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January 2007 MSDS available at www.colourcomponents.com.au

1 component, water based, Inkjet Protection Varnish (Liquid Laminate)

Physical, chemical and UV protection for digital prints for indoor and short term outdoor use

Variants

EasyProtect 480-5700 (gloss)

EasyProtect 480-5700/MT (matt)

A self cross-linking, ***one 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 indoor use and short-term outdoor applications (up to 6 months depending on exposure and display conditions). 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.

EasyProtect 480-5900 ECOSOL (gloss)

EasyProtect 480-5900/MT ECOSOL (matt)

A self cross-linking, ***one component***, flexible protection varnish that provides environmental resistance to inkjet output printed using Ecosol inks on a wide range of woven and non-woven media intended for indoor use and short-term outdoor applications (up to 6 months depending on exposure and display conditions). 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.

Substrates

The range of compatible print media includes many different plastics and commonly used media like rigid and soft PVC, Tyvek, polystyrene, polycarbonate, vinyl, polyolefin and boards. EasyProtect is also suitable for many fine art papers and canvas type media. Due to the very wide range of inkjet media available, their various modifications and common use of co-polymers and recycled components during manufacture, we strongly recommend pre-production trials to confirm the suitability of EasyProtect 480 for varnish adhesion and performance for your application. To achieve optimum protection printed images must not contain any residual solvents as this may reduce the adhesion of water based varnish.

Applications

EasyProtect 480 protection varnish has a wide range of possible applications in both the promotional, point of sale and display markets including but not limited to, vinyl and polyolefin self adhesive films, signs and posters for indoor and short term outdoor use (<6 months). The raw materials used in the formulation of EasyProtect 480 are carefully selected to meet the high resistance expectations for indoor digital print media, outdoor trials also confirm that damage due to natural aging can be substantially delayed by a factor of up to three. EasyProtect 480 is not recommended for vehicle graphics, truck sides or any long-term outdoor use or application that requires water resistance, use EasyProtect 482 (2 component water based varnish) for these. Water resistance of EasyProtect 480 ECOSOL is also limited, we recommend testing be carried out before cleaning varnished prints with water based cleaners.

Mixing

Stirring is required to evenly distribute any solids that have settled during storage. 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.

The varnish must be well stirred and left to stand for a few minutes before use to allow foam formed from 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 detailed 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 or approximately 100g/m^2 coverage) 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 480 will be touch dry in approximately 2-3 hours, full drying and curing (cross-linking) 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 after which time full resistance properties will have developed giving the print maximum protection from damage by physical, chemical and 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.

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 may have occurred during storage.

Pack Sizes

1kg and 5kg plastic pails with re-sealable air tight lid

Other useful and more detailed information is given in

Tech Tip No. 071 – EasyProtect FAQ's
Tech Tip No. 072 – EasyProtect Application Guide
EasyProtect 480 MSDS
or by calling Colour Components, we're happy to help!


ISO 9001

printcolor high performance inks

Printcolor easyPROTECT varnish
Series 480 / 482

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

(2) Heavy metals according to DIN EN 71, part 3
(2) Heavy metals according to ASTM Standard F 963 (2003)
(2) Chlorinated organic compounds
(2) Listed Azo compounds
(2) Tin (Sn) and silver (Ag) and such alloy's
(2) Formaldehyd
(2) Vinyl chlorid or monomeric VC
(2) Toluene and Xylene
(1) EU-Richtlinie 2002/95/EG
(1) EU-Richtlinie 2002/96/EG
(1) EU-Richtlinie 2005/84/EG
(1) EU-Richtlinie 2003/11/EG
(1) European Directive 76/769 EEC
(1) DIN 53160
(1) 5th Alteration of "Bedarfsgegenständeverordnung"
(1) EU-Richtlinie 2000/53/EG
(1) SS-002259

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SONY Green Partner since 2003

November 2, 2006
Printcolor Screen Ltd.

CERTIFICATE

Richard Gähwiler
HSE Manager

Dieter Hermann
CEO

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.