

AP401DS (Primers – 2K – Dye Sublimation)

Description

AT Inks, AP401DS, is a Adhesion Promoter (also called Primer or Varnish by some) specially designed to become a receptive layer for Water Based Dye Sublimation inks, to be transferred from coated printed paper onto the following surfaces using dry heat:

- a) Glass
- b) Ceramic mugs/Plates/Tiles
- c) Metal
- d) Wood/MDF
- e) PVC Surfaces(*)

Dye Sublimation Inkjet Printing is very popular and a common method to get printed ceramic mugs/plates/tiles, glass plates, metal plates, wood, MDF and such gifting articles with digital images is to print images using digital desktop or large format printers onto coated paper, and, then transferring the image onto the article using a heat press. However, to transfer, one needs a coating that has to be pre-applied before heat transfer. AP401DS is one such pre-coat. It provides rich colors and excellent color transfer onto the receiving substrate with good to excellent washing fastness.

AP401DS is a 2 Component System which when mixed together provide an excellent receptive layer. It comes in two parts, i.e. Part A and Part B that will have to be mixed with each other in the recommended ratio of 4:1 i.e. 4 portions Part A and 1 portion Part B. Both of them need to be mixed well to form a single homogenous solution. This mixture will start hardening within 45 minutes and has to be used up within 75 minutes of mixing. After mixing, the homogeneous solution may be applied to the substrate using spray coating (recommended for large surface areas), or dip-coating (smaller substrates).

Use of Product

This product requires to be dried or cured in an oven at 80°C for 3-4 hours to give a clean dry film. Please ensure you have the requisite drying facilities for this product before starting to apply the same. AP401DS is designed for multi product use and can be used to form a ink receptive layer on Glass surface, MDF, Ceramic, Metal, PVC Backlit by heat transfer method.

Application Note

Spray coating is a convenient method to deposit liquid droplets onto substrates. AP401DS can be applied effectively onto substrates using spray coating method. Dip coating is recommended for products with smaller surface areas or odd shape articles.

Spray Coating:

- Fix the cleaned substrate vertically in a fume hood or in a well ventilated area.
- It is recommended that you clean the surface of the substrate before applying AP401DS with an alcohol like IPA to make a clean surface for a defect free surface and better adhesion.
- Take Part A of AP401DS into a mixing vessel first. Then add part B into the mixing vessel while stirring the mixer to ensure a good, homogeneous solution is prepared.
- During the mixing take care not to use violent stirrings to avoid inclusion of air into the solution.
- We recommend that you take 4 portion of Part A and 1 portion of Part B. This is the ratio in which it has been packed and we recommend that once opened, the bottles should be fully consumed.

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- If you need a smaller portion of the primer, then please use the ratio of 4:1 for Part A: Part B to ensure it is effective. Change in Ratio will reduce the adhesion of the primer and its outcome, thus, please take precaution to ensure that the ratio is right.
- Please ensure that after using if any Part A or Part B solution is remaining in the bottle, then you should cap it tightly as both the components are sensitive to moisture. The shelf life of the product will drastically reduce if left open for a longer period of time.
- Take the quantity as per your requirement but the ratio shall always be 4:1 (4 PART-A:1 PART-B)
- If you find the solution is too thick in any case, add 1 part of Dilution Solvent (to be ordered separately if required, not included in the pack). However do note that diluting the product, will reduce the film thickness and may affect the outcome of the transfer after drying.
- For example, if you are taking 400 ml part-A and 100 ml part-B and find too thick, also add 30-50 ml Dilution Solvent “DS1” for thinning.
- Kindly use the Dilution Solvent “DS1” provided by us only. We cannot assure results if, any other solvent system is used or mixed in the process.
- Now pour the mix into a spray gun connected to an air compressor.
- Tune the spray gun mouth by rotating the mouth which allows the fine mist spray with small droplets.
- Please note that spraying on the substrate must be done, preferably within 10-15 minutes after mixing party A and part B. The pot life of the mix is about 75 minutes.
- Spray gently for forming a thin layer of primer smoothly on whole surface, keeping the spray nozzles at a reasonable distance from the surface to ensure no excess flow of primer is formed on the substrate surface.
- Spraying conditions like-distance from substrate, nozzle setting and applied pressure etc should always be kept the same.
- Do not over-spray; the liquid should not flow down vertically as it may spoil the surface of the printing.
- Clean the spray nozzle with the Dilution Solvent “DS1” to ensure the coating does not dry out or cure in the spray nozzles and block them.
- It is a good practice to clean the nozzle with solvent after each spray coating is completed.
- After coating allow the substrate to dry in an oven at 80°C for 8-10 hours OR 120°C for 2 hours OR 200°C for 30 minutes to give a clean dry film. Drying is important for performance of the film and thus, do not compromise on the drying time. Once the heating is completed, allow the article to cool down in a cool, dry place away from moisture.
- Now the substrate is ready for transfer.

Standard Product Packaging

Available in 5 Kg pack (4000 g of Part A and 1000 g of Part B), packed in a 10/20 Kgs carton box. Smaller packs are also available on requests. Dilution Solvent “DS1” needs to be ordered separately.

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Shelf Life

6 months from date of manufacturing in unopened condition. The product should be kept in closed condition at all times once opened. We do not guarantee the shelf life of the product, once the seal is broken.

Storage Conditions

Product should be stored in original packaging in a cool/dry place between 10°C and 35°C (50-95°F) and relative humidity of 30 – 60% (non-condensating), away from direct sunlight and heat sources. Prevent freezing of this product.

Shipping and Handling

All personnel handling these products must wear gloves and eye protection as per local laws. After use, wash hands with soap and water. Should product come in contact with clothes, remove clothing to avoid prolonged skin exposure. Should product come in contact with skin, wipe off with a clean, dry absorbent cloth and wash area with soap and water. Dispose containers and product waste as per local and federal regulations. For additional safety data, please refer to SDS.

Disclaimer: The information provided in Technical Data Sheet (TDS) is based on AT Inks' internal laboratory testing data. Rex-Tone industries Ltd, AT Inks, their distributors and assigns shall not be liable to any loss or damage, including such loss or damage to any third party, caused by any use of the Products which is inappropriate or not in accordance with instruction for the storage and use of the products in this TDS or in a replacing or supplementary TDS issued by AT Inks. In any event AT Inks' liability is limited to a maximum of the price of the Product(s) or the cost of replacing such Products only. AT Inks is not, in any event, liable to any other loss or damage, including consequential damages.

All technical instructions about our products and their use, if spoken, written or through test trials are to the best of our knowledge. However, it should not be considered as an assurance for certain properties of products or their suitability for each application. It will be solely your responsibility for the selection and testing of the ink for specific applications.