

Laser Robot ECO

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 Laser Robot ECO 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 paste
Character	Acrylic co-polymer emulsion with polyurethane, silicon catalyst system
pH (undiluted)	1-2
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. Laser Robot ECO 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 Laser Robot ECO 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.

Discharge printing - Suitable with sampling trials for pigment printing discharge.

PREPARATION OF PRINTING PASTE

Stir with water and, if necessary, add an antifoam, successively add the emulsifier, Laser Robot ECO 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
Laser Robot ECO	10-20% (as per pigment)	10-20% (as per pigment)
Water	78.5-88.5%	79.5-89.5%
Kerosol 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.

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Electron Group
230 New Apollo Estate, Mogra Lane, Andheri (E), Mumbai 400069, India. Ph- +91 99200 77766
e-mail- info@electrongroup.com, website- <http://www.electrongroup.com>

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