TherMark LMC74
Yellow for Glass & Ceramic

Recommended use:
LMC74 is recommended for creating yellow marks on glass and ceramic substrates. LMC74 dries quickly as a yellow powder-like coat and is extremely easy to wash after laser marking. This coat can be smudged or wiped off prior to marking, however, so LMC74 should be laser marked shortly after application.

Recommended substrates:
LMC74 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 LMC74 with a solid state laser. Although LMC74 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:
LMC74 will need to be diluted differently depending on how you plan to apply it.

- **Air brush application:** Ratio of 1:1.25 (1 part in volume of LMC74, 1.25 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 1.5:1 (1.5 parts in volume of LMC74, 1 part 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 LMC74 from an air brush, the resulting coating should be about 1.5-2 mils thick (~35-50 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 that the bare ceramic/glass is not visible underneath. If necessary spray a few more times. As LMC74 requires a reasonably thick coating, usually one needs to spray once, allow it to dry, and repeat the process until the desired thickness is achieved.

- **Foam brush (hand) application:** When hand applying LMC74, the resulting coating should be about 1.5-2 mils thick (~35-50 µm). Use about 1" wide foam brush and soak less than ¼" of the brush with LMC74. 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.

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, LMC74 will normally fully dry within one to two minutes. If air drying takes too long, however, a hair drier or forced air heater may be used to speed up the process. LMC74 can be fully dried with an average household hair dryer in less than 15 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 LMC74 laser settings chart.

Product Appearance:
LMC74 is a bright yellow liquid with a viscosity of smoothie. It will need to be thinned and stirred prior to use as described above, but will remain bright yellow in color after dilution.

Once applied to the substrate and dry, LMC74 will be a yellow powder-like coating.

Shipping options:
LMC74 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 40ºF (5ºC) and 95ºF (35ºC) in a dark, dry place.

Disposal:
LMC74 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:
LMC74 comes in 2 sizes: for price and availability, please contact TherMark.

LMC74.TM.50	50 gm liquid ink, up to 950 sq/in
LMC74.TM.250	250 gm liquid ink, up to 4,750 sq/in

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