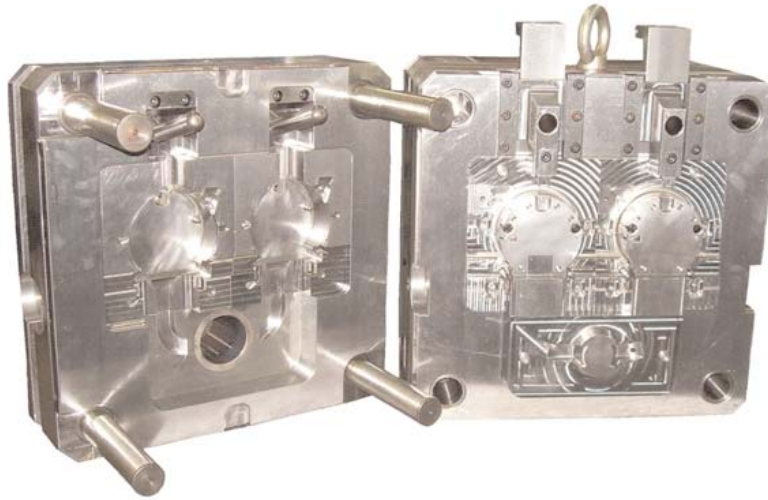


Alumold® 500 Aluminum Mold Plate



ELLWOOD
SPECIALTY
STEEL



CHARACTERISTICS

Ellwood and Constellium offer **Alumold® 500** Rolled Mold Plate, a unique 7000 series aluminum alloy that has successfully replaced steel in numerous mold applications. Combining high thermal conductivity, strength, ease of machining and polishing, dimensional stability, and consistent thru hardness this material results in reduced operating costs and increased part production.

Benefits of **Alumold® 500** include:

- * Three to Six times higher thermal conductivity than P20 steel
- * Three to Five times faster milling on existing equipment
- * Up to Four times faster polishing
- * Accepts surface treatments for increased hardness
- * Dimensionally stable
- * Supplied stress relieved, requiring no further thermal treatment
- * Repair welding by TIG/MIG is possible

PHYSICAL PROPERTIES

| | |
|----------------------------------|--------------------------------|
| Density | 0.102 lb/in ³ |
| Coefficient of thermal expansion | 13.2 x 10 ⁻⁶ /in °F |
| Thermal conductivity (@ 68° F) | 88 Btu/hr/ ft °F |
| Elastic Modulus–Tensile | 10,400 ksi |
| Elastic Modulus–Compression | 10,600 ksi |





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Alumold® 500 Aluminum Mold Plate

Alumold® 500 ALUMINUM ROLLED MOLD PLATE

TYPICAL MECHANICAL PROPERTIES

| Thickness | Typical Tensile (ksi) | Typical Yield (ksi) | Brinell Hardness (info only) | Elongation % |
|-----------|-----------------------|---------------------|------------------------------|--------------|
| 1 – 3 in | 85 | 78 | 185 | 10 |
| 3 – 5 in | 84 | 77 | 185 | 6 |
| 5 – 6 in | 82 | 75 | 180 | 4 |
| 6 – 10 in | 80-77 | 74-71 | 175 | 2 |

Alumold® 500 Aluminum Rolled Mold Plate

is available and stocked in the following sizes:

4" to 8" thick X 60" width X 135" to 180" length.

9" to 10" thick X 52" to 58" width X 160" to 184" length

(Forged Alumold is available up to 28" thick. Please contact Ellwood for more information)

APPLICATIONS

- Plastic injection molds
- Blow molds
- Vacuum forming
- RIM molds
- Foam molds
- Jigs and Fixtures

MOLD DESIGN

Molds designed with Alumold 500 should see a maximum operating temperature of 230 °F for the mold, not the plastic, and a parting line stress of 5000 psi nominal and 7200 psi maximum.



ELLWOOD SPECIALTY STEEL

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