

## Notes

**Warnings :** The information and recommendations presented here were completed with the utmost care, but can't be extended to cover every possible case. They are intended to serve as non-binding guidelines and must be adapted to the prevailing condition. The product whether used singly or in combination with other substances, should be carried out in lab test prior to bulk production. The user needs to assume all risk and liability no matter whatsoever results are.

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# Evercion P<sup>®</sup>

[www.ecic.com](http://www.ecic.com)

Better Chemistry  
Better Life

## Evercion P

Reactive dyes for  
Cellulose, Silk printing



  
Everlight  
Chemical

EVERCION P

English

Everlight Chemical Industrial Corporation

## Evercion P







Evercion P reactive dyes are designed for cellulose, silk printing, giving prints with excellent fastness and brightness.

### Feature of Evercion P

- Brilliant with full color range
- Easy to dissolve with high solubility
- Free form insoluble particle
- Dust free
- Good quality with consistency
- Easy wash-off and free from cross staining
- Low urea request for most of products
- Excellent paste stability
- Very good reproducibility
- Meet standard fastness requirement
- Good for versatile printing and dyeing application
- Liquid range available for auto dispensing

### Application of Evercion P

- Direct printing
- Resist printing
- Cellulose continuous pad bake dyeing
- E/C fabric disperse/reactive continuous pad bake dyeing














| Evercion P Colors<br>on<br>Cotton  |         | Yellow<br>P-6GS   | Yellow<br>P-5G  | Yellow<br>P-4G  | Golden<br>Yellow<br>P-R   | Yellow<br>P-2RN   | Yellow<br>P-N3R   |
|--|---------|---|---|---|---|---|---|
|  |         |  |  |  |  |  |  |
| 5g/kg & 30g/kg for color sample.   |         |   |   |   |   |   |   |
| Solubility (g/l)   | 50°C    | 150   | 200   | 200   | 140   | 200   | 160   |
| Lightfastness (Xenon test)<br>----- ISO 105-B02 (Black, 10/60 g/kg)              | 3 g/kg  | 5-6   | 6   | 5   | 6   | 5-6   | 6   |
|  | 30 g/kg | 6   | 6   | 6   | 6   | 6   | 6   |
| Light-fastness to perspiration - Acid / Alkali<br>(Xenon test) ----- ISO 105-B07 | Acid    | 6   | 6   | 5-6   | 6   | 6   | 6   |
|  | Alkali  | 6   | 5-6   | 5   | 6   | 6   | 6   |
| Fastness to washing<br>----- ISO 105-C02 (50°C x 45')                            | E       | 5   | 5   | 5   | 5   | 5   | 5   |
|  | C       | 5   | 5   | 5   | 5   | 4-5   | 5   |
|  | N       | 5   | 5   | 5   | 5   | 5   | 5   |
| Fastness to water<br>----- ISO 105-E01 (37°C x 4hr)                              | E       | 5   | 5   | 5   | 5   | 5   | 5   |
|  | C       | 5   | 5   | 5   | 5   | 4-5   | 5   |
|  | N       | 5   | 5   | 5   | 5   | 5   | 5   |
| Fastness to perspiration (acid)<br>----- ISO 105-E04 (37°C x 4hr)                | E       | 5   | 5   | 5   | 5   | 5   | 5   |
|  | C       | 5   | 5   | 5   | 4-5   | 4-5   | 4-5   |
|  | N       | 5   | 5   | 5   | 5   | 4-5   | 4-5   |
| Fastness to perspiration (alkali)<br>----- ISO 105-E04 (37°C x 4hr)              | E       | 5   | 5   | 5   | 4-5   | 4-5   | 5   |
|  | C       | 5   | 5   | 5   | 4-5   | 4-5   | 4-5   |
|  | N       | 5   | 5   | 5   | 5   | 4-5   | 4-5   |
| Fastness to chlorinated water (20ppm) --- ISO 105-E03 (27°Cx1hr)                 | E       | 5   | 3   | 4   | 4   | 4   | 4   |
| Fastness to rubbing<br>----- ISO 105-X12   | Dry     | 5   | 5   | 5   | 5   | 5   | 5   |
|  | Wet     | 4   | 4   | 4   | 3-4   | 3   | 3   |
| Multicycle Laundering --- M&S C10A(UK-TO)60°Cx30'                                | E       | 4-5   | 3   | 4-5   | 4-5   | 4-5   | 4-5   |
| White ground staining  | E       | 5   | 5   | 5   | 4-5   | 4-5   | 4-5   |








Remark : E : color change C : stain on cotton N : stain on nylon (Fastness properties were tested in accordance with SN-ISO 105 and carried out under laboratory condition)  
For all wet fastness & rubbing fastness of test specimens were printed at 40g/kg ; for M&S C10A & perspiration light fastness was tested at 30g/kg



| Orange<br>P-2R   | Orange<br>P-G   | Orange<br>P-4R  | Scarlet<br>P-RR   | Red<br>P-2B   | Red<br>P-4BN  | Red<br>P-4B   | Red<br>P-6B   | Red<br>P-8B  | Red<br>P-5BL  | Blue<br>P-GR  | Blue<br>P-3R  | Blue<br>P-5R  | Blue<br>P-N3G   | Navy<br>P-2R  | Navy<br>P-2RN   | Turq.<br>P-A  | Turq.<br>P-GF   |
|--|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 160  | 200   | 200   | 120   | 100   | 200   | 200   | 120   | 120  | 200   | 160   | 240   | 120   | 120   | 120   | 120   | 100   | 200   |
| 3  | 3-4   | 5   | 4   | 4   | 4   | 4   | 4   | 4  | 5   | 5   | 5   | 4-5   | 3   | 3-4   | 3-4   | 3-4   | 4-5   |
| 5  | 6   | 6   | 5-6   | 5-6   | 5-6   | 5-6   | 5-6   | 5-6  | 6   | 5-6   | 6   | 6   | 4   | 4-5   | 4-5   | 5-6   | 5   |
| 4-5  | 6   | 6   | 5-6   | 5-6   | 5-6   | 5-6   | 5-6   | 5-6  | 6   | 5-6   | 6   | 5-6   | 4-5   | 5   | 5   | 4-5   | 4-5   |
| 4-5  | 5-6   | 6   | 5-6   | 5-6   | 5-6   | 5-6   | 5-6   | 5-6  | 6   | 5-6   | 6   | 5   | 4-5   | 4-5   | 4-5   | 4-5   | 4-5   |
| 5  | 4-5   | 5   | 5   | 5   | 5   | 5   | 5   | 5  | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   |
| 5  | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5  | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 3   | 3-4   |
| 5  | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5  | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   |
| 5  | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5  | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 4-5   |
| 4-5  | 4-5   | 4-5   | 4-5   | 4-5   | 4-5   | 4-5   | 4-5   | 4  | 5   | 4-5   | 4-5   | 4-5   | 4-5   | 4-5   | 4-5   | 3-4   | 3-4   |
| 4-5  | 4-5   | 4-5   | 4-5   | 4   | 4-5   | 4-5   | 4-5   | 4-5  | 5   | 4   | 4-5   | 5   | 4-5   | 4-5   | 4-5   | 3   | 3   |
| 5  | 5   | 5   | 5   | 4-5   | 4-5   | 4-5   | 4-5   | 4-5  | 4-5   | 4-5   | 4-5   | 4-5   | 5   | 5   | 5   | 5   | 4-5   |
| 4  | 4-5   | 4-5   | 4   | 4   | 4   | 4   | 4   | 4  | 4-5   | 5   | 5   | 4-5   | 4-5   | 4-5   | 4-5   | 2-3   | 2-3   |
| 4-5  | 4-5   | 4-5   | 4   | 4   | 4   | 4   | 4   | 4  | 5   | 4-5   | 4-5   | 5   | 4-5   | 4-5   | 4-5   | 2-3   | 2-3   |
| 4-5  | 5   | 5   | 4-5   | 4-5   | 4-5   | 4-5   | 4-5   | 4-5  | 4-5   | 4-5   | 4-5   | 4-5   | 5   | 5   | 5   | 5   | 4-5   |
| 4-5  | 4-5   | 4-5   | 4   | 4   | 4   | 4-5   | 4   | 4  | 4-5   | 5   | 5   | 4-5   | 4-5   | 4-5   | 4-5   | 2-3   | 2-3   |
| 5  | 5   | 4-5   | 4-5   | 4-5   | 4-5   | 4-5   | 5   | 4-5  | 5   | 5   | 5   | 5   | 5   | 5   | 4-5   | 3-4   | 3   |
| 4  | 4-5   | 4   | 4-5   | 4-5   | 4-5   | 4-5   | 4   | 4-5  | 3   | 2   | 2   | 2   | 4   | 4   | 4   | 4   | 3   |
| 4-5  | 5   | 5   | 5   | 5   | 5   | 5   | 4-5   | 4-5  | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 4-5   | 5   |
| 2-3  | 3   | 3   | 3   | 2-3   | 2-3   | 2-3   | 2-3   | 2-3  | 3   | 3-4   | 3   | 2-3   | 2-3   | 2-3   | 2-3   | 2   | 2-3   |
| 4-5  | 4   | 4-5   | 4-5   | 4-5   | 4-5   | 4-5   | 4-5   | 4-5  | 4-5   | 4-5   | 5   | 4-5   | 5   | 5   | 5   | 4-5   | 4-5   |
| 4-5  | 4-5   | 4-5   | 4-5   | 5   | 5   | 5   | 5   | 5  | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 2-3   | 3-4   |



| Blue<br>P-5R   | Blue<br>P-N3G   | Navy<br>P-2R  | Navy<br>P-2RN   | Turq.<br>P-A  | Turq.<br>P-GF   | Green<br>P-4BD  | Brown<br>P-4RD  | Brown<br>P-6R   | Grey<br>P-TGE   | Black<br>P-N  | Black<br>P-SG   | Black<br>P-GR   |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 120  | 120   | 120   | 120   | 100   | 200   | 80  | 200   | 100   | 100   | 100   | 100   | 140   |  |  |  |  |  |
| 4-5  | 3   | 3-4   | 3-4   | 3-4   | 4-5   | 3   | 3-4   | 5   | 5   | 5   | 4-5   | 4   |  |  |  |  |  |
| 6  | 4   | 4-5   | 4-5   | 5-6   | 5   | 4   | 4   | 6   | 6   | 6   | 6   | 6   |  |  |  |  |  |
| 5-6  | 4-5   | 5   | 5   | 4-5   | 4-5   | 4-5   | 4-5   | 6   | 6   | 4-5   | 5   | 4-5   |  |  |  |  |  |
| 5  | 4-5   | 4-5   | 4-5   | 4-5   | 4-5   | 4-5   | 4-5   | 6   | 5-6   | 4-5   | 4-5   | 4-5   |  |  |  |  |  |
| 5  | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   |  |  |  |  |  |
| 5  | 5   | 5   | 5   | 3   | 3-4   | 4   | 3-4   | 5   | 4-5   | 4   | 4   | 4-5   |  |  |  |  |  |
| 5  | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   |  |  |  |  |  |
| 5  | 5   | 5   | 5   | 5   | 4-5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   |  |  |  |  |  |
| 4-5  | 4-5   | 4-5   | 4-5   | 3-4   | 3-4   | 4   | 3-4   | 4   | 4-5   | 3-4   | 3-4   | 4-5   |  |  |  |  |  |
| 5  | 4-5   | 4-5   | 4-5   | 3   | 3   | 3   | 3   | 4-5   | 4-5   | 3-4   | 3-4   | 3-4   |  |  |  |  |  |
| 4-5  | 5   | 5   | 5   | 5   | 4-5   | 5   | 5   | 4-5   | 4-5   | 5   | 5   | 5   |  |  |  |  |  |
| 4-5  | 4-5   | 4-5   | 4-5   | 2-3   | 2-3   | 4-5   | 3-4   | 4   | 4-5   | 3-4   | 3-4   | 4   |  |  |  |  |  |
| 5  | 4-5   | 4-5   | 4-5   | 2-3   | 2-3   | 4-5   | 3-4   | 4-5   | 4-5   | 3-4   | 3-4   | 4   |  |  |  |  |  |
| 4-5  | 5   | 5   | 5   | 5   | 4-5   | 5   | 5   | 4-5   | 4-5   | 5   | 5   | 5   |  |  |  |  |  |
| 4-5  | 4-5   | 4-5   | 4-5   | 2-3   | 2-3   | 4-5   | 3-4   | 4   | 4-5   | 3-4   | 3   | 4   |  |  |  |  |  |
| 5  | 5   | 5   | 4-5   | 3-4   | 3   | 4-5   | 4   | 5   | 4-5   | 4-5   | 4-5   | 4-5   |  |  |  |  |  |
| 2  | 4   | 4   | 4   | 4   | 3   | 1-2   | 4   | 4-5   | 3-4   | 3-4   | 4   | 4   |  |  |  |  |  |
| 5  | 5   | 5   | 5   | 4-5   | 5   | 5   | 4-5   | 4-5   | 4-5   | 5   | 5   | 4-5   |  |  |  |  |  |
| 2-3  | 2-3   | 2-3   | 2-3   | 2   | 2-3   | 2-3   | 2-3   | 3   | 2-3   | 3   | 3   | 2-3   |  |  |  |  |  |
| 4-5  | 5   | 5   | 5   | 4-5   | 4-5   | 4-5   | 4-5   | 5   | 5   | 4   | 4-5   | 5   |  |  |  |  |  |
| 5  | 5   | 5   | 5   | 2-3   | 3-4   | 4   | 3-4   | 4-5   | 4-5   | 5   | 5   | 4-5   |  |  |  |  |  |
|  |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |

|  |   |   |   |   |   |   |  |  |  |  |  | <b>Evercion P Colors<br/>on<br/>Cotton</b> |   |
|--|---|---|---|---|---|---|--|--|--|--|--|--|---|
| Green<br>P-4BD   | Brown<br>P-4RD  | Brown<br>P-6R   | Grey<br>P-TGE   | Black<br>P-N  | Black<br>P-SG   | Black<br>P-GR   |  |  |  |  |  |  |   |
|  |  |  |  |  |  |  |  |  |  |  |  | 5g/kg & 30g/kg for color sample.           |   |
| 80   | 200   | 100   | 100   | 100   | 100   | 140   |  |  |  |  |  | 50°C                                       | Solubility (g/l)  |
| 3  | 3-4   | 5   | 5   | 5   | 4-5   | 4   |  |  |  |  |  | 3 g/kg                                     | Lightfastness ( Xenon test )  |
| 4  | 4   | 6   | 6   | 6   | 6   | 6   |  |  |  |  |  | 30 g/kg                                    | ----- ISO 105-B02 (Black, 10/60 g/kg)                               |
| 4-5  | 4-5   | 6   | 6   | 4-5   | 5   | 4-5   |  |  |  |  |  | Acid                                       | Light-fastness to perspiration - Acid / Alkali                      |
| 4-5  | 4-5   | 6   | 5-6   | 4-5   | 4-5   | 4-5   |  |  |  |  |  | Alkali                                     | (Xenon test) ----- ISO 105-B07                                      |
| 5  | 5   | 5   | 5   | 5   | 5   | 5   |  |  |  |  |  | E  | Fastness to washing<br>----- ISO 105-C02 (50°C x 45')               |
| 4  | 3-4   | 5   | 4-5   | 4   | 4   | 4-5   |  |  |  |  |  | C  |   |
| 5  | 5   | 5   | 5   | 5   | 5   | 5   |  |  |  |  |  | N  |   |
| 5  | 5   | 5   | 5   | 5   | 5   | 5   |  |  |  |  |  | E  | Fastness to water<br>----- ISO 105-E01 (37°C x 4hr)                 |
| 4  | 3-4   | 4   | 4-5   | 3-4   | 3-4   | 4-5   |  |  |  |  |  | C  |   |
| 3  | 3   | 4-5   | 4-5   | 3-4   | 3-4   | 3-4   |  |  |  |  |  | N  |   |
| 5  | 5   | 4-5   | 4-5   | 5   | 5   | 5   |  |  |  |  |  | E  | Fastness to perspiration (acid)<br>----- ISO 105-E04 (37°C x 4hr)   |
| 4-5  | 3-4   | 4   | 4-5   | 3-4   | 3-4   | 4   |  |  |  |  |  | C  |   |
| 4-5  | 3-4   | 4-5   | 4-5   | 3-4   | 3-4   | 4   |  |  |  |  |  | N  |   |
| 5  | 5   | 4-5   | 4-5   | 5   | 5   | 5   |  |  |  |  |  | E  | Fastness to perspiration (alkali)<br>----- ISO 105-E04 (37°C x 4hr) |
| 4-5  | 3-4   | 4   | 4-5   | 3-4   | 3   | 4   |  |  |  |  |  | C  |   |
| 4-5  | 4   | 5   | 4-5   | 4-5   | 4-5   | 4-5   |  |  |  |  |  | N  |   |
| 1-2  | 4   | 4-5   | 3-4   | 3-4   | 4   | 4   |  |  |  |  |  | E  | Fastness to chlorinated water (20ppm) -- ISO 105-E03 (27°Cx1hr)     |
| 5  | 4-5   | 4-5   | 4-5   | 5   | 5   | 4-5   |  |  |  |  |  | Dry  | Fastness to rubbing<br>----- ISO 105-X12                            |
| 2-3  | 2-3   | 3   | 2-3   | 3   | 3   | 2-3   |  |  |  |  |  | Wet  |   |
| 4-5  | 4-5   | 5   | 5   | 4   | 4-5   | 5   |  |  |  |  |  | E  | Multicycle Laundering --- M&S C10A(UK-TO)60°Cx30'                   |
| 4  | 3-4   | 4-5   | 4-5   | 5   | 5   | 4-5   |  |  |  |  |  | E  | White ground staining   |
|  |   |   |   |   |   |   |  |  |  |  |  |  |   |



## 2. Resist printing (cellulose)

Resist printing can be carried out with selected Evercion P and Everzol items to display the delicate design (motif & fine line) on deep ground with similar result like discharge.

### A. wet on wet procedure

Print Evercion P illuminate color →

Wet on wet over print Everzol ground color at last screen →

Drying → Fixation → Wash off → Drying

#### Recipe

| Evercion P illuminates |        | Everzol ground color |        |
|------------------------|--------|----------------------|--------|
| Thickener              | X      | Thickener            | X      |
| Alkali                 | 20-30  | NaHCO <sub>3</sub>   | 20-30  |
| Urea                   | 50-100 | Urea                 | 50-100 |
| Reduction inhibitor    | 10     | Reduction inhibitor  | 10     |
| Resist agent           | 40-60  | Everzol              | Y      |
| Evercion P             | Y      | soft water           | Z      |
| Soft water             | Z      | Total                | 1000   |
| Total                  | 1000   |                      |        |

### B. Print on pre-padded ground procedure

Pre-pad ground color on white fabric in neutral condition →

Drying (prevent the premature fixation of ground color) →

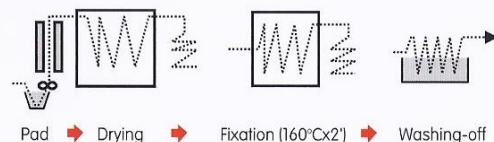
Print illuminate colors on pre-padded fabric → Drying

→ Fixation → Wash off → Drying

#### Recipe

| Evercion P illuminates |        | Everzol padding liq. |        |
|------------------------|--------|----------------------|--------|
| Thickener              | X      | Migration inhibitor  | 1-2    |
| Alkali                 | 20-30  | Alkali donor         | 30-50  |
| Urea                   | 50-100 | Urea                 | 50-100 |
| Reduction inhibitor    | 10     | Reduction inhibitor  | 10     |
| Resist agent           | 40-60  | Everzol              | X      |
| Evercion P             | Y      | Soft water           | Y      |
| Soft water             | Z      | Total                | 1000   |
| Total                  | 1000   |                      |        |

## 3. Continuous pad baking dyeing



### A. Recipe

|                     |        |
|---------------------|--------|
| Migration inhibitor | 1-2    |
| Alkali              | 15-30  |
| Urea                | 50-200 |
| Reduction inhibitor | 0-5    |
| Evercion P          | X      |
| Soft water          | Y      |
| Total               | 1000   |

### B. Chemical recommendation for pad baking

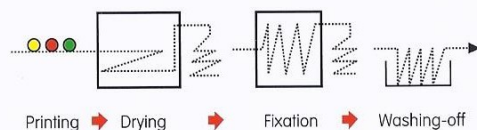
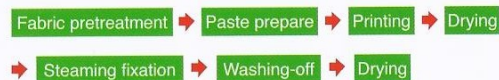
| Evercion P (g/kg) |   | 10 ↓    | 10~30 | 30~60     | 60 ↑    |
|-------------------|---|---------|-------|-----------|---------|
| Alkali (g/kg)     | Na <sub>2</sub> CO <sub>3</sub>                     | 10      | 15    | 17.5      | 20      |
|                   | NaHCO <sub>3</sub>                                  | 15      | 20    | 25        | 30      |
|                   | Na <sub>2</sub> CO <sub>3</sub> /NaHCO <sub>3</sub> | 7.5/7.5 | 10/10 | 12.5/12.5 | 15/15   |
| Urea (g/kg)       |   | 50      | 50~75 | 75~100    | 100~200 |

## Evercion P combination

| Items                     | Tri-chromate  | Supplementary   |
|---------------------------|---|---|
| Pale                      | Yellow P-N3R<br>Red P-4BN<br>Black P-N  | G. Yellow P-R<br>Red P-2B<br>Blue P-3R<br>Blue P-GR<br>Blue P-5R                          |
|                           | Yellow P-2RN<br>Red P-4B<br>Black P-SG  |   |
| Medium ~ Heavy            | Yellow P-2RN<br>Red P-6B<br>Blue P-5R<br>Blue P-N3G                                     | G. Yellow P-R<br>Red P-2B<br>Red P-4BN<br>Red P-4B<br>Red P-8B<br>Navy P-2R<br>Navy P-2RN |
|                           |   |   |
| Red, Scarlet              | Orange P-2R<br>Scarlet PRR<br>Red P-4BN   | Orange P-G<br>Red P-2B<br>Red P-4B<br>Red P-6B<br>Red P-8B                                |
| Royal, Violet             | Red P-6B<br>Blue P-3R   | Red P-4B<br>Red P-8B<br>Blue P-5R   |
| Brill. Yellow, Green      | Yellow P-6GS<br>Turquoise P-GF  | Yellow P-4G<br>Yellow P-5G<br>Turquoise P-A   |
| Navy                      | Red P-6B<br>Navy P-2R<br>Navy P-2RN   | Red P-2B<br>Red P-4BN<br>Red P-4B<br>Red P-8B<br>Blue P-5R                                |
|                           |   |   |
| Beige, Khaki, Brown, Grey | Yellow P-2RN<br>Brown P-6R<br>Black P-SG  | Yellow P-N3R<br>Brown P-4RD<br>Black P-N  |
| Deep green                | Green P-4BD<br>G. Yellow P-R  | Yellow P-2RN<br>Yellow P-N3R<br>Blue P-GR   |
| Black                     | Black P-GR  | Everzol Black GSP<br>Everzol Black ED<br>Everzol Black ED-G<br>Everzol Black ED-R         |
|                           |   |   |
| Excellent Lightfastness   | Yellow P-2RN<br>Red P-5BL<br>Brown P-6R<br>Blue P-3R<br>Black P-SG<br>Everzol Red LF-2B | Yellow P-6GS<br>Yellow P-N3R<br>G. Yellow P-R<br>Orange P-4R<br>Blue P-GR<br>Black P-N    |

## 1. General process for cellulose, silk printing

The procedure of cellulose, silk fabric printing with Evercion P dyes summarized as follow.



### A. Fabric pretreatment

The fabric should be carefully pretreated with thoroughly de-sized and scoured before printing. This imparts the fabric good absorption and free from impurity. It should also leave the fabric in a neutral or slightly alkaline condition.

### B. Paste recipe

Depend on different fixation way, facility property, material, dyes and its usage amount, there are different recipes can be used. The most suitable recipe can be decided according to above parameter. The following is a standard recipe.

|                     |        |
|---------------------|--------|
| Thickener           | X      |
| Alkali              | 15-30  |
| Urea                | 50-200 |
| Reduction inhibitor | 10     |
| Dyes                | Y      |
| Chelating agent     | 5      |
| Soft water          | Z      |
| Total               | 1000   |

## C. Chemical recommendation for printing

| Evercion P (g/kg) |   | 10 ↓    | 10~30 | 30~60     | 60 ↑    |
|-------------------|---|---------|-------|-----------|---------|
| Alkali<br>(g/kg)  | NaHCO <sub>3</sub>                                  | 15      | 20    | 25        | 30      |
|                   | Na <sub>2</sub> CO <sub>3</sub> /NaHCO <sub>3</sub> | 7.5/7.5 | 10/10 | 12.5/12.5 | 15/15   |
| Urea (g/kg)       |   | 50      | 50~75 | 75~100    | 100~200 |

### D. Thickener

Because of the reactive nature of Evercion P dyes, thickeners containing free hydroxyl groups cannot be used. Thickeners base on sodium alginate and a mixture of either with emulsion or synthetic thickener are so far widely acceptable.

### E. Alkali

There are several kinds of alkali, which are possible to be used for the fixation. We recommend using either sodium bicarbonate or a mixture with sodium carbonate for Evercion P.

### F. Urea

There are low urea request for most of Evercion P products. Normally urea amount should be increase when viscose printing, and fixation under high-temperature steaming or baking process. So the urea usage is depend on the material, fixation way and the property of facility.

### G. Reduction inhibitor

In order to avoid reduction decomposition, it's necessary to make an addition of reduction inhibitor.

## H. Water and Sequestering agent

Soft water should be used. And sequestering agent is intended for blocking such actives of metallic ions present in printing paste.

### I. Printing and drying

Fabric should be pre-set and fed into printing machine with proper tension so as to keep the prints maintain original design. Intermediate drying is required after printing. But over drying may cause fixation failure especially for viscose fabric.

### J. Fixation

The printed fabric are fixed by saturated steaming for 6-12 minutes at 102°C. Dry heat fixation and high-temperature steaming are possible but offers no advantage over saturated steaming.

### K. Wash-off

After fixation not only thickener and auxiliaries, but also the unfixed dye should be removed. Careful attention should be given during each rinsing process so as not to generate cross staining.



Overflow is necessary for cold washing. The higher the temperature the better the soaping effect.