>Drying/Curing</b>       | Accumulated energy: about 300 to 400mJ/cm <sup>2</sup> , Peak power:400mW/cm <sup>2</sup><br>(Eye Graphics UV integral light counter)<br>Two 80W/cm Metal halide lamps, lamp height 15 cm, belt speed 10 to 15m/min   |   |   |
| <b>Standard Colors</b>     | 000 MEDIUM<br>011 MATT BASE<br>160 SCARLET<br>163 RED<br>177 OPAQUE RED<br>182 RED  | 190 BRILLIANT RED<br>221 YELLOW<br>263 REDDISH YELLOW<br>271 OPAQUE LIGHT YELLOW<br>277 OPAQUE REDDISH YELLOW<br>391 BLUE | 581 MAGENTA<br>611 WHITE<br>626 WHITE<br>797 GREEN<br>821 VIOLET<br>911 BLACK |
| <b>Caution</b>             | <ul style="list-style-type: none"> <li>• Checking adhesion before production: Adhesion may change depending on the substrates, processes, and printing. Be sure to check the adhesiveness before mass production printing.</li> <li>• Do not use for printed materials to be placed inside the packages of optical discs such as CDs and CD-Rs.</li> <li>• Ink shelf life: stable for 12 months from shipping date</li> </ul> |   |   |

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|-----------------|---|
| <b>Safety</b>   | UN No.: 3082<br>UN Classification: Class9 Environmentally Hazardous Substances  |
| <b>Handling</b> | <ul style="list-style-type: none"> <li>• 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.</li> <li>• Containers should be closed tightly after use and stored in a cool and dark place.</li> <li>• SDS is available upon request. Please request a copy and read it carefully before handling the products.</li> </ul> |

## Resistance

| Test item              | Test Conditions  | Test results            |
|------------------------|--|-------------------------|
| Adhesion               | JIS K 5600-5-6(cross-cut), 1mm interval 6×6、cellophane tape & peel off   | 0(no peel)              |
| Pencil Hardness        | JIS K 5600-5-4 (pencil)、Weight 750g, hardness which does not make scar   | 6B or below             |
| Heat                   | 80°C 72 hrs. check appearance and peel off   | No defect               |
| Hot Water              | Soak 72 hrs. in 50°C hot water, leave 1 hr., check appearance, adhesion and size change.                                 | No defect               |
| Hot-cold cycling       | 80°C 4 hrs~25°C 1 hr~-20°C 4 hrs~ 25°C 1hr 10 cycles, check appearance and adhesion                                      | No defect               |
| Humidity               | 60°C97%RH, After 240hrs、leave 1 hr. Check appearance, adhesion and size change   | No defect               |
| Boiling                | 98°C check appearance after 5 min  | No defect               |
| Water                  | Soak 240hrs(25°C) in tap water、leave it 1hr, check appearance, adhesion and size change.                                 | No defect               |
| Acid                   | Soak 24 hrs. in 5% HCl, check appearance and adhesion (25°C)   | No defect               |
| Alkaline               | Soak 24 hrs. in 5% NaOH solution, check appearance and adhesion(25°C)  | Slightly shinny surface |
| Alcohol                | Soak 30 min in ethanol, check appearance   | No defect               |
| Gasoline               | Soak 30 min in high octane gasoline, check appearance  | No defect               |
| Scrub                  | Gakushin scrub tester, cotton, 500g weight, 1000 back and forth, check appearance  | No defect               |
| Elongation (%)         | Tensilon: 1.5cmx10cm sheet pulled by Tensilon STM tensile tester   | 10.0→13.5cm             |
| Punching               | After cutting by press and push cutter, observe the cut part.  | No defect               |
| Blocking               | 200g/cm <sup>2</sup> weight, 60°C 100 hrs. matching printing surface, blocking test                                      | No defect               |
| Overprinting           | Overprinting of 5 colors, check appearance and adhesion  | No defect               |
| Accelerated Weathering | Weather meter,BP temp. 63+/-3°C Raining rate 18 min/120 min, check color fade and appearance (JIS K5600-7-7 : ISO 11341) | 600-1200hrs (no defect) |

\*Test condition 【80W/cm<sup>2</sup> Metal halide lamps, Height 15 cm, Belt speed 10m/min】  
【T 350】【Substrate: PVC sticker】

\*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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