Technical Data Sheet

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Solutions for CerMark ULTRA Aerosol

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:
CerMark ULTRA is ready to use in aerosol can form. **IMPORTANT: Shake can well before using. Allow the agitator ball to rattle for at least 2 minutes. Failure to shake thoroughly can result in the failure of the aerosol system.** For best results, use when aerosol is between 20 °C and 30 °C.

Strengths of Product

Allows CO_2, 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.

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. Hold can approximately 20-30 cm from substrate to be sprayed. Depress valve fully during spray. 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. After use, the can nozzle should be cleaned to eliminate residue to avoid a clogged nozzle. **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.**

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Marking On metals:

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

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_2 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.

Laser marking non-metals:

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

Applying:
Clean the marking surface so that it is free of any lubricants or contaminates. The **CerMark ULTRA** must be applied with an even coat to ensure a consistent mark and color. Hold can approximately 20-30 cm from substrate to be sprayed. Depress valve fully during spray. 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. After use, any excess material on the nozzle should be cleaned off with water.

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.

Recommended Starting Point for Settings:
CO2: 15%-30% power (35 watt laser)
10%-40% speed
600 DPI / 600 PPI
YAG: 10-20 watts
25-50 cm/sec speed

Storage:
Do not expose to temperatures exceeding 50 °C

There are solids and liquids that make up the aerosol marking products. If the aerosol can remains unused for any length of time the liquids and solids will separate, with the solids settling to the bottom of the can.
It's very important to shake the aerosol can for 2 minutes after the rattle ball inside the can has released.

After use a simple wipe of the nozzle is recommended so that products doesn't dry over the hole causing a disruption in the spray pattern.

Clean up:

Wash with water or a wet towel or sponge.