



**LE** light  
elegance  
gel nail products

[www.lightelegance.com](http://www.lightelegance.com)

**Technical  
Information**

# Typical Sources of Problems ...

**The majority of problems regarding gel application and most concerning to us are:**

**1)** The nail must be clean prior to filing the nail. The nail is not truly clean if the client has just washed her hands. Washing with soap and water leaves water and soap residue on the nail. This must be removed with Light Elegance Cleanser and a Light Elegance Wipe.

**2)** The nail technician should always use a new 100/180 Perfect File on every client. The client should be charged per file. This has many advantages:

the new file is faster and thus saves time and money!

the new file is sanitary, reducing potential for infection

the new file prepares the nail better which reduces lifting; this saves time on the next service, makes the client happier and increases business

**3)** The nail technician should not use any other cleansing material other than Light Elegance Cleanser. Other cleansing materials often contain water to make them less expensive, dyes to make them pretty and fragrances to make them smell nice. These all will create lifting.

**4)** The nail technician should not use paper towels as replacements for our wipes. Paper towels have clay and plasticizers. These will leave residues on the nail that will cause lifting.

**5)** The nail technician should not use any 9-watt bulb other than what is purchased from Light Elegance. There are bulbs on the market that are defective and will result in a poor cure which will lead to lifting.

**6)** There are other 9-watt lamps that will cure the Light Elegance gel. Please call us at 800-275-5596 to determine if the nail technician's lamp will cure our gel.

**7)** The finished nail must have a proper curve and arch. Nails without a curve and arch will be inherently weaker than a nail with an arch and curve. Weaker nails are more apt to have breakage problems.

**8)** The Application Guide section of this book contains a Trouble Shooting area. When the nail technician is having any type of problem, this area should be read. You will find answers to most issues in this section. We also strongly encourage the nail technician to call us with any questions. We can answer and solve questions quickly and accurately.

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# Product Guide & Application Book

## Bonding and Finishing gels ...

### Bonder ...

**Description and Recommended Uses:**

All of our products are formulated to adhere to the natural nail as well as to existing enhancement. Bonder will increase the adhesion to the nail plate for all of our products. The nail should look moist and a little glossy.



### Super Shiny ...

**Description and Recommended Uses:**

Super Shiny is a UV cured material that creates a high shine without yellowing. It can be applied to tacky as well as clean, dry surfaces. The shine can last up to 4 weeks.



**Uses:**

Gloss coat over gels, acrylics or wraps.  
Natural nail manicures

**Hints and Trouble Shooting:**

\* Dull streaks are a result of too short of a cure time or bad bulbs. Buff and re-apply Super Shiny.

### Top Gloss...

**Description and Recommended Uses:**

Top Gloss is a UV cured material that creates a tack-free high gloss shine. It should be applied to a clean, dry surface. The shine can last up to 4 weeks. Top Gloss may yellow upon over exposure to UV rays.



**Uses:**

Gloss coat over gels, acrylics or wraps.  
Natural nail manicures

**Hints and Trouble Shooting:**

\* If Top Gloss is sticky after curing in a 9-watt lamp, your bulbs should be replaced.  
\* If Top Gloss is yellowing, apply it thinner. The yellow tint can be removed by filing and re-applying the Top Gloss

# Clear “fill” and “full-set” gels ...

## 1-Step ...

### Description and Recommended Uses:

1-Step is used for creating an shine and a hard outer layer to an arched nail. It is often used as the last step in a full-set or fill. 1-Step will not yellow and the wet-look shine lasts for three to four weeks.

### **Uses:**

Full-sets and fills  
Most often used as the last coat for full-sets and fills

### **Hints and Trouble Shooting:**

- \* Cure 1-Step with a 9-watt lamp. If the shine does not have a wet look, then replace your bulbs.
- \* If the 1-Step feels soft or “gummy”, replace your bulbs.



## Extreme Gel ...

### Description and Recommended Uses:

Extreme Gel is our most popular gel for creating arches and C-curves in the enhancement. It is the strongest gel in our line and is crystal clear. This combination makes it great for appearance, and its viscosity allows for arches to be created easily. It is great for flat nails as well as curved nails.

### **Uses:**

Full-sets and fills on any nail type

### **Hints and Trouble Shooting:**

- \* Extreme Gel will not produce a high shine. Use 1-Step, Top Gloss or Finisher for a high shine.



## Builder ...

### Description and Recommended Uses:

Builder is great for creating arches and C-curves in flat or ski-jump nails. Builder will not run into the sidewall or cuticle.

### **Uses:**

Creating arches and C-curves in flat or ski-jump nails.

### **Hints and Trouble Shooting:**

- \* Builder should not be used in areas where increased strength is needed - Extreme Gel should be used for strength applications



## Pink 1-Step ...

### Description and Recommended Uses:

Pink 1-Step is a semi-opaque pink version of our clear 1-Step. It creates a beautiful pink cast to the nail.

### **Uses:**

Pink and Whites French manicures where a pink cast is needed to enhance the pink tint of the nail plate.



# White “French” gels ...

## White Art ...

### Description and Recommended Uses:

White Art is a gel that is thin and is used for a back-fill without a drill. It creates a very bold French look in one or two thin layers.

### **Uses:**

White French appearance over gels, acrylics or wraps

### **Hints and Trouble Shooting:**

\* If White Art is applied too thick, it will peel easily from the nail surface. If this occurs, remove the White Art and re-apply much thinner.



## Swedish White ...

### Description and Recommended Uses:

Swedish White is a gel that is VERY thin and is used for a back-fill without a drill. It creates a very bold French look in only one extremely thin layer.

### **Uses:**

French white appearance over gels, acrylics or wraps

### **Hints and Trouble Shooting:**

\* If Swedish White is applied too thick, it will peel easily from the nail surface. If this occurs, remove the Swedish and re-apply much thinner.



## French Tip ...

### Description and Recommended Uses:

French Tip is applied to a form to create an extension without the use of glue-on tips.

### **Uses:**

French extensions with the use of a form.

### **Hints and Trouble Shooting:**

\* If French Tip is applied too thick, there will be a white liquid residue on the form when the form is removed from the nail. This uncured product can result in the tip being easily removed from the nail.



## Natural Tip ...

### Description and Recommended Uses:

Natural Tip is a buff, natural color of the French Tip. All application guidelines and recommendations of the French Tip also apply to the Natural Tip.

### **Uses:**

Repair of the natural free-edge of the nail

Natural looking extensions with the use of a form

### **Hints and Trouble Shooting:**

\* If Natural Tip is applied too thick, there will be a white-ish liquid residue on the form when the form is removed from the nail. This uncured product can result in the tip being easily removed from the nail.



## Cleanser ...

### Description and Recommended Uses:

Cleanser is used to clean the nail before and after filing as well as at the end of the service. Cleanser contains no dyes or fragrances. Do not use rubbing alcohol or another manufacturer's cleansing product because this can lead to lifting.



## Gel Polish colors ...



## LE Colorz gel polish ...

### Description and Recommended Uses:

The Light Elegance gel polish colors are used just like a lacquer polish but they have no smell, no dry time and are cured in our UV lamp. We manufacture three new colors every three months, so there are always new shades added to your life of color. The Light Elegance gel polish lasts for months without chipping and because the gel polish does not dry, there is no imprinting or smudging of the gel polish.

#### **Uses:**

Any where a lacquer polish is used and places that you would not consider a regular polish to be used!

#### **Hints and Trouble Shooting:**

- \* Apply two thin layers, curing each layer before the application of the next layer.
- \* When applying to a natural nail, apply a thin coat of a clear gel before applying the gel polish. This allows the gel polish to be filed off without damaging the natural nail.

#### **Application Instructions:**

- 1) Cleanse and prepare the nail (see "Nail Preparation")
- 2) Apply a coat of Bonder to the nail surface and cure for 120 seconds.
- 3) Apply a thin coat of 1-Step over the nail or after the shaping process of the nail when creating an enhancement.
- 4) Apply a thin coat of gel polish and cure. Repeat this step one more time.
- 5) Cleanse and apply a thin coat of Top Gloss and cure 120 seconds. 1-Step or Finisher can also be used at this time, cured for 120 seconds and cleansed.

## Dry Glitters ...

### Dry Glitters ...

#### Description and Recommended Uses:

Light Elegance dry glitters are used for nail art to enhance or decorate a nail. Use the glitters in combinations with the gel polishes or with our clear gels such as 1-Step.



Red



Crystal



Vivid Blue

www.lightelegance.com sales@lightelegance.com phone 541.6861887 toll free 800.275.5596

## Nail Preparation ...

Nail preparation is crucial for the success of the nail and often is over-looked as unimportant and as a result the nail enhancement fails. Please follow our recommendations and if you have any questions, contact us to get the appropriate solution to a problem or answer to your question.

- 1) Push the cuticle back and remove the eponychium with the **Light Elegance Cuticle Pusher**.
- 2) Cleanse the nail thoroughly with **Light Elegance Cleanser ONLY** and **Light Elegance cleansing Wipes**.
- 3) Remove the shine from the nail plate using a light touch and a **Light Elegance 100 grit Perfect File**. Inspect the nail plate surface to be certain that the entire nail surface has been roughed up.
- 4) Cleanse the nail once again with a fresh, clean wipe and Cleanser.
- 5) Inspect the nail one more time for a uniform white appearance. If the nail looks “powdery” then you have done an excellent job!

## Glue-On Tips ...

Gluing on a tip is simple once you know that you need / must choose the tip based on the curvature of the tip not the width of the tip. Once you have chosen the proper tip, glue it onto the nail with **Light Elegance Brush-on Glue**, holding the tip to the nail firmly for a period of 10 seconds. Proceed to the next nail. Once all ten tips have been applied, trim the tips to the desired length, remove the shine and apply **Bonder**.

## Forming ...

The use of a form to create an extension requires time, a good teacher and practice! I strongly emphasize **PRACTICE**. Arrange for a class at one of our local educators for more information. The key to applying the gels over the form is to apply the gel only as thickly as it will cure. This is dependant upon the gel that is used as well as the form that is used. Please call for more information regarding this procedure.

## Finishing ...

We use the term “Finishing” for the process of filing the nail to a desired shape. Shaping the nail is very important in creating strength and durability. A curved nail is not only more attractive than a flat nail but it is much more durable and longer lasting. Flat nails lead to cracking in the stress area and lifting from the side-walls.

Apply **Light Elegance** cuticle oil to the nail after the service. This will give your client a more professional service and repeated, continued use of **Light Elegance Cuticle Oil** will increase the strength of your client’s natural nail over a period of 3 months.

# Application ...

## Full-Set with Tips ...

- 1) Prepare the nail (see “Nail Preparation”), apply the tip to the nail matching the curve of the tip to the curve of the nail and etch the tip with your file. Do not cleanse the tip after filing,
- 2) Apply Bonder and cure for 120 seconds
- 3) Apply Builder or Extreme Gel to create an arch and curve in the nail. Cure the product for 120 seconds.
- 4) Apply Extreme Gel or 1-Step and cure for 120 seconds.
- 5) Cleanse the sticky residue from the nail, file the nail to shape with a 180 grit file and cleanse the nail again to remove dust and oils from the filing process.
- 6) Apply Super Shiny, Top Gloss or 1-Step to a shine and cure for 120 seconds. Cleanse the nail to remove the sticky residue from the nail (unless you used Top Gloss - do not cleanse Top Gloss).

## Full-Set with Forms ...

- 1) Prepare the nail (see “Nail Preparation”),
- 2) Apply Bonder and cure for 120 seconds
- 3) Adhere the form to the finger and use French Tip to construct the free-edge of the nail.
- 4) Apply Builder or Extreme Gel to create an arch and curve in the nail. Cure the product for 120 seconds.
- 5) Apply Extreme Gel or 1-Step and cure for 120 seconds.
- 6) Cleanse the sticky residue from the nail, file the nail to shape with a 180 grit file and cleanse the nail again to remove dust and oils from the filing process.
- 7) Apply Super Shiny, Top Gloss or 1-Step and cure for 120 seconds. Cleanse the nail to remove the sticky residue from the nail (unless you used Top Gloss - do not cleanse Top Gloss).



## French Fill ...

HINT: Swedish White can also be applied just before the application of the Super Shine.

- 1) Prepare the nail (see "Nail Preparation"),
- 2) Apply Bonder and cure for 120 seconds
- 3) Apply a thin coat of White Art or Swedish White and cure for 120 seconds. Repeat this step for a more bold white if desired.
- 4) Apply Builder, Extreme Gel or 1-Step to create an arch and curve in the nail. Cure the product for 120 seconds.
- 5) Cleanse the sticky residue from the nail, file the nail to shape with a 180 grit file and cleanse the nail again to remove dust and oils from the filing process.
- 6) Apply Super Shiny, Top Gloss or 1-Step and cure for 120 seconds. Cleanse the nail to remove the sticky residue from the nail (unless you used Top Gloss - do not cleanse Top Gloss).

## "Natural Look" Fill ...

- 1) Prepare the nail (see "Nail Preparation"),
- 2) Apply Bonder and cure for 120 seconds
- 3) Apply Builder or Extreme Gel to create an arch and curve in the nail. Cure the product for 120 seconds.
- 4) Cleanse the sticky residue from the nail, file the nail to shape with a 180 grit file and cleanse the nail again to remove dust and oils from the filing process.
- 5) Apply Super Shiny, Top Gloss or 1-Step and cure for 120 seconds. Cleanse the nail to remove the sticky residue from the nail (unless you used Top Gloss - do not cleanse Top Gloss).



# Trouble Shooting ...

## Lifting in Cuticle Area ...

- 1) Be sure to cleanse the nail prior to filing.
- 2) Do not touch the skin with the product.
- 3) Be certain that ALL shine is removed from the nail during preparation.
- 4) Apply Bonder to the nail after the preparation process.
- 5) Use a new 100 grit Light Elegance Perfect File to prepare the nail.
- 6) Do your bulbs need to be replaced?

## Lifting at Free-Edge ...

- 1) Be sure to cleanse the nail prior to filing.
- 2) Cap the free-edge when applying each coat of gel.
- 3) If you are using a white gel, apply the white gel thinly so that the thickness of the gel cures completely, DO NOT APPLY WHITE GELS THICKLY.
- 4) Use a new 100 grit Light Elegance Perfect File to prepare the nail.
- 5) Do your bulbs need to be replaced?

## Burning or heat sensation ...

- 1) Reduce the amount of product being used in one coat of gel.
- 2) Insert the hand into the lamp for a two seconds at a time, then remove the hand. Repeat this process five times or ... slowly insert the hand into the lamp.
- 3) Keep in mind that there are factors that increase heat sensitivity: removal of acrylics, hormone therapy, anti-depressant pharmaceuticals and some individuals are more prone to heat sensitivity than others.

## Cracking ...

- 1) Make the application thicker only in the stress area, creating more of an arch and curve in the nail.
  - 2) Do not file the sidewalls too thin when shaping. Keep in mind that the gels file much easier than acrylics and thus are more easily filed away.
  - 3) Make sure that you are using a Light Elegance approved lamp.
- Do your bulbs need to be replaced?

## Soft Product ...

- 1) Use a Light Elegance approved lamp.
- 2) Change your bulbs immediately.
- 3) Cure product twice until new bulbs arrive.

## White circle in stress area ...

- 1) Use a Light Elegance approved lamp.
- 2) Use a new 100 grit Light Elegance Perfect File when preparing the nail.
- 3) Apply Bonder when doing a fill or full-set.
- 4) Replace bulbs.

## Other Important Items ...

- 1) Avoid contact with skin. Some people can become allergic to all products used for nail enhancements. Gels are not an exception. When you cleanse the nail, cleanse from the cuticle area to the free-edge. Avoid wiping the gel residue onto the cuticle area.
- 2) Avoid exposure of the open containers to UV light. Sources of UV light include your Light Elegance lamp, sunlight and some desk lamps.

# Gel Comparison Sheet

Light Elegance	Viscosity (1)	Self-Leveling? (2)	Color (3)
<b>Builder</b>	Thick	No	Clear
<b>Extreme</b>	Thick	Yes	Clear
<b>1-Step</b>	Medium	Yes	Clear
<b>Pink 1-Step</b>	Medium	Yes	Pink
<b>Super Shiny</b>	Thin	Yes	Clear
<b>Top Gloss</b>	Thin	Yes	Clear
<b>Bonder</b>	Thin	Yes	Clear
<b>French Tip</b>	Thick	No	White
<b>White Art</b>	Thin	Yes	Bright White
<b>Natural Tip</b>	Thick	No	Natural White
<b>Gel Polishes</b>	Medium	Yes	Varies

## IBD

<b>Clear Builder</b>	Medium	Yes	Clear
<b>Clear</b>	Thin	Yes	Clear
<b>Pink Builder</b>	Medium	Yes	Pink
<b>Bonder</b>	Thin	Yes	Clear
<b>Ultra White Builder</b>	Medium	Yes	Bright White
<b>Gel Polish</b>	Medium	Yes	Varies

Light Concept Nails	Viscosity (1)	Self-Leveling? (2)	Color (3)
<b>Sculptor</b>	Thick	No	Clear
<b>Fibrique</b>	Medium	Yes	Clear
<b>Bondique</b>	Thin	Yes	Clear
<b>One Phase</b>	Medium	Yes	Clear
<b>Pink Sculptor</b>	Medium	Yes	Pink
<b>Sealant</b>	Thin	Yes	Clear
<b>Nail Bond</b>	Thin	Yes	Clear
<b>Bonder</b>	Thin	Yes	Clear
<b>Formature</b>	Thick	No	White
<b>FM White</b>	Thin	Yes	Bright White

## Brisa by Creative

<b>Sculpting</b>	Thick	No	Clear
<b>Sculpting Pink</b>	Thick	No	Pink
<b>Liquid Bond</b>	Thin	Yes	Clear
<b>Finishing Gloss</b>	Thin	Yes	Clear
<b>Gel Paint</b>	Medium	Yes	Varies

**Le Chat**

<b>Gel Base</b>	Thin	Yes	Clear
<b>Powder Gel</b>	Thin	Yes	Clear
<b>Gel Top</b>	Thin	Yes	Clear
<b>French Pink Gel Top</b>	Thin	Yes	Pink
<b>Color Gel</b>	Medium	Yes	Varies

**Young Nails**

<b>Base</b>	Medium	Yes	Clear
<b>Flex</b>	Medium	Yes	Clear
<b>Build</b>	Thick	Yes	Clear
<b>Build Pink</b>	Thick	Yes	Pink
<b>Finish</b>	Thin	Yes	Clear
<b>Gloss</b>	Thin	Yes	Clear
<b>French</b>	Medium	No	White
<b>Snow</b>	Very Thick	No	White
<b>Hyper White</b>	Medium	Yes	Bright White

**Star**

<b>Primer</b>	Thin	Yes	Clear
<b>Clear</b>	Thin	Yes	Clear
<b>Thick Clear</b>	Medium	Yes	Clear
<b>Pink</b>	Medium	Yes	Pink
<b>White</b>	Medium	Yes	White
<b>Gel Polishes</b>	Medium	Yes	Varies

- (1) Viscosity refers to the thickness of the gel. This is measured in centipoise, but is commonly listed as thin, medium or thick. The thinner the gel, the more it will run into the side-walls and cuticle areas.
- (2) Self-Leveling refers to the ability of the gel to become flat. Self-leveling gels when listed as "thin viscosity" gels usually will run into the sidewalls and cuticle areas.
- (3) The clear, pink and white gel colors are self-explanatory, but the terms "varies" designates that this product has many different colors.

# Lamp and Bulb Article

## Lamp and Bulb Article

### Not All Lamps and Bulbs are the same

#### What will you learn today?

Today we will be discussing all aspects of curing lamps. UV gels are the result of very specific chemistry used with very specific curing technology. If good curing technology is not employed to polymerize the UV gel resin system, then all of the polymer chains will not form. Not completing all of the polymer chains will result in a few important issues that will cause problems. These issues will be, most importantly, a weak polymer that is not functioning at its optimal strength. The finished product will not have a high shine, white and colored gels will not cure to their optimum thickness and adhesion will be weak resulting in a greater occurrence of lifting. Likewise, if the optimal curing is obtained by the use of proper curing technology, all of the polymers will be formed, high gloss will be a result and the enhancement will have increased adhesion and thus will decrease the occurrence of lifting problems.

It is VERY important to note that the use of poor curing technology will result in poor adhesion and a weak polymer system after curing the gel in the UV lamp. An optimal cure will not replace good nail preparation and ideal nail shaping.

#### Not All UV Bulbs are Equal

There are four bulbs that are most commonly used in curing lamps for UV gel systems. The four types of bulbs are 4, 6, 8 and 9-watt bulbs. These bulbs normally emit UV light in the 350 nm (nanometer) wavelength. Most gel systems used for fingernail enhancement purposes use this wavelength to cure the gels from a liquid to a polymerized, plastic state. Wavelengths too far outside of this ultra violet region of light are typically not used to cure gels and thus are not useful for our purposes. The bulbs that are typically used are listed below with their UV emittance: (provided by Sylvania Lighting)

<b>Bulb</b>	<b>UV Light Emittance</b>
4-watts	0.25 watts
6-watts	0.60 watts
8-watts	0.80 watts
9-watts	1.7 watts

*Per Bulbtronics, Inc.*

Notice the difference between the 9-watt bulb and all the other bulbs. The 9-watt bulb, because of the U-shaped design, is much more effective than the others. Please look at the photos of the 4 bulbs that we are discussing. These bulbs have two different shapes. If your bulb is straight, then you know that it is not a 9-watt bulb.

# Lamp and Bulb Article (cont.)



8-watt, 6-watt and 4-watt bulbs



9-watt bulb

## How Strong is Your Lamp?

If the lamp uses a single 9-watt bulb, then it is a 9-watt lamp with 9 watts of power. If it uses four (4) 9-watt bulbs, it is still a 9-watt lamp that has 36 watts of power. The number of bulbs used in your lamp should be enough to cure the gel that you are placing into the lamp. The general (and I stress the term *general*) calculation for determining the strength of a lamp is dependent upon four things.

- 1) The number of bulbs is very important. The more bulbs a lamp contains will result in a more powerful lamp. This seems like common sense but many people have purchased a large, two handed lamp with only five small, 4-watt bulbs and think that this large lamp will cure as well as a small lamp with more powerful bulbs.
- 2) The type of bulb is very important. A 9-watt bulb is more powerful than the other bulbs in this study and thus will have a better curing ability. The new 9-watt lamps are fast becoming the industry standard for curing gels.
- 3) The size of lamp is important to the performance of the curing of the gel. The fewer bulbs inside the lamp the less intense the light concentration will be. Imagine the room that you are sitting in. If there is one small, 15 watt light bulb in ceiling of the room, the light intensity will not be very high. Now, imagine that the entire room's ceiling is filled with large fluorescent lamps. This room that has a ceiling of light bulbs will result in a much brighter room.
- 4) The last important factor is making a good curing lamp is the distance between the bulb and the fingernail. The closer the bulb is to the fingernail the more intense the curing of the gel. Envision yourself in a tanning bed. Would you leave the lid of the tanning bed open or pull it as close to you? If you want to have a nice tan, then you will do your best to bring that lid as next to your skin. Why? You instinctively know that the upper lid containing the bulbs needs to be as near to you as possible to ensure that you are getting the best possible results. The further a UV ray travels, the less intense it becomes. The same principle applies to curing UV fingernail enhancement resin systems. So, the closer the bulbs are to the resin the better the curing effect will be.

I have created a formula that is good for estimating the relative power of the curing lamp. The equation is as follows:

Lamp Power =  $\frac{\text{curing power of the bulb} \times \text{number of bulbs}}{\text{area inside the lamp} \times \text{distance of the bulb from the fingernail}}$

(area inside the lamp x distance of the bulb from the fingernail)

# Lamp and Bulb Article (cont.)

For an example, the Light Elegance Easy Cure lamp would follow this same equation:

$$\begin{aligned}\text{Lamp Power} &= \frac{1.7 \text{ UV watts/bulb} \times 3 \text{ bulbs}}{36 \text{ sq. in.} \times 1.5 \text{ in.}} \\ &= \frac{5.1 \text{ UV watts}}{54 \text{ cu. In.}} \\ &= 0.094 \text{ UV watts / cu. in.}\end{aligned}$$

For a second example, we can compare the Light Elegance Easy Cure Lamp to one sold that contains five 4-watt bulbs with approximately 100 square inches of interior space. The larger lamp is good for curing products such as UV cured gloss coats but not for thicker films of enhancement resin systems such as building gels.

$$\begin{aligned}\text{Lamp Power} &= \frac{0.25 \text{ UV watts/bulb} \times 5 \text{ bulbs}}{100 \text{ sq. in.} \times 3 \text{ in.}} \\ &= \frac{1.25 \text{ UV watts}}{300 \text{ cu. In.}} \\ &= 0.004 \text{ UV watts / cu. in.}\end{aligned}$$

If the curing power of the two lamps are compared, it is simple to see that the smaller lamp that utilizes the 9-watt bulbs is more intense in it ability to cure gels.

# Lamp and Bulb Article (cont.)

## Lamps ...



**Pro Finish Lamp – 0.004 UV watts/cu in**



**IBD Jet 1000 Lamp – 0.007 UV watts / cu in**



**IBD Jet 3000 Lamp – 0.005 UV watts / cu in**



**IBD Jet 5000 Lamp – 0.005 UV watts / cu in**

# Lamp and Bulb Article (cont.)



**Tunnel Lamp – 0.071 UV watts / cu in**



**Creative Brisa Lamp – 0.096 UV watts / cu in**



**Light Elegance Easy Cure Lamp - 0.094 UV watts / cu. in.**



**Generic 6-watt lamp - 0.029 UV watts / cu. in.**

# Lamp and Bulb Article (cont.)

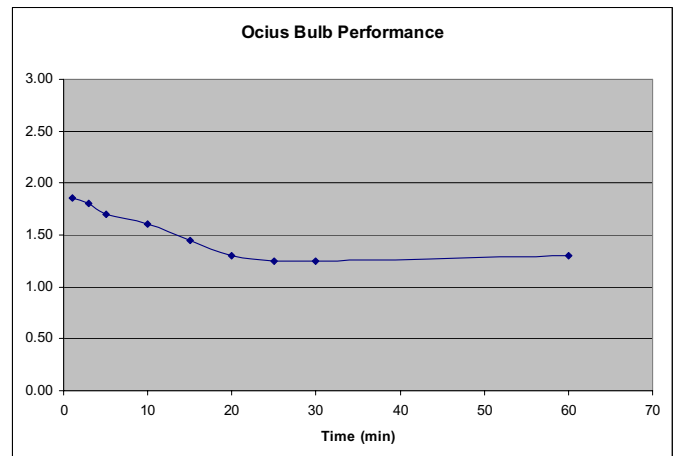
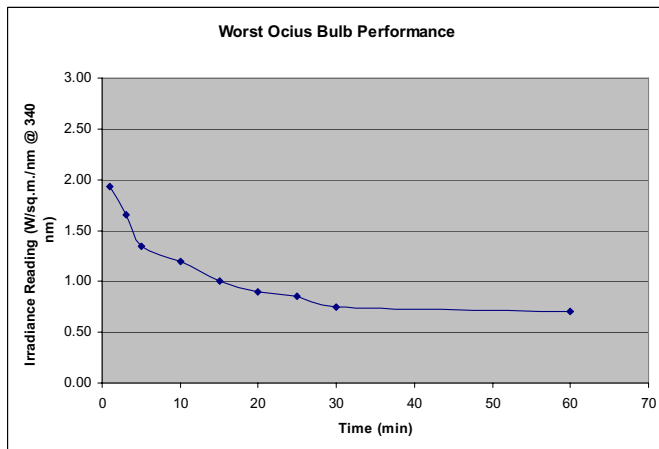
## How effective is the bulb that is used in your lamp?

The lamp is only one component of the curing issue. The second component of curing is the bulb that is used inside the lamp. Not all bulbs are the same. One 9-watt bulb from manufacturer "A" will not have the same performance as a 9-watt bulb from manufacturer "B". The test lamp utilized was a single, 9-watt bulb lamp. It was completely reflective on its interior and was of similar size and proportion to a generic single, 6-watt bulb lamp.

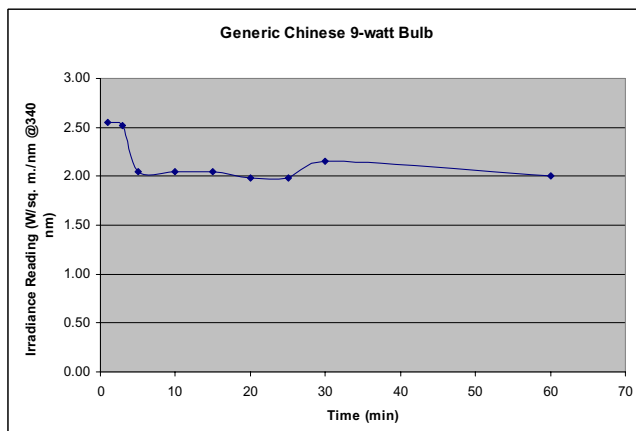
The above figures are listed as calculations for how powerful a curing lamp *might* be. These calculations can be supported by actual measurements of the UV emittance from the lamps themselves. Utilizing a tool that measures UV emittance at 340 nm, we can verify or contradict the above calculations. For these measurements to be accurate, I used a ultra violet radiometer made by Q-Panel Corporation that measures the light intensity at a wavelength of 340 nm. I utilized two light units for this test. One light unit uses a 9-watt bulb and one a 6-watt bulb. The measurements for each reading were taken at similar intervals and plotted over time yielding a graph that represents the amount of UV intensity expressed at 340 nm at a specific time.

I have attached a few graphs to this report that signify the bulb performance.

Here are a few bulbs that are on the market currently:



The difference between the above two graphs is significant in that both bulbs are made in the same plant. Please note where each bulb's emittance is measured after 30 minutes.

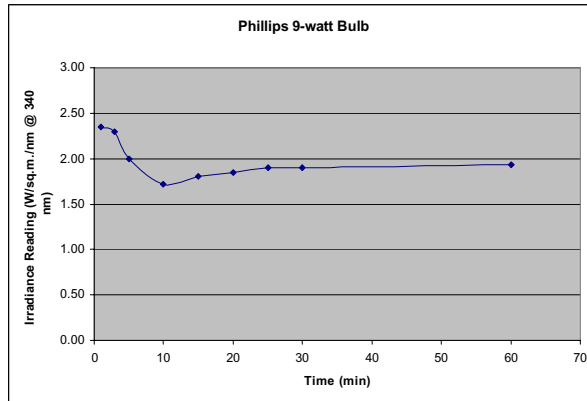


Comparing the Generic Chinese Bulb with the Ocius bulb, you can clearly see that the Chinese bulb starts at a much higher irradiance level. You can also see that the performance of the Chinese bulb begins to deteriorate after 30 minutes of use. This deterioration continues during its life and I

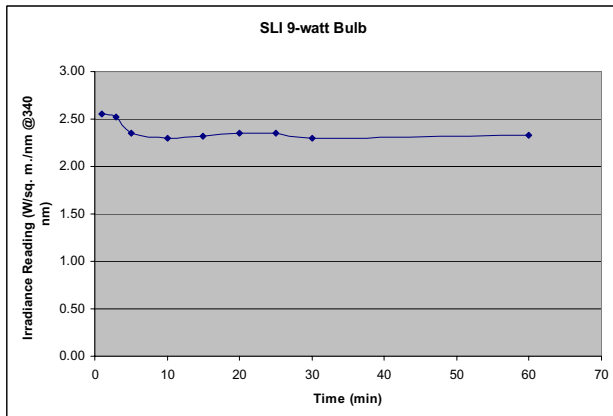
# Lamp and Bulb Article (cont.)

have found that even though this bulb is of better quality than the Ocius bulb, it is still not the best bulb on the market and should be replaced at  $\frac{1}{4}$  to  $\frac{1}{2}$  the life expectancy of many other higher quality bulbs.

Examination of the Phillips bulb compared to that of the Chinese or Ocius bulbs you can observe that the Phillips bulb's performance is similar to the Chinese bulb to begin with but the Phillips bulb does not deteriorate within the duration of the test after 30 minutes. The life expectancy of the Phillips bulb is much higher than that of the other two bulbs thus far. I should note that the Phillips bulb has another high quality



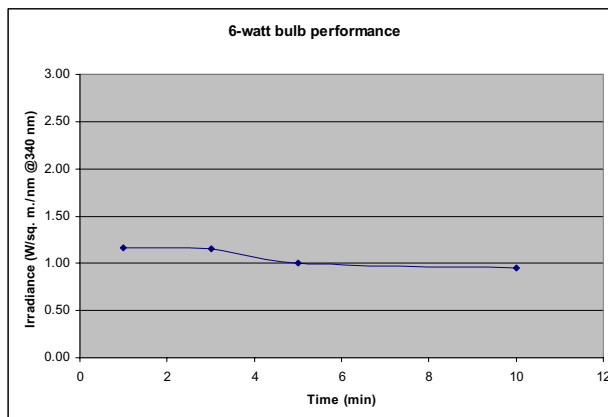
component that can not be over looked. The Phillips bulb uses a very good starter, which is a key component for 9-watt bulbs. It is this starter that makes the Phillips bulb very good where electrical interruptions and supply can be questionable. This is important in many industrial areas that have high demands on the electrical supply that can yield lower voltages.



To the left you can view the performance of the SLI bulb that is sold by Light Elegance. This bulb has a similar performance to the Phillips bulb. There is no decrease in UV emittance performance and the emittance stays above 2.3 irradiance after the 30 minute time.

It is indicated by the above study that the SLI and Phillips bulbs have superior performance to the generic Chinese and Ocius bulb. If the Sylvania bulb that is manufactured in the United Kingdom were included in this test, it would perform in a similar manner to the SLI and Phillips bulbs.

If the performance of the SLI bulb is compared to the performance a generic 6-watt lamp,



# Lamp and Bulb Article (cont.)

we can see that the 6-watt lamp begins its life cycle at roughly 1.2 irradiance. This reading tells a story that the 6-watt bulb (being used in a similar lamp as the test lamp for the 9-watt bulb) has roughly 1/3 the emittance as a good quality 9-watt bulb. Additionally, if the UV power of the 9-watt bulb would be used in the calculations for the 6-watt lamp, the Lamp Power figure would change from 0.029 UV watts/ cu. in. to 0.081 UV watts/cu. in. The 0.081 calculation is 2.79 times greater than that of the 6-watt lamp. This confirms that the figures supplied by Sylvania are reliable and that the calculations that I have determined are accurate.

## **What happens if the optimal cure is not obtained for your gel?**

UV gels require very specific curing technology to be used with very specific chemistry. Using the wrong lamp for a gel is like using acrylic off ratio. It is unadvised and will result in bad results. Weak lamps will result in weak gels; strong lamps will result in stronger gels. The stronger lamp will cure white, pink and colored gels better than a weak lamp.

It is also very important to note that the bulbs need to be replaced periodically. Two lamps on the market today have an L.E.D. (light emitting diode) on the back of the lamp that changes from green to red when it is time to change your bulbs. Light Elegance and Creative Brisa gels use a lamp with the L.E.D. technology. If you do not have this feature, a good rule to follow is replace the bulbs in your lamp every four months if you have a clientele of 40 clients using gels per week, every eight months if you have a clientele of 20 clients using gels per week and once a year if you have a clientele of 10 or less clients using gels per week.

In conclusion, not all UV lamps are the same. Likewise, not all UV bulbs are the same. These two statements lead to only one conclusion, when using gel nail products you must be certain as to which lamp and bulb is best suited for the gel that you are using. UV cured gel enhancement systems are becoming very popular and a service that many clients are asking for regularly. So, as we venture into the years ahead where UV gels will become the leading enhancement systems used, you need to be prepared to understand the technology that you are or will be using.

If you have any further questions, you can contact the author at:

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# Acrylics and Light Elegance Gel Nail Products ...

## What is the difference?

*I have assembled important information on acrylics and compared that to Light Elegance. This assembly has been the request of many individuals. The information contained within these pages is information that I found on the internet in various locations. I reviewed this information and found that it is correct and I feel very comfortable passing it along to you. I understand this information and if you find some of it confusing, please call me at 800-27565596 and I will be happy to explain it to you.*

*Jim McConnell  
President, McConnell Labs, Inc.  
Manufacturer of Light Elegance Gel Nail Products*

### **A brief summation of the information in this packet is ...**

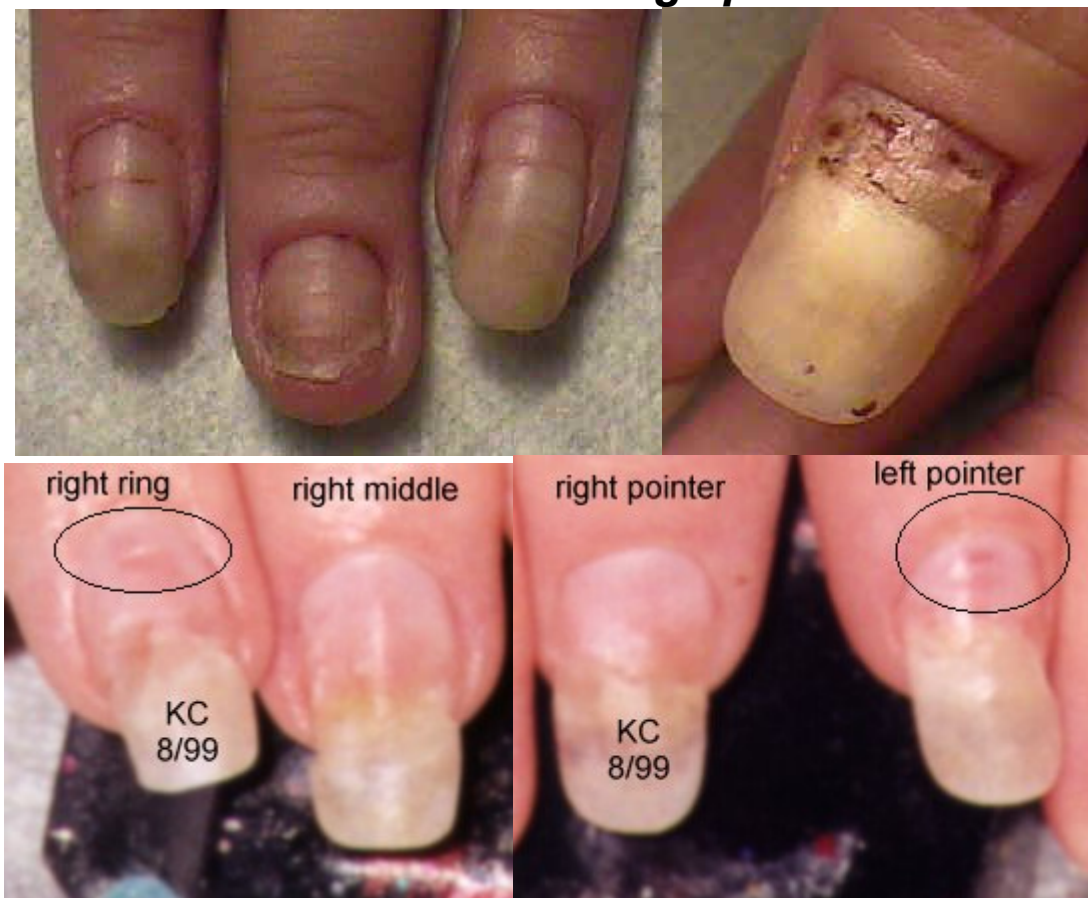
1. Acrylics use a liquid and a powder that are mixed together and applied to the fingernail. The mixture cures on the nail resulting in a plastic enhancement.
2. Light Elegance and other gels are a single component liquid that is applied to the fingernail and cured in a UV lamp. The cured plastic is hard and flexible resulting in an enhancement that is superior to acrylics.
3. There are many differences between acrylics and Light Elegance.
  - a. The most noticeable difference is that Light Elegance consists of thick liquids and do not involve a thin liquid with a strong odor.
  - b. If a thin liquid with a strong odor is used with a powder, then it is neither Light Elegance nor any other gel.
  - c. If the product is not cured in a UV lamp, it is not Light Elegance or any other gel.
4. Light Elegance gels have a beautiful high shine once cured. This high shine does not dry and can not be dulled unless abraded by a file or other very hard surface. This high shine lasts for 3-4 weeks.
5. Acrylics are not stronger than Light Elegance. This is a myth that has been created by acrylic companies. Now that acrylic companies are making gels, this myth will disappear.
6. Light Elegance can be used in arid, humid and all environments in between. It has been said that gels do not behave well in arid or humid conditions, this is a myth told by acrylic manufacturers.
7. Light Elegance is less harmful to the natural nail than acrylics and do not yellow. If nail lacquer is applied to the gel, a base coat does not need to be used.
8. Light Elegance can be applied and used by people who are pregnant (*safe handling procedures should always be followed*).
9. Acrylic manufacturers do not want nail technicians to know the health hazards of using monomers, so I have listed MSDS (material safety data sheets) in this packet of information. Please look at these MSDS' to learn what they can do to people who do not handle them correctly. The CDC (Center for Disease Control) and NIOSH (National Institute for Occupational Safety and Health) recommend the use of nail tables that remove the dust and vapors from the work environment when the nail technician is using acrylics! This is NOT the case for nail technicians using Light Elegance.

# MMA and Improper Drill Use

1. Acrylics typically use one of two monomers as their liquid component: MMA and EMA. The FDA has determined that EMA is “safe for professionals to use” but I choose not to use it because of its dangers. EMA is the name used in the industry, but its chemical name is ethyl methacrylate. You will find a MSDS (material safety data sheet) for EMA listed in this paper. You will see that EMA is not a product that a person should have on their skin or breathe the vapors of the EMA. MMA (methyl methacrylate) is used in many salons that offer inexpensive services. It has a very strong odor and is difficult to remove by soaking in acetone or filing.
2. Light Elegance uses resins that are called oligomers – meaning that they are built upon other types of molecules such as urethanes. Oligomers are safer to use and handle than monomers because of the size of the molecule. Gels have a much lower odor than acrylics. Light Elegance gel does not yellow whereas acrylics do yellow. Gels are easier to file on and can not be removed by soaking in acetone.

What I am certain you really want to know is the bottom line. After all the data is read and digested, the actual information is simple ... Light Elegance is safer to use than acrylics. Light Elegance is one of the safest gels on the market and one of the easiest gels to use. When I formulate a gel product, I do not use any MMA, EMA or any other hazardous ingredient.

## ***Drill and MMA damage pictures***



(<http://www.beautytech.info/articles/mmafacts.htm>) July 31, 2006

# Typical Gel Questions and Answers

- 1) Q) Why do gels get hot?
  - A) Gels, as with all polymers, generate heat as a result of an exothermic reaction. An exothermic reaction is a reaction that generates heat (exo – “to give off” and thermic – “heat”). The exothermic reaction is a result of the gel being at one state (liquid) which has a high potential energy and going to a solid which has a lower potential energy. The difference in potential energy is the amount of energy that is given off in the form of heat. Each resin that is used in the final gel formulation has its own exothermic reaction. These individual exothermic reactions take place at individual times during the curing process. If each exothermic reaction takes place at the same time, then there is more heat. If the exothermic reactions are staggered, then there is less heat. The exothermic reaction feels hotter if the individual reactions take place at the same time. A second factor effecting the exothermic reaction is the amount of product being used to create the enhancement. If more gel is used to create the enhancement, then more heat is generated; likewise, if less product is used to create the enhancement, then less heat is generated. Light Elegance makes a gel called Builder Gel. Builder has a staged reaction rate that creates less heat when cured compared to our Extreme Gel which is our strongest gel in our line that does not have a staged reaction. Extreme Gel generates more heat than Builder when cured. We could not adjust for the exotherm when we formulated Extreme because Extreme Gel had to be strong and be good for clients who have allergies to other gels.
- 2) Q) Can you soak-off gels? Is this a good characteristic or a bad one?
  - A) You can not soak-off most gels and those that you can really do not gel soft and ‘gummy’ like acrylics do when you expose them to acetone. Gels are a urethane resin that is terminated with an acrylic reactive site. This transforms the urethane into an acrylate (slightly different than an acrylic). The urethane does not swell with exposure to acetone and thus can not be soaked off. Gels that can be soaked off have a lower cross link density and do not become gummy rather they swell and can be scraped off the nail plate. Gels of this nature are not as chemically strong as gels with higher cross link densities and appear to be more flexible. We like our gel to not be able to be attacked by acetone because this means that the nail technician can use acetone based polish remover to remove any polish from the gel and not have it effect the gloss or integrity of the gel. Acetone is a very harsh chemical on the skin. Prolonged exposure to acetone removes critical oils in the skin that help protect our bodies from other chemicals and elements in the environment. I do not see this prolonged exposure as a positive treatment for our clients.
- 3) Q) Are gels as strong as acrylics?
  - A) Some gels are as strong as acrylics. One example of this would be our Extreme Gel. One reason why gels are perceived as weaker is the application technique. Because most gels do not have a solid polymer (like acrylic powder) in them, it is easy to not create an arch and curve in the nail. Since an arch and curve create integrity and strength in the enhancement, the lack of an arch and curve allow the nail to be more flexible and as such create cracking. Another aspect to consider is how easily gels file off compared to acrylics. When the nail technician shapes the nail too much product can be removed and this results in too little product remaining in the sidewall of the nail. This is where a crack can initiate and subsequently continue across the nail surface in the stress area. Both of these aspects of gels can be considered to be weaknesses unless the nail technician knows about the product that she or he is using so that accommodations can be made resulting in a beautiful and durable enhancement.
- 4) Q) Why do some people become allergic to gels?
  - A) Clients generate allergies to various products used to manufacture fingernail enhancement systems. Many clients develop allergies to acrylic acids found in acrylics and some gels and epoxy acrylates found in some gels. Clients and nail technicians can even develop allergies to the urethanes used to make gels. Urethane acrylates used to make gels have less of a tendency to develop allergies than the acrylic acids and epoxy acrylate resins. Allergic reactions can be reduced dramatically if the nail technician follows a few simple guidelines: a) do not over expose your client’s skin to the product by getting it on her cuticle, b) do not wipe or cleanse the sticky layer off of her enhancement while cleansing her skin – restrict your cleansing area to the enhancement only, c) be careful when removing the gel from the container – do not let the product drip onto the surface of the table where you could rest your arms. This results in over exposing the skin on your forearms to the gel that could result in an allergy.
- 5) Q) Do gels turn yellow in a tanning bed?
  - A) Most gels do not turn yellow in a tanning bed. I know for certain that the Light Elegance does not. This is because of our selection of resins and photoinitiators that are used to manufacture Light Elegance are specifically chosen because of their UV stability.
- 6) Q) Are all UV lamps that are used to cure gels the same?
  - A) No! Not all UV lamps are the same. In fact, not all UV bulbs of the same wattage are equal! There are inferior bulbs on the market and inferior lamps that use circuitry and ballasts that I would consider to be sub-standard. Choose a 9-watt lamp that uses name brand bulbs that you know you can trust (Sylvania Lighting –SLI, Phillips, ...). Ask questions regarding your lamp and be informed before spending your money.