

Subli Glaze FAQ

Here are the top questions we get asked the most about using Subli Glaze.

Subli Glaze Clear Coating

Q. How long does it take to cure ready for sublimation transfer?

A. Subli Glaze can be cured at a range of different temperatures and times, for example, if you left a coated product at room temperature of around 20°C it would air dry in around 72 hours, conversely force curing in an oven can take just 15 minutes. As a general rule we do not recommend air drying because you cannot be sure it's been left long enough to fully dry without touching it to check, which can easily lead to finger marks on the surface which can ruin your product.

Here are some examples of elevated curing mix and match times, these will always depend on the efficiency of your oven, and what type of substrate you have coated.

Here are some guidelines to consider

200°C for 15 mins is great for ceramic tiles and hard substrates that can take the heat

150°C for 20 mins is great for wood where you don't want to end up warping the product with heat

100°C for 90 mins is great for products that could melt or distort under too much heat

If after curing the product you find it is not fully ready to sublimate, it will still continue to cure at room temperature until it is ready.

Q. What type of oven can I use?

A. You can use a standard kitchen oven, although we would recommend using a dedicated oven for curing; we would certainly not recommend cooking food in an oven straight after curing. If you are making small products you can buy inexpensive pizza type ovens from as little as £20.00, just like the one below.



Q. What coverage can I expect from a can of Subli Glaze Clear Coating?

A. On average 2-3 square meters. However, there are a lot of variables to take into account such as how many layers are applied, how even the layers of spray applied are, how absorbent the surface is etc.

Q. What type of spray gun should I use to apply Subli Glaze Industrial Coatings?

A. You can use either a gravity feed, or a suction air assisted spray gun with a nozzle size of 1.4mm – 1.8mm. To get an even coat you should spray at around 40-50psi.

Here are details of the Clarke PGF14 spray gun (<https://www.machinemart.co.uk/p/pgf14-gravity-fed-pro-spray-gun/>) it is gravity fed, simple to set up and prices start at around £30.00. Other brands available are De Vilbiss or Anest-Iwata equipment.

Q. What type of wood can I coat with Subli Glaze?

A. There are many different types of wood to choose from. The thing to be aware of is to make sure the wood you are coating does not contain any moisture because when you force cure the coating or press the wood under heat, the moisture will turn to steam and delaminate the coating and image poorly. If you think the wood may contain moisture dry the wood slowly first in an oven at a low temperature before pressing.

Q. Can I coat mugs with Subli Glaze?

A. Yes. However, you should consider that a mug is cylindrical and as such you must hold the spray can at the right distance whilst turning the mug at the same time. It is a job more suited to a professional.

Q. Can I coat Cotton t-shirts with Subli Glaze?

A. Yes. Subli Glaze can be used on cotton but be aware that all sublimation transfers to cotton will appear somewhat muted in colour when compared to sublimation to a polyester material.

To use on cotton please follow these instructions

1. Spray the area of the t-shirt you wish to image with Subli Glaze Clear Coating
2. Place the t-shirt under the platen of the heat press set at 200°C for 1 minute to dry the coating; *Important: do not close the lid of the press, keep it 25mm from the surface of the shirt.*
3. Once dry place the sublimation transfer on the t-shirt and sublimate at 180°C for 50 seconds with a Teflon sheet over the top of the transfer paper.

The result is a transfer that does quite well in the wash tests we have done, it will feel a little stiff at first but after the first wash its nice and soft.

Top tip. Cut out a cardboard template the size of the image you wish to sublimate, and spray only this area on the t-shirt, this will ensure you do not waste coating on areas you do not intend to sublimate

Subli Glaze UV Protection Coating

Q. What extended life will Subli Glaze UV Protection Coating give my printed products?

A. This is difficult to answer because there are so many variables, however, below is the testing data results from the laboratory; we apologise for the technical nature of the information, and we have summarised in plain English after the report.

Summary of Subli Glaze UV Protection Systems.

By way of a background information, Ultra Violet (UV) radiation consists of three distinct bands:

1. UVA
2. UVB
3. UVC

Please note: UVC radiation cannot penetrate the Earth's atmosphere, therefore Subli Glaze only needs to protect against UVA and UVB radiation.

UVA has the higher wavelength (lies between 315nm to 380nm), and UVB has the lower wavelength (lies between 280nm to 315nm).

By definition, the lower the wavelength the higher its energy, consequently the more destructive the radiation is. Conclusively, UVB radiation is far more destructive than UVA radiation.

$$E = ch/\lambda$$

- E - energy
- λ - wavelength
- c - speed of light
- h – Planck’s constant

Introduction

Glass panels were coated with varying dry film thicknesses of Subli Glaze UV Protection Coating and were then tested for their ability to block out UV radiation. The tests were done using varying thicknesses of 16, 23, 32, and 37 microns of coating

Under normal circumstances, Subli Glaze UV coating would be applied by spray to achieve a dry film thickness of 30-40 microns.

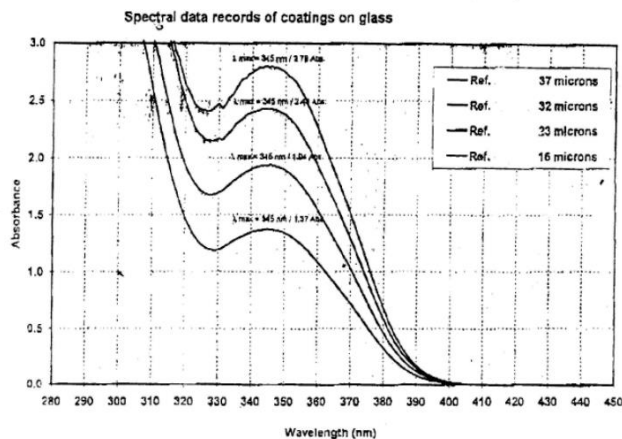
Summary of Results

The graph below, clearly shows that all the higher energy UVB radiation falling in the wavelength range of 280nm to 310nm is totally blocked (Absorption > 3.0) at dry film thicknesses above 23 microns, and that the lower energy UVB radiation (310-315nm) is totally blocked at dry film thicknesses above 32 microns.

Regarding the lower energy, less destructive UVA radiation, this is partially blocked at all dry film thicknesses, but the most desirable results are achieved at the higher film builds.

At the chosen wavelength of 345nm, the coating at DFT of 23 microns blocks out 98.852% of the UVA radiation. The amount of blocking increases as the DFT is increased. At a DFT of 37 microns 99.838% of the UVA radiation is blocked out.

The graph below shows the relationship between dry film weight and UVA radiation transmitted through the coating at a wavelength mid-way through the UVA spectrum (345nm).



In plain English

The tests demonstrate if you apply a dry film thickness of 23 microns to your product you will block out 98% of UVA Radiation which will prolong the life of your product when measured against an untreated product.