

TherMark LMC34 Red for Glass & Ceramic



Recommended use:

LMC34 is recommended for creating red marks on glass and ceramic substrates. LMC34 dries quickly as a red powder-like coating. This coat can be smudged or wiped off prior to marking, however, so LMC34 should be laser marked shortly after application.



Recommended substrates:

LMC34 material can mark a range of glass and ceramic substrates. It has previously been used to mark many different types of glass in industrial applications such as vehicle windshields, laboratory instruments, plate glass, and glass ampoules. It can also be used for decorative work on bottles, wine glasses and awards. Additionally, it has found uses on ceramic products such as porcelain sanitary ware, electronic substrates, and for decorating wall and floor tiles.

Glass Ceramic

Lasers that work:

It is preferable to use LMC34 with a solid state laser. Although LMC34 can work with a CO2 laser, we do not recommend this as the resulting marks may have relatively low contrast compared to marks created using solid state lasers. It may also be necessary to do extensive process development to find suitable settings for your laser.

Dilution:

LMC34 will need to be diluted differently depending on how you plan to apply it.

- **Air brush application:** Ratio of 1:2 (1 part in volume of LMC34, 2 parts in volume of denatured alcohol) is recommended (please refer to your air brush manual for information about material thickness for your model type).
- **Foam brush (hand) application:** Ratio of 2:3 (2 parts in volume of LMC34, 3 parts in volume of denatured alcohol) is recommended. For more detailed information on dilution, please visit www.thermark.com.

Application methods:

Please make sure that the surface to be marked is free and clear of oils, cleaning agent films, dust, and lacquer coating.

- **Air brush application:** When applying LMC34 from an air brush, the resulting coating should be about 1.25-1.5 mils thick (~30-40 μm). Spray uniformly at a 10" distance from the surface and move the nozzle from one side to the other covering the whole substrate area. Start spraying away from the area to be marked and move towards the opposite side and past the target area. Over-spraying before and after the target area allows constant velocity of movement and will help provide an even coating on the substrate. Make sure the substrate is not visible underneath. If necessary spray one or two more times. As LMC34 requires a reasonably thick coating, a few passes will probably be necessary.
- **Foam brush (hand) application:** When hand applying LMC34 the resulting coating of LMC34 should be about 1.5 mils thick. Use about a 1" wide foam brush and soak less than $\frac{1}{4}$ " of the brush with LMC34. There is no need to soak more than that, otherwise the ink may splash and result in an uneven coat thickness. Apply with smooth, even strokes.

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Note: Air brush application is preferred over foam brush application. It can be challenging to achieve the smooth, even coating of laser marking material necessary for optimal marks when using a foam brush. We only recommend foam brush application if you do not have an air brush or are coating a small surface area.

For more detailed information on application, please visit www.thermark.com.

Drying time & methods:

If left to air dry, LMC34 is normally fully dry within 4 minutes. If air drying takes too long, however, a hair drier or forced air heater may be used to speed up the process. LMC34 can be fully dried with an average household hair dryer in less than 20 seconds.

Laser settings:

Power and speed are the two most important variables to control when using TherMark laser marking materials with any laser, but there are other relevant variables depending on which laser you are using, such as the focal length of the focusing lens, resolution (DPI), rep rate (PPI, Hz), or hatch spacing (for vectoring mode operation). Please visit www.thermark.com to read more about laser settings and to download an LMC34 laser settings chart.

Product Appearance:

LMC34 is a bright red liquid paste with a thickness of yogurt or sour cream. It will need to be thinned and stirred prior to use, but will remain red in color after dilution.

Once applied to the substrate and dry, LMC34 will be a red powder-like coating.

Shipping options:

LMC34 liquid is a non-hazardous, water-based product and can be shipped via ground or air with no additional charges.

Product storage:

All LMC products should be stored between 40°F (5°C) and 95°F (35°C) in a dark, dry place.

Disposal:

LMC34 is a water-based material and is environmentally safe and non-hazardous. After laser bonding, any excess, un-bonded material can be washed off the substrate and down the drain into your normal water/sewer waste area.

Unused containers of liquid ink/paste can be safely disposed of in your regular trash and solid waste area.

Availability:

LMC34 comes in 2 sizes: for price and availability, please contact TherMark.

LMC34.TM.50	50 gm liquid ink, up to 1,550 sq/in
LMC34.TM.250	250 gm liquid ink, up to 7,750 sq/in

* Product coverage in above table assumes proper application (dilution/coating thickness).