

# ALPASE M-5™

ALUMINUM MOLD PLATE - PROVEN ALPASE MOLD PLATE TECHNOLOGY IN A 5000 SERIES ALUMINUM ALLOY.

New Technologies  
In Aluminum



**TST, Inc.**  
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M-5 offers mold builders the same proven Alpase technology used to produce the industry leading M-1 Aluminum Mold Plate specified by engineers for over 20 years. M-5 has the benefit of excellent corrosion resistance and high dimensional stability without stress relieving.

Combined with a 5% reduction in weight, good polishing and anodizing capabilities, M-5 may be the choice for your application.

Produced in the USA



## M-5 Product Features and Benefits

- Elongation - 12% - 15%
- Excellent weldability
- Surface Condition - Machined top and bottom to reduce costly handling and machining steps
- Dimensional Stability - High dimensional stability during and after machining
- Polishing - Good polishing properties
- Good Anodizing and Hard Coating properties
- Corrosion Resistance - Excellent corrosion resistance in many applications
- Low density offers a 5% weight savings over other cast products
- Very consistent hardness and mechanical properties throughout its entire thickness range, regardless of size

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## M-5 APPLICATIONS

*M-5 Aluminum Mold Plate* is used in a large variety of molding applications. Proven applications include: Injection Molds, Blow Molds, Structural Foam Molds, and Rubber Molds. Additional uses include: Vacuum Forming Tools, Compression Molds, Heating and Cooling Plates and proven Semi-conductor Transfer Chamber applications. Careful consideration and analysis of properties play an important role in selecting the right aluminum for different molding applications. Contact an Alpanse representative for additional information regarding your choices.

## M-5 TYPICAL PROPERTIES

<b>Typical Tensile Strength</b>	41 ksi	<b>Coefficient of Expansion</b>	13.2 x 10 <sup>-6</sup> (68" - 212°F)
<b>Typical Yield</b>	18 ksi	<b>Electrical Conductivity</b>	29% (I.A.C.S.)
<b>Typical Elongation</b>	12% - 15%	<b>Microstructure</b>	Vacuum Tight
<b>Typical Hardness</b>	70 HB	<b>Thermal Conductivity</b>	81 Btu/ft x h x °F
<b>Density</b>	0.096 lb./in <sup>3</sup>	<b>Modulus of Elasticity</b>	10.3 KSI x 10 <sup>3</sup>
<b>Dimensional Stability</b>	Consistently Stable		

### Surface Condition

Milled Surface Top and Bottom

### Quality

M-5 plates are U/T inspected to MIL-Spec 2154-Class A

### Tolerances

<b>Thickness</b>	+1/8" - 0"
<b>Width/Length</b>	+1/4" - 0"

### Standard Sizes

<b>Thickness</b>	Up to 30"
<b>Widths</b>	Up to 88"
<b>Lengths</b>	Up to 195"

### Non-Standard Thicknesses

Special Inquiry

### Close Tolerances

Special Inquiry

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