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## Lab-Metal 450

### TECHNICAL DATA

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#### Description

LAB METAL 450, product code 10106, is a ready-to-use repair and patch compound is especially recommended for use under coatings requiring higher bake curing temperatures.

Use LAB METAL 450 to fill and repair metal defects under light colored powder coat colors where color stability is required.

LAB METAL 450 will not yellow under powder coating cured between 300-450F.

#### Color

- "LAB METAL 450" is aluminum filled and is light gray in color. Metal gray when buffed.

#### Adhesion

- Excellent adhesion to pretreated CRS, and aluminum, including zinc plating.

#### Conductivity

- Will accept ground for powder coating.

#### Mechanical

- Fully cured LAB METAL 450 can be milled, sawed, drilled, tapped, sanded and filed.

## **GENERAL APPLICATION and PROCESS NOTES**

- "Flash off" refers to time period in which the wet filler becomes *dry to touch*. Time period for flash drying at room temperature varies with *dry film thickness* (DFT) and *shop conditions*.
- "Force drying" refers to a low temperature process which evacuates the solvent from the filler compound, and in most cases is complete by heating 20-30 minutes @ 120F.
- "Full cure" refers to the high temperature bake process which cross links the LAB METAL 450 repair, a period not less than 15-20 minutes @ 325F (substrate temperature). The actual time at temperature (TAT) varies with ambient oven air, and the total mass/thickness of metal in the oven.

### **DFT 5-30 MIL (minor pitting/imperfections)**

In cases where filling repair requires lower DFT, for example, PEM studs, minor surface imperfections, etc., *dry to touch* can be 10-30 minutes at 68F 50% RH, with air movement.

When SURFACE SANDING is not required, filler and Powder coat finish can be applied and baked *in a single pass* through the curing oven.

To ensure the filler compound is ready for powder coat finishing, flash-dry for 15-30 minutes, then force-dry LAB METAL 450 filler for 20 minutes @ 120F

### **DFT 50-125 MIL UP TO 1/8 INCH**

In most cases filler repair requiring higher DFT will require SURFACE SANDING and longer flash drying periods.

To decrease time before SURFACE SANDING, flash dry the repair for 15-30 mins @ room temperature followed by FORCE DRYING 30 minutes at 120F.

In cases where FORCE DRYING is not feasible allow 4-6 hours drying @ room temperature before SURFACE SANDING.

### **DFT 150-250 MIL UP TO ¼ INCH**

In all cases where filler repair exceeds 1/8" (125 MIL) SURFACE SANDING will be required.

Flash drying 20-40 minutes @ room temperature followed by FORCE DRY @ 120F for 30 minutes before SURFACE SANDING and topcoat finishing.

In all cases where repair requires milling, tapping, grinding, or saw cutting before top coat.

LAB METAL 450 must be fully cured for 15-20 minutes @ 325F, TAT.