

# Technical Data Sheet



## Solutions for LMM-6904 Anodize Aluminum Paste

**LMM-6904** is a laser marking material for anodized aluminum. This material can be used to produce a black mark on anodized aluminum surfaces. LMM-6904 will not work on metals with a lacquered coating.

### Physical Properties

<b>Appearance</b>	Black colored liquid.
<b>Density</b>	13.98 -14.10 pounds/gallon
<b>Flash Point</b>	N/A
<b>Drying Rate</b>	2-3 minutes, can be accelerated by forced air.

### Strengths of Product

Versatility and ease of application. High quality, high contrast, durable marks on anodized aluminum.

### Recommended Application Parameters

<b>Application Methods</b>	Spray gun, airbrush or foam brush.
<b>Application</b>	Clean surface of anodized aluminum so that it is free of any lubricants or oils. LMM-6904 must be applied with an even and thin coat to ensure a consistent mark.
<b>Wet Film Thickness</b>	0.5 – 1.0 wet mils.
<b>Thinner</b>	Water
<b>Recommended reduction</b>	For brushing applications, use LMM-6904 as is. For spray applications, LMM-6904 can be used as is, or it can be thinned with water if necessary.
<b>Suggested Cleaning Solvents</b>	Wash with water or a wet towel.

### Limitation of Warranty and Liability

Ferro believes that the information contained in this document is accurate at the time of its publication. Ferro makes no warranty with respect to the information contained in this document. The information in this document is not a product specification, either in whole or in part. Your use of the information contained in this document and your purchase and use of this Ferro product are at your sole discretion. Downstream users are responsible for determination of the suitability of this product and for testing in specific applications. Nothing in this document shall be construed as a license for use that infringes upon any property rights of any third party. Please refer to the Safety Data Sheet (SDS) for safe use, handling and disposal information. All sales by Ferro to you are subject to Ferro's Terms and Conditions of Sale, as amended from time to time and available at [www.ferro.com](http://www.ferro.com). In the event this document conflicts with Ferro's Terms and Conditions of Sale, Ferro's Terms and Conditions of Sale shall control.



## Solutions for LMM-6904 Anodize Aluminum Paste

### Curing/Drying of Product

#### **Drying Method**

Air dry, radiant heat, hair dryer or convection oven.

#### **Drying Parameters**

Typically air dries in about 2 minutes, can be sped up by force drying.

### Laser Marking of Product

#### **Laser Marking Method**

CO<sub>2</sub>, YAG or Fiber laser

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

CO<sub>2</sub>: 100% power (35 watt laser)

5-30% speed

500 DPI / 500 PPI

YAG: 20-25 watts

10-20 inches/sec speed

### Application Notes

For optimum mark quality, a thin even coat of LMM-6904 should be used. If the material is applied too thin, the marks will not be as dark. If the material is applied too thick, more power will be required to make the mark. Applying LMM-6904 may require practice to achieve the right coverage. It is also important to allow the coating to dry thoroughly.

In most cases, LMM-6904 can be used as is. It may be necessary to thin the paste before using. Application method will determine the amount of water required, along with room temperature and humidity. The ratios recommended above should be sufficient. Keep in mind that the more the material is thinned, the less active ingredients are being applied. Overthinning will result in a lighter mark.

### 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. You may need to run several tests to optimize the settings for your laser.

### Product Preparation

Insure that the product has been well mixed prior to use. Settling will occur during storage. Avoid long periods where material has not been mixed. Material temperature should be equivalent to your printing room temperature prior to measuring viscosity or application.



## Solutions for LMM-6904 Anodize Aluminum Paste

### Storage Recommendations

Product must be stored in cool and dry conditions. Storage temperatures should be between 40°F (5°C) and 95°F (35°C). Settling may occur if stored for long periods of time. **Material should be mixed every 3-4 weeks to avoid hard settle.** Before use, products must be stirred thoroughly. Partly used containers must be tightly sealed after use. If stored as recommended, a minimum shelf life of six months after the ship date is guaranteed.

### Contact Information

For questions about properties of this product, application techniques or laser settings, please contact:  
800-245-4951 Customer Service & Technical Service

### Limitation of Warranty and Liability

Ferro believes that the information contained in this document is accurate at the time of its publication. Ferro makes no warranty with respect to the information contained in this document. The information in this document is not a product specification, either in whole or in part. Your use of the information contained in this document and your purchase and use of this Ferro product are at your sole discretion. Downstream users are responsible for determination of the suitability of this product and for testing in specific applications. Nothing in this document shall be construed as a license for use that infringes upon any property rights of any third party. Please refer to the Safety Data Sheet (SDS) for safe use, handling and disposal information. All sales by Ferro to you are subject to Ferro's Terms and Conditions of Sale, as amended from time to time and available at [www.ferro.com](http://www.ferro.com). In the event this document conflicts with Ferro's Terms and Conditions of Sale, Ferro's Terms and Conditions of Sale shall control.