

Seven Secrets to Properly Curing UV Gels Nails

By Doug Schoon

There's a big difference between "cure" and "properly cure" and often it's the difference between success and failure. UV curing artificial nails may be "under cured", "over cured" or "properly cured". Anything other than a proper cure may result in service break down and/or an increase potential for adverse skin reactions, such as irritation or allergy. UV (ultraviolet) light has been used for more than 30 years to cure UV curing artificial nail coatings. UV nail lamps produce the safest part of the UVA spectrum where it overlaps with visible light to cure these nail coatings. Although you may have already known this if you regularly perform these types of nail services but, you may not have realized that UV energy has a difficult time penetrating UV curing nail coatings. Or that plain, every day "oxygen" in the air can cause special problems.

More will be revealed as you explore the Seven Secrets below.

Secret 1- The "light" that cures UV gels is invisible to the human eye.

The UVA nail bulbs create energy in a part of the spectrum the eye can't see. Some birds and butterflies can see UVA, but people can't. UVA nail bulbs create both visible light and invisible energy. Light is the energy our eye can see. Since UVA energy is invisible, it isn't considered to be "light". The visible blue glow doesn't cure the UV nail gel; instead this curing is done by the invisible UVA energy. These UVA bulbs used in UV nail lamps emit very low levels of UV and are considered to be safer than similar exposure to natural sunlight. Clients do not need to worry about UV overexposure, especially because their hands are only exposed for short periods of time. UV nail lamps have a long history of safe use and there are several scientific studies to show they are safe as used in nail salons.

Secret 2- UVA light is strongly absorbed by UV gels.

UVA light is strongly absorbed by UV nail gels. So much so, that the top layers absorb the majority of the UVA before it can penetrate very deep into the gel layer. This can lead to under curing problems. The upper layers act like an umbrella to shield the lower layers, making it more difficult to properly cure thicker layers of UV gel. This explains why UV cure gels nail coating needs to be applied in thinner layers to ensure proper cure.

Secret 3- UVA curing can't compete with oxygen.

Oxygen in the air prevents the UV gel molecules in the top most layer from linking together to create hard polymers, so that part remains sticky, gooey and only partially cured. Underneath this sticky "inhibition layer" there is little oxygen, so UVA energy can cure the UV gel into a durable artificial nail, as long as it isn't applied too thickly!

Secret 4- Don't judge a UV bulb/lamp by its "wattage".

UVA "intensity" is very important to proper curing. Intensity determines how much UVA is available for curing. Without sufficient intensity of the correct UVA wavelengths for a sufficient length of time these UV nail gel products can't properly cure. The formulation of a UV gel determines necessary intensity and wavelength required, as well as the correct exposure time needed for proper curing. It is very important to understand that UVA light intensity is completely different from "wattage." Wattage measures how much electricity a UV bulb will consume; higher watt bulbs use more electricity. That's all! Proper curing does NOT depend on "wattage." Don't be fooled into judging a UV nail lamp by the wattage of the UV light bulbs. Never buy a UV nail lamp because of its wattage. Use only the UV nail lamp recommended by the manufacturer of the UV gel. Always remember: the wattage of a bulb will remain the same, but UVA light "intensity" slowly degrades every time a UVA bulb is turned on.

Secret 5- UV bulbs MUST be changed regularly.

After a few months of regular use the bulbs in UV nail lamps may no longer properly cure an artificial nail coating. How often should you replace them? Generally, after about 2-4 months of regular use the entire set of UV bulbs should be changed. You should also consider replacing them if clients' nails begin to show signs of unusual service break down or anything else that might suggest under curing, e.g. unusual staining.

Also, carefully clean nail dust from the UV bulbs whenever needed, e.g. once per week. Dirty bulbs have a lower UV intensity, especially those coated with gobs of hardened UV gel. Once coated with cured UV nail product, the bulb can be flipped over and the clean side of the bulb may be used.

Secret 6- UV gels can be under-cured.

All UV gels solidify after they reach 50-55% cure and at this point they are still “under cured”. Just because a nail coating has hardened and looks “cured”, it doesn't mean it is “properly cured”. Under-cured UV gel nails will be prone to staining, discoloration, lifting, breakage and an increased risk for clients to develop skin sensitivities. For example, if a client complains of nail beds that feel “warm” hours after the service or underneath the nail plate feels “itchy” or if the nail plate is partially separated from the nail bed, these are all possible signs of a developing skin allergy. Dusts from under cured UV nail coatings or roll-off from filing the sticky surface layers are more likely to cause skin allergy when skin is repeatedly exposed. Avoid direct skin contact with both! Other signs of under curing may be small voids or air pockets underneath the artificial nail coating that indicate pockets where adhesion has been lost. Or a loss of clarity or a cloudy nail, thicker than normal sticky surface layer. Also watch for dull, soft surfaces or areas where the coating was too easily wiped or filed away.

Secret 7- UV gels can be over-cured

More isn't always better! Using too higher of an intensity UVA nail lamp can over cure UV gels designed for use with lower intensity lamps. This can happen when UV curing nail product designed for use with traditional UV nail lamps are cured with LED style UV nail lamps. In this case the UV nail coating would be exposed to excessive UVA which can cause the UV gel to cure too rapidly and over heat. This can lead to serious burns to the client's nail beds and service break down.

To ensure proper curing of UV nail gels it is VERY important to always use the UV nail lamp that was designed specifically for the UV gel product of your choice and recommended by the manufacturer and to cure as directed. It's NOT a marketing gimmick when manufacturers say you MUST use their UV nail lamp to properly cure their UV gels. This is based on scientific fact.

Now you can appreciate the vast difference between "cure" and "proper cure". If UV gel nails aren't properly cured, the results could range from lifting to cracking to air pockets to allergic reactions and more. Of course, your clients need not worry because you've read and reread the Seven Secrets. Please use this knowledge wisely and prosper.

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