EasyProtect 482
2 Component Liquid Laminate

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2 component, water based, Inkjet Protection Varnish (Liquid Laminate)
Physical, chemical and UV protection for digital prints for indoor and long term outdoor use

Variants

EasyProtect 482-5700 (gloss)
EasyProtect 482-5700/MT (matt)

A ***two component*** flexible protection varnish that provides environmental protection to inkjet output printed using solvent inks on a wide range of woven and non-woven media, intended for long–term outdoor use and archival preservation of prints. Protects against fading caused by UV exposure, abrasion and mechanical wear, damage from chemicals (alcohol, acids and alkalis), most cleaning agents, moisture and dirt. Anti fungal additives are also incorporated and the water resistance is excellent. The varnish layer will remain flexible for the life of the print without cracking.

EasyProtect 482-5700 A/R (Floor Graphic)

Floor graphic protection varnish is a modification of 482-5700 with anti-slip additives for inkjet prints used as floor graphics. Varnishing a compatible self adhesive media with EasyProtect Floor Graphic will form a non slip surface that can be used in applications such as floor advertising and temporary directional signage. The Australian Standard AS4586 specifies the non-slip standards required for floor graphics in a public place, testing and certification of EasyProtect to AS4586 standards is currently being undertaken. More information is available in Colour Components Tech Tip #073 "EasyProtect Floor Graphics and the Australian Standards for Slip Resistance".

Substrates

The range of compatible print media covers many different plastics and commonly used media including, but not limited to, rigid and soft PVC, Vinyl and polyester banner materials, vinyl and polyolefin self adhesive films, Tyvek, polystyrene, polycarbonate, and most other solvent ink compatible media for signs and posters used for both indoor and outdoor applications. It is also suitable for many fine art papers, many types of canvas, and media used for vehicle wrap applications. Due to the wide range of inkjet media available, their various modifications and the common use of co-polymers and recycled components during manufacture, we strongly recommend pre-production trials to confirm the suitability of EasyProtect 482 for varnish adhesion and performance for your application.

Applications

EasyProtect 482 has a wide range of applications in the promotional, point of sale and display markets. Banners, posters, vehicle graphics, floor advertisements, billboards and almost anywhere where a digital print is exposed UV and/or physical and chemical wear that would shorten it's useful life. The raw materials used to formulate EasyProtect are carefully selected to meet high resistance expectations for long-term outdoor prints, and trials confirm an extended print life of five years or more without yellowing, crazing, cracking or degradation such as fading and deterioration from UV light. Furthermore the print is able to be cleaned with most commercial cleaners and is protected from damage caused by abrasion or rubbing.

Mixing

Add the hardener 482-HDA while stirring at the ratio of 10 parts EasyProtect to 1 part hardener. Initially the material will go lumpy, but this will dissipate with continued stirring. Avoid heat build up if using a mechanical stirrer and allow the mixed varnish to sit for 10 minutes before use to allow any bubbles formed during mixing to dissipate.

Roller Application - Refer to "EasyProtect Application Guide" for more detailed information.

To achieve optimum protection performance and adhesion the printed output must not contain any residual solvents. The varnish must be well stirred with the hardener and left to stand for a few minutes before use to allow foam formed during mixing to dissipate and the rheology (viscosity) to stabilise. Viscosity should measure 40–60 seconds through a 4 mm DIN cup and filtering the mixture through a suitable mesh prior to use is recommended to avoid particle contamination. Use a closed cell, very fine foam roller (available from Colour Components) or, if using a napp coated roller, select only those with a very short napp to prevent excess bubbles forming in the varnish surface. In order to archive maximum protection the varnish must be applied with a wet film thickness of at least 100 microns (coverage approximately 100g/m^2).

Spray Application - Refer to "EasyProtect Application Guide" for more information.

For spray application the varnish must be thinned by adding 5-10% clean water stirred in slowly, viscosity should measure between 30 – 40 seconds through a 4 mm DIN cup. A large diameter nozzle is required, start with 1.5mm and experiment with other sizes to obtain the required coverage (100 microns wet film layer) and best finish with your equipment. Spray application of water based EasyProtect does NOT require the use of a dedicated spray booth.

Drying

Lay the print out at room temperature (20–25°C) with good air circulation to dry. EasyProtect 482 will be touch dry in approximately 2-3 hours, full drying and curing will take a further 48 hours depending on temperature and humidity. You can speed up the drying process using a hot air drying tunnel set at 50° to 55°C, however, curing will still take up to 48 hours. Full resistance properties and performance of the varnish layer will continue to develop over 5 to 7 days at which time the print will have maximum protection from physical, chemical damage and fading from UV exposure.

Clean Up

Rollers and other tools must be cleaned with water immediately after use. Dried varnish can be removed using slightly alkaline water solution (e.g. household ammonia solution).

Storage

Under normal conditions (average temperature between 15-25° C) the varnish can be stored for least two years from the date of manufacture. Containers must be firmly closed when not in use. 482-HDA Hardener is susceptible to deterioration if left open to the air - replace the cap tightly, immediately after use.

Safety

Additional information about proper use and personal safety when handling this product is provided in the relevant MSDS (Material Safety Data Sheet).

Physical Properties

Milky coloured liquid, with a slight odour. Easily poured, gently mix well to re-distribute any sedimentation of solids that may have occurred during storage. 700-HDA hardener is a clear viscous liquid.


printcolor
high performance inks

Printcolor easyPROTECT varnish
Series 480 / 482

fulfils following regulation (1) / is free of (2)

- Heavy metals according to DIN EN 71, part 3
- Heavy metals according to ASTM Standard F 963 (2003)
- Chlorinated organic compounds
- Listed Azo compounds
- Tin (Sn) and silver (Ag) and such alloy's
- Formaldehyd
- Vinyl chlorid or monomeric VC
- Toluene and Xylene
- EU-Richtlinie 2002/95/EG
- EU-Richtlinie 2002/96/EG
- EU-Richtlinie 2005/84/EG
- EU-Richtlinie 2003/11/EG
- European Directive 76/769 EEC
- DIN 53160
- 5th Alteration of "Bedarfsgegenständeverordnung"
- EU-Richtlinie 2000/53/EG
- SS-002259

Member of IMDS / IMDS-ID 9448512

SONY Green Partner since 2003

November 2, 2006
Printcolor Screen Ltd.

CERTIFICATE

Richard Gähwiler
HSE Manager

Dieter Hermann
CEO

Pack Sizes

Varnish in 1kg and 5kg plastic pails with re-sealable air tight lid; hardener in 100g, 500g, 1kg

Other useful and more detailed information is given in

Tech Tip No. 071 – easyProtect FAQ's
Tech Tip No. 072 – easyProtect Application Guide
Tech Tip No. 073 – easyProtect Floor Graphics and the Australian Standards for Slip Resistance
EasyProtect 482 MSDS, 482 HDA MSDS
or by calling Colour Components, we're happy to help!

Precautionary Measures

Read Material Safety Data Sheet (MSDS) prior to processing. The MSDS contain indications of hazardous ingredients, TLV-level and instructions for precautions when processing, handling and storing as well as first aid. The information given in the MSDS refers to processing as described in this technical leaflet. The statements in these leaflets have been made to the best of our knowledge and are given without any obligation. These Technical Sheets serve to advise, but it is absolutely necessary to undertake your own tests under local conditions to ascertain the suitability of the product for your application. The application, use and processing of the products delivered by Colour Components are beyond our control and imply no liability or guarantee on our part.