

# Technical Data Sheet

Solutions for CerMark ULTRA Paste



**CerMark ULTRA** is specifically formulated to laser mark on most laser markable substrates such as metals, glass, ceramics (glazed or unglazed), stone, brick (glazed & unglazed), slate and more using just one CerMark product. This new product is by far superior to our existing product line formulated to achieve the best results in the industry.

**CerMark ULTRA** is ethanol based which allows for a faster drying time.

## Using CerMark ULTRA:

### Strengths of Product

Allows CO<sub>2</sub>, YAG, and Fiber lasers to mark the follow substrates: Uncoated metals such as stainless, brass, aluminum and more as well as ceramics, glass, porcelain, brick and more. Produces high contrasting, highly durable marks; fast drying; will not stain sensitive metals such as brass, nickel and others.

### Recommended Application Parameters

#### **Application Methods** **Application**

Spray gun, airbrush, or aerosol.  
Clean the surface to be marked so that it is free of any lubricants or oils. The **ULTRA** must be applied with an even coat to ensure a consistent mark and color.

#### **Coverage**

500 grams of the CerMark **ULTRA** will cover approximately 6000 square inches.

#### **Thinner** **Recommended reduction**

Thin with ethanol.  
1:1 ratio by volume: 1 part ULTRA – 1 part ethanol

#### **Suggested Cleaning:**

Wash with water or a wet towel or sponge.

#### **Limitation of Warranty and Liability**

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**Laser marking metals:**

A variety of bare metal substrates including stainless steel, brass, aluminum, titanium, tin, copper, nickel and more.

**Applying:**

Clean the surface of the metal so that it is free of any type of lubricants or oils. Apply a thin coat of **CerMark ULTRA** to the metal, apply an even coating. Try to cover the area to be marked with a light spray, using two passes. For high quality results it's important for the **CerMark ULTRA** to be applied evenly across the marking area. Applying **CerMark ULTRA** may require practice to achieve the right coverage. **We recommend that all CerMark ULTRA be applied in a well-ventilated area or spray booth designed to pull air away from user.**

**Drying:**

It is important that the **CerMark ULTRA** is allowed to dry thoroughly. It will air dry in about 2 minutes. **For best results do not force dry coated parts which includes using air blower or fan.**

**\*CO2 Laser systems**

**Marking On Stainless Steel & Other metals:**

This step may require some trial and error to optimize your laser with a particular substrate. Keep in mind that all lasers react differently depending on the substrate, the type of laser, the laser's power, dot size, and other factors:

The following laser setting are to be considered starting points, more test marks may be necessary to optimize performance.

	25 Watt	35 Watt	50 Watt
Power	100%	90-100%	80-100%
Speed	10%	30-60%	30-80%
DPI/PPI	600/600	600/600	600/600

**Marking On Aluminum & Brass:**

Softer Metals require more power or slower speeds to obtain a permanent mark. We recommend at least a 50 Watt CO<sub>2</sub> lasers for such metals.

	Brass			Aluminum		
	25 Watt	35 Watt	50 Watt	25 Watt	35 Watt	50 Watt
Power	100%	90-100%	90-100%	100%	90-100%	90-100%
Speed	10%	10-30%	20-40%	10%	10-30%	20-40%
DPI/PPI	600/600	600/600	600/600	600/600	600/600	600/600

- Scrub test marks with 3M Scotch-Brite for verifying durability / Medium Duty Scrub Pad.
- Based on these results choose the best setting for your application.

If using a **Fiber or YAG** laser you may need to run several tests to optimize the settings for your particular laser, similar to above Testing Grid.



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### **Laser marking non-metals:**

**CerMark ULTRA** can be used on a variety of materials such as glass, ceramic, tile, brick, dinnerware, mugs, stone, slate and porcelains. Results: A high contrast, smoother, blacker mark.

#### **Applying:**

Clean the marking surface so that it is free of any lubricants or contaminants. The **CerMark ULTRA** must be applied with an even coat to ensure a consistent mark and color. For optimum mark quality, an even coat of the **CerMark ULTRA** should be applied. Applying **CerMark ULTRA** will require some practice to achieve a correct and even coverage.

**We recommend that all CerMark products be applied in a well-ventilated area or spray booth designed to pull air away from user.**  
**Drying:**

It is important that the **CerMark ULTRA** is allowed to dry thoroughly. It will air dry in about 3 to 5 minutes.

**For best results do not force dry coated parts which includes using heat lamps, air blowers or fans.**

**\*For higher contracting marks a second coat is recommended but allow the first coat to dry for at least 30-40 seconds.**

#### **Recommended Starting Point for Settings:**

CO2: 15%-30% power (35 watt laser)

10%-40% speed

600 DPI / 600 PPI

**\*Higher power output will allow for faster speed settings. This is true for all laser systems!**

#### **Marking Notes:**

Marking may require some trial and error to optimize your laser with a particular substrate. Keep in mind that all lasers react differently depending on the substrate. For more information regarding power and speed settings contact CerMark Technical Support 800-245-4951

#### **Storage:**

Do not expose to temperatures exceeding 50 degrees C / 120 degrees F.

#### **Clean up:**

Wash with water or a wet towel or sponge.

#### **Contact Information:**

To place an order or questions about properties of this product, application techniques or laser settings please call:

800-245-4951

Customer Service & Technical Service Representative

#### **Limitation of Warranty and Liability**

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