

# How to apply **EasyProtect** liquid laminate

## Introduction

Applying EasyProtect is a simple process and great results can be achieved with a minimum of practice and equipment. EasyProtect is formulated for ease of use and, with a thorough understanding of the techniques involved and a bit of practice, you will be laminating like a pro! The following will give you all the information you need to get started making digital prints that are UV stable, cleanable, protected against physical and chemical damage and that will remain flexible and colourful for years and years to come!

EasyProtect can be used for many applications both indoor and outdoor, on banners, posters, A-frames, truck sides, safe and durable floor graphics, fine art prints and in fact on any digital print requiring protection from damage and deterioration caused by exposure to sunlight, pollution, graffiti, physical or chemical wear and tear.



## Product Selection

Select the type of EasyProtect suitable for your application; one or two part, ECOSOL or solvent ink compatible, floor graphic, gloss or matt finish (Refer to individual product data sheets for attributes of each EasyProtect type). Generally one part versions (EasyProtect 480) are suitable for indoor and short term outdoor applications, while two part versions (EasyProtect 482) are suitable for long term outdoor use under the most difficult conditions, and floor graphics. Users of Ecosol inkjet inks must only use EasyProtect 480-5900, while those using water based inkjet inks should test the compatibility of any EasyProtect product with your output before varnishing jobs.

## Equipment Required

Mixing stick and cup  
Soft dry cleaning cloth  
Weighing scales

Disposable gloves  
EasyRoll application roller\*

\*Available from Colour Components

## Print Preparation

It is very important that the print is **completely dry** before applying EasyProtect. Let your print dry for 24-48 hours to ensure it is absolutely dry and completely free of solvents which can inhibit adhesion and curing of the EasyProtect varnish layer. Lay your print out on a flat, clean and level surface and carefully remove dust and other foreign particles with a soft dry cloth. Avoid static build up on the print surface as this will attract dust from the surrounding environment.

## Mixing EasyProtect 480 - 1 part varnishes

EasyProtect 480 should be thoroughly stirred prior to use to ensure all ingredients are evenly mixed. Avoid heat build up, if using a mechanical mixer. Let the varnish stand for 10-15 minutes before applying to allow any air bubbles formed during mixing to dissipate, this is very important in achieving a smooth surface finish.



## Mixing EasyProtect 482 - 2 part varnishes

Mix EasyProtect 482 with hardener 482-HDA at a ratio of 10 parts to 1 part hardener measured by weight. Add the hardener while stirring; initially the viscosity will visibly increase, continue stirring until a smooth homogeneous mixture is obtained and viscosity has returned to normal. Let the varnish stand for 10-15 minutes before applying to allow any air bubbles formed during mixing to dissipate, this is very important in achieving a smooth surface finish.

## Viscosity

All versions of EasyProtect are supplied ready to use, with a viscosity suitable for roller application under most conditions. When applying by roller, the viscosity should measure 40-60 seconds tested with a 4mm DIN cup. If required thin slowly with water, adding a maximum of 5% by weight while stirring. For spray application the viscosity should be reduced with water until it measures 30-40 seconds tested with a 4mm DIN cup.

## Roller Application

Only very fine foam or short nap rollers should be used. Although EasyProtect incorporates advanced auto levelling compounds, coarse foam and long nap rollers will cause excessive foaming of the varnish layer that may not level out. Use the following procedure and, with a little practice, you will quickly be achieving consistent results on any size print.

Roller application has proven to be the most cost effective and efficient means of application and good results can be achieved using these four simple steps.



### STEP 1: Wet the Roller

Soak the roller with water and press out firmly. This fills the inner volume of the roller and facilitates an even distribution of varnish and minimises bubble formation.



### STEP 2: Wetting Phase

Pour a small amount of varnish on to the print surface and load the roller by gently rolling in a linear direction. Avoid excessive or crosswise rolling.



### STEP 3: Film Build-Up Phase

Immediately add more varnish and distribute the liquid in an even layer over the entire print. Use minimum roller pressure to avoid making air bubbles and apply an even, heavy 100 micron thick wet film which is about 100g/m<sup>2</sup> when wet (or 30g/m<sup>2</sup> dry).



## STEP 4; Auto Levelling Phase

The wet film will not be completely free of small air bubbles or show a smooth finish at this stage. Complete de-gassing and smooth surface development will occur automatically with the auto-levelling phase, over the next few minutes the initial uneven appearance of the wet varnish (bubbling and orange-peel) will disappear leaving an even and smooth finish. Avoid rolling over the varnish at this stage as it may interfere with auto-levelling and inhibit the formation a smooth surface.

### Ambient Conditions for Roller Application

If applying in temperatures above 25°C and/or low humidity the varnish surface may dry very rapidly, limiting the ability of the auto levelling compounds to remove larger bubbles. A final a **gentle** roll over the varnish surface may assist, but be very careful as repeated rolling of the surface as it dries can interfere with the development of the final even and smooth surface of the easyProtect coating. In circumstances of hot weather and/or low humidity the addition of retarder (EasyProtect 400-018/09) at 3% but **never more than 5%** may be required to slow the rate of drying, allowing the auto levelling compounds time to fully develop the smooth surface.

### Spray Application

For spray application EasyProtect can be thinned by adding a maximum of 5% to 10% water. Measure carefully, as the dilution effect of even small amounts of water is rapid. Viscosity should measure 30-40 seconds through a 4mm DIN cup. Use a large nozzle diameter of about 1.5mm.

For hot and dry conditions or when spray drying problems are encountered, using a small amount of retarder (EasyProtect 400-018/09) may be beneficial. The addition 3% but **not more than 5%** will help prevent premature drying.

### Drying

Drying is quite rapid. Lay the print out at room temperature (18-25°C) with good air circulation for 2 hours or until touch dry. The chemical curing which gives EasyProtect it's unique resistance properties will continue to over the next 48 hours for 1 component 480 and a further 5 to 7 days for 2 component 482, after which the print will be fully cured and protected from UV fading and damage from chemicals and abrasion.

Utilising a hot air dryer/tunnel at approximately 50-55°C will significantly reduce drying time of both 1 and 2 component types, however full mechanical and chemical resistance and/or non-slip properties of 2 component types will only be fully developed after 5 to 7 days regardless of drying speed.

### Pot Life

Regardless of application method, 2 component varnish must be used within its pot life of 5 to 6 hours after adding hardener (482-HDA). Varnish beyond its pot life will rapidly become thick and unusable and should be disposed off according to local EPA regulations.

**Following these steps with reference to additional information provided in Technical Data Sheets, FAQ Sheets and MSDSs, and with some hands on experience, you will quickly achieve outstanding and consistent results with EasyProtect protection varnishes.**

*Happy Varnishing!*

Information is intended as a guide. Due to the numerous varieties or print media, ink brands and the effects of their combination, it is your responsibility to test the compatibility of EasyProtect varnishes with your output and ink type to assess adhesion and suitability for your intended application before varnishing jobs.

