



Textile
Printing

ROBOT REAKTIV 4000

High performance, self-cross linking acrylic co-polymer with extremely soft and durable film of high dry and wet rubbing fastness. Provides uniform, brighter shades with a very thin film. Free from APEO/NPEO and Formaldehyde as per ecological norms. Use ROBOT REAKTIV 4000 for pigment printing and get the feel and look of reactive printing.

FEATURES:

1. very good thermal and mechanical stability (also stable in caustic lye)
2. smooth print-running properties
3. separate addition of catalyst is required for polyester, blends and synthetic fabrics

PROPERTIES:

| | |
|---------------|---|
| Appearance | Thin milky white liquid |
| Character | Acrylic co-polymer emulsion with polyurethane, silicon catalyst system |
| pH | 6-8 |
| Setting point | Approx. 0°C |
| Boiling point | Approx. 100°C |
| Shelf Life | Exposure to air causes formation of a thin layer on the surface of the product. ROBOT REAKTIV 4000 should be stored in a sealed container between 10°C to 30°C. Unopened original packing has a shelf life of 1 year under such conditions. |

Exact figures with tolerance limits are given in the product certificate of analysis.

APPLICATION

The print paste made from ROBOT REAKTIV 4000 has very good running properties. For printing formulations with a high concentration of solvent, sample trials should be carried out. The good wet rubbing fastness properties of the binder, especially on woven cotton fabrics, can be further improved by adding a crosslinking agent (fixer) such as Excellent 500 (for eco-friendly prints). However, optimal fixation/curing of the prints is necessary.

Fields of application

Direct printing - White (matt finish/khadi) printing and multicolour pigment printing on white and dyed fabrics.

PREPARATION OF PRINTING PASTE

Stir with water and, if necessary, add an antifoam, successively add the emulsifier, ROBOT REAKTIV 4000 and, if required, Fixer like Excellent 500 (for eco-friendly prints) and rheology modifiers. Use TexBond as a catalyst for superior fastness. Then stir while slowly adding

synthetic thickener (Kerosol 3000). Continue stirring (approx. 8 – 10 min) with a highspeed stirrer until the thickener has completely swollen.

pH

The pH of the print pastes should be between 6 and 7. Lower values must be corrected by adding ammonia.

Viscosity adjustment

The viscosity of the print pastes can be adjusted at the time of printing. Add small quantities of synthetic thickener like Kerosol 3000 to increase viscosity and aqueous solution of Di-Ammonium Phosphate or Ammonium Sulphate to decrease viscosity.

Fixation

Fixation with hot air is preferred for getting the right fastness. The following temperature and curing time is recommended: 4 – 5 minutes at 150°C.

Recipe Guideline

| | All Colours | Black |
|--------------------|----------------------------|----------------------------|
| ROBOT REAKTIV 4000 | 10-20% (as per pigment) | 10-20% (as per pigment) |
| Water | 78.5-88.5% | 79.5-89.5% |
| Keroso I 3000 | 1.5% | 0.5% |

For black printing paste, mix thoroughly and then add thickener to get print viscosity.

The above guideline recipes were prepared with demineralized water and adjusted to a viscosity of approx. 80 poise as measured with the Brookefield Viscometer RV series, spindle RV-3 at 100RPM. These recipes are intended for guidance and should be modified as required to accommodate the local conditions (e. g. fabric substrate, water quality, environment, processing conditions, etc.)

Safety

When using this product, the information and advice given in our Material Safety Data Sheet should be observed. Due attention should also be given to the precautions necessary for handling chemicals.

The information and our technical advice - whether verbal, in writing or by way of trials - are given in good faith but without warranty, and are based on our current knowledge and experience. In view of the many factors that may affect processing/printing and application of our product, these data do not relieve processors/printers from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product.

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