

## results

### optimal

If your image is **shiny and dense black**, you have reached optimal results and maximized contrast and resolution.



(matte silver)

(satin silver)

(satin gold)

### over mark

Too much power causes over marking which results in a **grayish mark** with slight **etching or relief**. The marked area can look "flat" or matte especially when viewing at an angle.



### under mark

Too little power causes under marking which results in an image with **shades of tan, brown or red**. Under marking can also cause inconsistency in the image as power is delivered unevenly to the AlumaMark.



## final word

There is care to be taken with all laserable material. Although AlumaMark may take some trial marking to discover the best settings for your laser, these settings should work for most jobs. Variability of quality after you have found your settings is most likely an issue of the specific art file you are working with.

For more information, visit  
[www.AlumaMark.com](http://www.AlumaMark.com)

- thank you and enjoy!

HorizonsIncorporated  
ISG Imaging Systems Group

ALUMAMark®  
Laser Markable Aluminum 

## laser settings and marking GUIDELINES

AlumaMark is an extraordinary aluminum that uses the heat of the laser to mark rather than etch. Correctly imaged AlumaMark results in rich black positive graphics that feel smooth to the touch. AlumaMark enables you to create high contrast, easy to read graphics with superior resolution.

The following provides  
guidelines to help you  
achieve consistent, high  
quality images on AlumaMark.

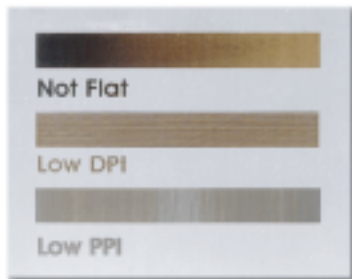
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## How to use AlumaMark

- Works well with most CO<sub>2</sub> lasers and some low power Fiber/YAG lasers.
- AlumaMark aluminum sheets are **markable on one side only** (peel off protective plastic before lasing).
- Satin Silver, Red, Blue, Green, Yellow and Orange use less power than the other finishes.

## settings

- Optimal marking results are based on a combination of the power and speed settings.
- The goal is to achieve a consistent black mark, not etch. Too much power delivered at the point of contact will etch rather than mark and result in a grey/charcol mark. We refer to this as over marking. Too little power will result in a tan, brown or red mark, otherwise referred to as under marking.
- Expect some trial and error in order to achieve an optimal mark (pictured in the "Results" section).
- Marking sheets will result in some black residue, or ash, on the surface of the lased area (especially on satin gold, bronze and brass). Wipe or wash the sheet after lasing to evaluate true image results.
- Two additional settings are important:
  1. DPI - should be set at 600dpi or higher
  2. PPI - should be set as high as possible.



## suggested laser settings

The following settings have been used with success by our customers. They are provided as a starting point only. Since no two lasers are exactly alike, **some experimenting to find your optimal settings will be necessary** for the best results.

laser (in watts)	power (percent)	speed (percent)
Epilog 35w	10	30
Epilog 40w	25	30
Epilog 75w	25	30
GCC 12.5w	35	70
GCC 35w	12	100
LaserPro 12.5w	35	75
LaserPro 35w	12	100
LaserPro 50w	30	100
Trotec 30w	15	15
Trotec 45w	13	20
Universal 25w	55	80
Universal 30w	25	100
Universal 35w	41	80
Universal 45w	27	80
Universal 100w	20	80
Xenotech 30w	56	80

It has also been helpful with some lasers to slightly de-focus the laser, in particular when marking Satin Silver and Colors. Lowering the bed of the laser about an 1/8 of an inch can yield better results.

### Side note for Epilog users -

autofocus adjust should be set between +90 and +115 with autofocus turned on. If your laser has the option, change the AC (acceleration compensation) to 6 and RC (ramp compensation) to 9. This will help to yield a consistent and rich black mark.

## Helpful Hints

1. To achieve greater consistency and improve results, a second pass is sometimes helpful. On the second pass, areas that did not mark black enough will get darker while the areas that achieved an optimal mark will be unaffected and not over marked.
2. AlumaMark sheets that have been under marked can be lased again with slightly more power until an optimal mark is achieved.

## additional considerations

- CO<sub>2</sub> lasers are not necessarily consistent from the beginning of a day to the end. The power setting that was used in the morning might have to be slightly altered to yield good results later in the day.
- AlumaMark is manufactured from coil aluminum. Each sheet is flattened at the factory prior to packaging. Due to the memory of the metal, some sheets may exhibit a slight bow when you receive them. Always make sure your sheet is held flat during lasering for optimal results.
- Lasing large areas of AlumaMark can heat the sheet and cause it to rise from the laser bed if not held in place. Inconsistent images can result.

