ALPASE M-5™

Aluminum Mold Plate - Proven Alpase Mold Plate Technology in a 5000 Series Aluminum Alloy.

New Technologies In Aluminum

ALPASE

TST, Inc.
11601 Etiwanda Avenue
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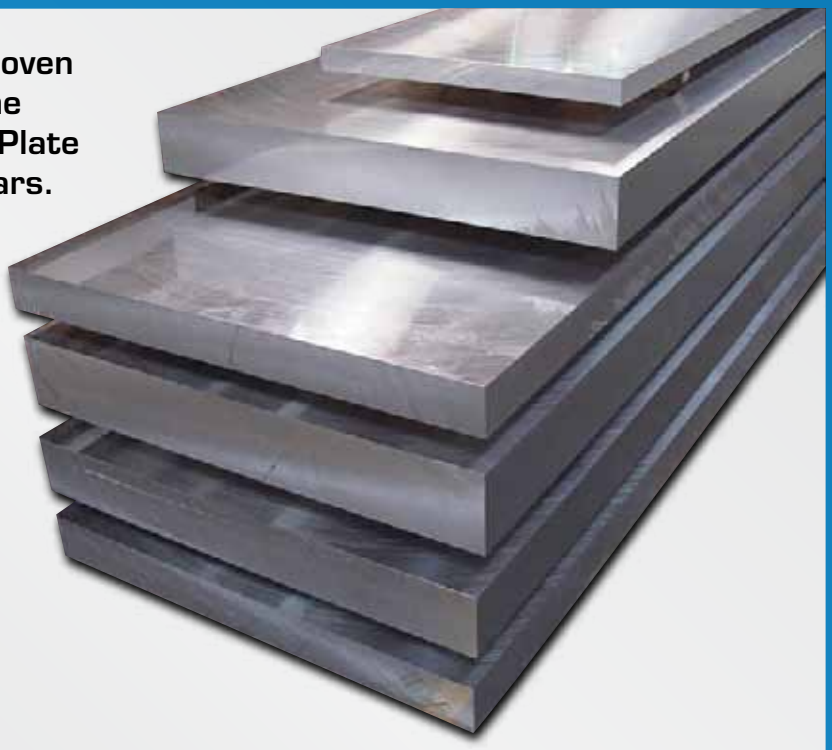
www.alpase.com

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

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 Alpase representative for additional information regarding your choices.

M-5 TYPICAL PROPERTIES

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

Surface Condition
Milled Surface Top and Bottom

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

Tolerances

Thickness	+1/8" - 0"
Width/Length	+1/4" - 0"

Standard Sizes

Thickness	Up to 30"
Widths	Up to 88"
Lengths	Up to 195"

Non-Standard Thicknesses
Special Inquiry

Close Tolerances
Special Inquiry

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AUTHORIZED ALPASE DISTRIBUTOR

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ALPASE, INC.
PRODUCT CERTIFICATION

Sample

Customer :

P.O. No.

Alpase W.O. No.

Alloy **Alpase M-5 Aluminum Mold Plate**

Form Standard Plate Sizes in:

Thickness	2" min. up to 24"
Widths	Up to 74"
Lengths	Up to 195"

Condition Stress Relieved

Mechanical Properties (Typical)

Ultimate Strength	Yield Strength	Elongation Percent in 1"
38,000	18,000	15%

Hardness

Typical Brinell 65
(Actual depends on thickness)

Chemical Composition

Cu	-	Max	-	.1
Mg	-	4.70	-	4.90
Si	-	0	-	.5
Ti	-	.15 maximum		
Cr	-	.05	-	.25
Fe	-	.0	-	.5
Al	-	Remainder		

Sample

ALPASE, INC. Date

Form 740 (Rev. 10/98)