

Water thinnable one component protection varnish with UV absorber

## **SERIES 480-5700**

For roll- and spray application

**Water based, self cross-linking, flexible protection varnish to optimise the resistance properties of inkjet prints on a wide range of woven and non-woven carriers.**

The range of possible substrates covers different plastics i.e. rigid- and soft PVC, Tyvek, polystyrene, polycarbonate, vinyl and board. Due to the meanwhile very wide range of available plastic films, their various modifications, the common incorporation of co-polymers and recycling components, we strongly recommend pre-production trials to confirm the suitability of the varnish in terms of film performance and adhesion.

### **Application**

Area of application is a wide range of different plastics in the promotion and display segment, vehicle tarpaulins, vinyl- and polyolefin self adhesive films, signs and plates for Indoor and short time Outdoor use.

The utilised basic raw materials are carefully selected to meet high resistance expectations of the imprinted media. Outdoor trials have confirmed that damage due to natural aging can be substantially delayed by a factor of 2 to 3. To achieve this, the images must not contain any residual solvents as this can reduce the adhesion of the water-based varnish.

### **Properties and handling**

The varnish must be well stirred in the original container without trapping air bubbles. After a short time of settling the varnish is ready to use. Initially visible foam has disappeared and the rheology has stabilised. The viscosity should be 40 – 60 seconds measured with a 4 mm DIN cup. To certainly avoid particle contamination it is recommended to filter the varnish prior to use through a suitable mesh.

In order to archive maximum protection the varnish must be applied with a wet film thickness of at least

100 microns. If applied using a roll the following technique is recommended:

- Soak the roll completely with water and press out firmly.
- Fill the roll on the substrate with varnish and distribute evenly (wetting phase).
- Immediately add more varnish and carefully distribute a homogenous second layer. Keep the pressure of the roll low to deposit a heavy film weight. (film build up phase).
- The initial uneven appearance of the wet varnish (air bubbles, orange peel) will disappear soon during film formation (auto levelling phase).

The described sequence must be carried out as quickly as possible. Unnecessary and repeated roll over and crosswise movement of the roll must be avoided, in particular when the varnish starts to dry, as this would interfere with the auto levelling function which develops a smooth and high gloss surface.

If applied using an air brush the varnish must be reduced by 5-10% with water. This must be stirred in slowly. The spray viscosity must be in the range of 30 to 40 seconds measured with a 4 mm DIN cup.

### **Drying**

If laid out at room temperature (20 – 25° C) with a free air flow the varnish Series 480-5700 will become touch dry after approximately 3 hours. In

order to obtain full drying and cross linking the varnished media must be stored for 48 hours in an ambient climate. The speed of the drying process can be substantially increased using a hot air drying tunnel set at 50° C. However, the final resistance performance will always be archived after 5 to 7 days.

### **Cleaning**

Rolls and other tools can be cleaned with water immediately after use. Dried varnish can only be removed using slightly alkaline water (ammonia solution) or a special cleaning liquid.

### **Storage stability**

Under normal conditions (low temperature cycles, average temperature between 15-25° C) the varnish can be stored without loss of the designed properties for at least one year after manufacturing. Containers must be always firmly closed when not in use.

### **Other information**

The varnish registers at the Federal Office for Health (BAG) with reference BAG-T Nr. 619000 as a non-toxic substance. Additional information regarding health and safety are provided in the relevant product safety data sheet.

### **Precautionary measures**

Read material safety data sheet prior to processing. The material safety data sheets according to OSHA form contain indication 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 our leaflets have been made to the best of our knowledge and are given without any obligation. They serve to advise our business associates, **but it is absolutely necessary** to make your own printing tests under local conditions, with regard to the intended purpose prior to starting the printing job. In case of any doubts please contact our technical advisors. The application, use and processing of the products delivered by us are beyond our control. This is subject to your responsibility and there is no liability or guarantee on our part. In case of justified complaints the manufacturer can only be made liable for the countervalue of the used ink system. Addition of not mentioned products or competitors products are on your own risk and releases Printcolor Screen Ltd. of any later demands, especially in cases of damage and loss caused by alien products.

All former leaflets are no longer valid.

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