

Technical Information

RICAPHOB ECO

*“Dendrimer to provide water and oil resistance to
Textiles, Paper and Paper-board”*

RCA INTERNATIONAL PTY LTD
A.C.N. 006 843 232 A.B.N. 006 843 232
3 Pilgrim Court, Ringwood, Victoria, 3134, AUSTRALIA
P.O. Box 138, Mitcham, Victoria, 3132, AUSTRALIA

Telephone: (03) 9872 3399
Facsimile: (03) 9872 3593



COMPOSITION

RICAPHOB ECO consists of a hydrocarbon matrix and hyperbranched star shaped polymers (denrimers).

FIELD OF APPLICATION

RICAPHOB ECO is a repellent for the hydrophobic and oleophobic finishing of textiles and paperboard products.

PROPERTIES

- Appearance : White to Cream emulsion
- Specific Gravity : approx. 1.0 g/cm³ @ 25°C.
- pH – 10% solution : 3.0 – 6.0
- Viscosity@25°C : 15 cPs Brookfield RVF Spindle 1 20 rpm
- Solubility : Readily dilutable with cold water.
- Ionicity : Cationic
- Solids : 21 - 23%

FEATURES

- Liquor preparation with soft water is recommended.
- Compatible with most non-ionic and cationic additives.
- Confers resistance to aqueous and oily soiling.
- Does not affect hand, colour, lubricity, air permeability and strength of paper.
- Can be applied by padding or coating.
- Confers high gliding properties to textiles.
- Non-flammable and solvent free.
- APEO-free
- Free of organic halogenated compounds including fluorinated carbon compounds
- High curing temperatures are not necessary
- Confers resistance to aqueous soil
- High wash resistance, not resistant to dry cleaning
- Excellent abrasion resistance
- Water-repellent for finishing fabrics of all fibre types with excellent wash resistance.

RICAPHOB ECO can be used for a permanent water-repellent finish of textiles of all fibre types. Adjust the liquor acidic with 1 ml/l acetic acid (60 %) before adding.

RICAPHOB ECO can be easily dispersed in the liquor by simply stirring it. Should the liquor be treated with high-speed stirrers or Turax-similar stirrers, because high shear forces can irreversibly damage the emulsions.

Since even small quantities of surface-active substances (surfactants, detergents) can cause deterioration in effect, the fabric to be finished has to be thoroughly pre-treated and free of surface-active residues, residual alkali and polyvalent salts.

RICAPHOB ECO has reduced liquor stability in combination with melamine cross-linking agents. We advise against a simultaneous application.

PAD APPLICATION

Permanent Water Repellency

In order to obtain permanent water-repellent effects and resistance to aqueous soiling:

20 – 40 g/l **RICAPHOB ECO**
Wet pick-up 60 - 80 %
Dry/cure 130 - 150°C, for 2 mins or 170°C for 30 secs.

Woven cotton and cotton blends:

20 – 40 g/l **RICAPHOB ECO**
Wet pick-up 60 - 80 %
Dry/cure 150° C, 2 min for or 170°C for 30 secs.

The articles have to be fully cured before further processing. However, higher temperatures or significantly longer curing times can cause deterioration in effect.

In case of penetration problems we recommend to add 1- 2 g/l **Ricawet VM** to the finishing liquor to ensure a good and uniform liquor pick-up. Add the wetting agent prior to the other liquor components.

Polyester and blends:

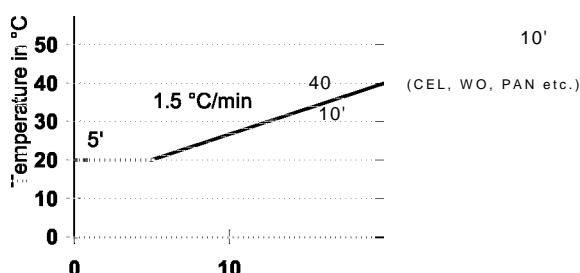
20 – 40g/l **RICAPHOB ECO**

Wet pick-up 60 - 80 %

Dry/cure 150° C, 2 min

EXHAUST APPLICATION

- Enter at 20° C
- Add 1 ml/l acetic acid 60 % prior to adding
- Add Ricaphob ECO predissolved via formulating tank
- Ratio of change of direction of the liquor at least 1 : 2,
Recommended procedure inside/outside 1 min, outside/inside 4 min
- Hold for 5 min at initial temperature.



- Heat at 1.5° C
min.

- See diagram
for
temperature-
time profile

Thorough drying/fixation has to follow to ensure wash-permanent effects:

PES and PA and their blends with CO

80 - 140° C - 3 min

Cotton

100 - 140° C - 3 min

The effect of is based on a microphase organisation of dendrimers in a hydrocarbon matrix. Small amounts of surface-active substances, used e.g. as emulsifiers for other product classes, can disturb this self-organisation and negatively influence the water-repellent effects.

The combination of **RICAPHOB ECO** with other product classes, such as silicone softeners, has to be tested beforehand in the lab.

After washing of textiles a heat treatment above 65°C is necessary in order to reconstruct the full effect of the finish.



STORAGE CONDITIONS

Do not store **RICAPHOB ECO** below 5°C or above 40°C. Ensure that all drums are sealed when the product is not in use. Store in a cool area.

SAFE HANDLING PRACTICES

When working with chemicals, protective clothing should be worn at all times. This equipment should include impervious gloves, goggles and protective clothing. For detailed health and safety information, refer to the relevant MSDS Bulletin.

ATTENTION

The data contained in this technical bulletin is based on extensive laboratory studies and field applications through bulk trials. Since there are many factors that may influence processing and application, the information herein does not exempt the user from performing their own tests and experiments to determine the suitability of the product for their own application.

The information contained does not provide any liability or legally binding guarantee regarding the suitability and properties of the product for a specific end use. It is the obligation of the user to ensure those proprietary rights; laws and legislation are observed.

WITHOUT LIABILITY &

Created: 19 February, 2009
Modified:

Version: 1

