

# **UV/LED--General ink**

### **(Product Introduction)**

This product is UV/LED light-cured screen printing general-purpose ink, suitable for paper, coated paper; painted surface; PC, PMMA, ABS, PS, AS; treated PE, PET, PP, etc.;

#### [Features]

- Fast curing speed, vivid color, high gloss;
- Good opacity and adhesion;
- High surface hardness, excellent light resistance, abrasion resistance and scratch resistance;
- ❖ High-efficiency, energy-saving, environmental protection, LED light curing is more than 90% energy-saving than UV light;
- Suitable for general printing substrate and all kinds of plastic products; it can be cured by special LED light or general UV mercury light source.

# **[**Environmental information]

Comply with Bauhinia Screen Ink Class A standard. Meet the volatile organic compound limit requirements in GB38507-2020. If you have special requirements, please consult our sales staff.

### [Performance parameters]

| Item  | Appearance     | Viscosity (25°C)        | Fineness                 | Defoaming           | Leveling     | Adhesion          |
|-------|----------------|-------------------------|--------------------------|---------------------|--------------|-------------------|
| Index | Viscous liquid | 4500±300mpa.s           | ≤6um                     | good                | good         | 100%              |
| Item  | Light fastness | Gloss (60° gloss meter) | Flexibility              | Light curing energy | Curing speed | Suggested<br>mesh |
| Index | Level 8        | 80±5°                   | Good, bending resistance | 2000≥mW/c m²        | ≥12M/min     | 350-450<br>mesh   |

# **User's guidance**

- Fully stirred the ink before use, to avoid long-term delamination affecting the printing effect;
- ❖ Number of meshes: 350-450 mesh is recommended;

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- Scraper hardness: 75-85 degree squeegee is recommended;
- ❖ Ink curing process: UV-LED light source---single lamp bead power 2-4W, quantity 300~600 (depending on the curing area), effective length of light source 400~800mm, light intensity 2.8-4w/ c m², The height from the substrate is 0.8-1.0cm; due to the consideration of the heating performance of the substrate, it is recommended to use a low-temperature water-cooled curing machine or a water-cooled LED light source;
- ★ If you use UV mercury lamp for curing, it is recommended that the UV curing machine is 2×5KW or more, and the UV curing energy is set at 150 ≥mj/c m² to ensure full curing;
- ❖ Additives: Bauhinia LED-001 diluent can be used to reduce ink viscosity (within 10%)

#### [Precautions]

- ❖ Ensure that the substrate is clean before printing, otherwise it will affect the adhesion or the smoothness of the ink;
- ❖ The printing workshop should avoid direct sunlight or strong light, and cover the ink in time after opening the cover, otherwise it will cause accidental curing or affect the printing performance. The yellow light is safety light;
- ❖ Due to the diversity of customer requirements, the printing workshop must simulate actual requirements, trial production in small scale, and large-scale production after confirmation; in addition, the printing effect of this product are closely related to the number of screens, the number of printing lines, the thickness of photosensitive adhesive, and UV curing energy and substrate type, and should be fully tested before printing;
- ❖ The ink may have a certain irritation effect on sensitive skin, please pay attention to protection; if the skin comes in contact, please wash with soapy water or water in time; if you accidentally contact the eyes, please rinse with plenty of water immediately, and promptly seek medical attention. Please change it in time when the ink sticks to the clothes;
- ❖ Do not mix with inks of different series or other brands to avoid adverse reactions;
- Stored in a cool, dry and dark place where is about 25°C, the shelf life is 1 year;

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❖ Attached: UV mercury lamp and UV-LED lamp comparison demonstration table (for reference only)

### Comparison demonstration table of UV mercury lamp and UV-LED lamp

| Types                                         | UV-mercury lamp                                                                               | UV-LED lamp                                                   |  |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------|--|
| length                                        | 800~1000mm (adjustable)                                                                       | 800~1200mm (adjustable)                                       |  |
| Emission spectrum                             | Broad: 205~445nm                                                                              | Concentration: 395nm                                          |  |
| Applicability                                 | Cannot be applied to heat sensitive materials                                                 | Almost all materials                                          |  |
| life                                          | ≤1000 hours                                                                                   | ≥20000 hours                                                  |  |
| Light output attenuation                      | Severe attenuation                                                                            | Almost no attenuation                                         |  |
| Ozone production                              | have                                                                                          | none                                                          |  |
| Light source thermal effect                   | High fever                                                                                    | Low                                                           |  |
| Start up                                      | Slow start, after shutting down, it needs to cool down completely before starting             | Can be started instantly                                      |  |
| Cool down                                     | Air or water                                                                                  | Air or water                                                  |  |
| Light source volume (length × width × height) | Large size (3m×1.2m×1.2m)                                                                     | Very small size (1m×0.2m×0.2m)                                |  |
| Light source equipment                        | Transformers, lamps, capacitors, fans                                                         | Light source module, cooling system                           |  |
| Maintenance                                   | Difficult to clean                                                                            | Easy to clean                                                 |  |
| Electric power                                | Lamp power: 8kw×3=24kw<br>Motor power: 4kw General<br>model: 10~15kw Larger model:<br>20~36kw | LED power: 2kw cooling<br>motor power: 2kw total<br>power 4kw |  |

# [Disclaimer]

\* The information in this article is based on actual production and test results, but whether the performance of the product meets the requirements of your factory depends on the specific application conditions and the materials to be printed. We suggest that users need to know whether each product meets all their requirements before starting to print. Since we cannot predict or control the conditions for your products to be used, product performance cannot be guaranteed. All sales are subject to our company's Standard sales terms and conditions control.

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