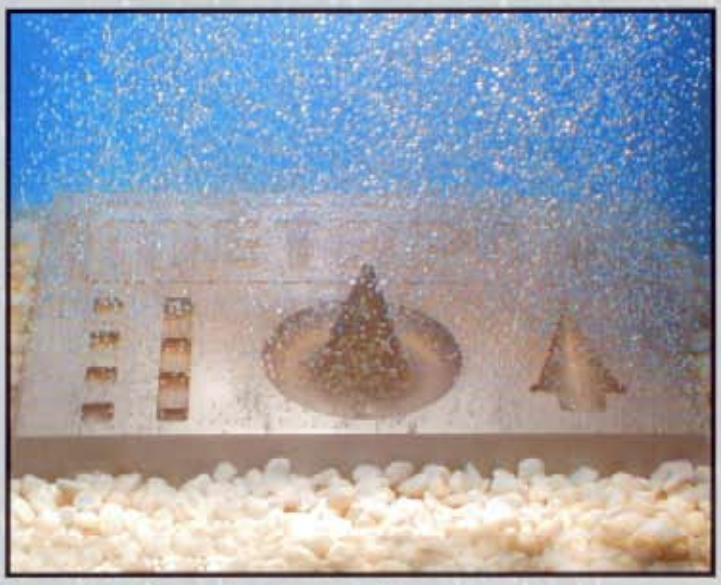
METAPOR©

Breathable Mould Material For Thermoforming



METAPOR micro-porous, air-permeable aluminium delivers advanced solutions for many thermoforming applications.

METAPOR eliminates the need to drill vacuum holes, expanding technical capabilities of the thermoforming process at a lower cost.

METAPOR material has consistent porosity which offers unparalleled design flexibility and new ways to optimize performance of thermoform tooling.

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Advantages & Applications

Unlimited design intricacy

Highly detailed moulds, engraved inserts, and other intricate features are quickly produced with METAPOR, since there is no need to drill vacuum holes.

High definition & accuracy

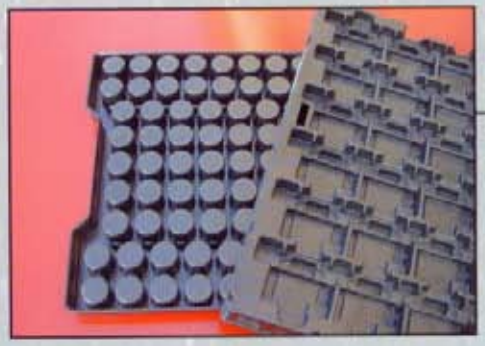
Even porosity on all surfaces of METAPOR results in extremely sharp definition and accuracy of formed components **without deformation**.

Flat surfaces

METAPOR is often used for large flat surfaces and bottom inserts to eliminate trapped air and related waviness.

Surface quality

Absence of drilled vacuum holes, eliminates surface imperfections on transparent and highly cosmetic parts.



Faster air evacuation

Rapid **and even** air evacuation assures that the plastic remains within its temperature formability window resulting in reduction of stresses and better mechanical properties.

Prototype & Production Tooling

Quick tooling with METAPOR accelerates product development and minimizes costly production problems. METAPOR tools with cooling systems may achieve 1 million parts and more.

Product Selection Table

METAPOR	Application areas	Main applications	Density (g/cm³)	Maximum mould temperature (°C)	Flexural strength (N/mm²)	E-module (N/mm²)
BF 100 AL	Production and prototype tools	PS, ABS, PVC, PET, PE	1.8	108	56	9,000
HD 100 AL	Production tools	Twin-Sheet, transparent parts	1.9	108	43.6	9,200
HD 210 AL	High temperature production tools	PVC, PE, PC, transparent parts	1.9	210	43	10,800

Machinability

The machining properties of METAPOR are similar to hard wood, so it machines faster than aluminium using standard milling machines or routers. METAPOR must be machined without any coolant using sharp carbide or high speed steel (HSS) tools.

Availability

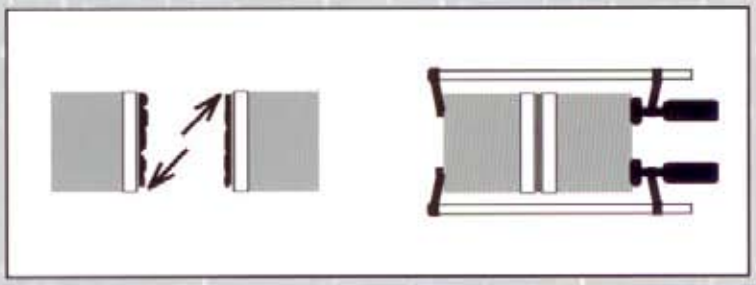
METAPOR blocks and slabs are available ex stock in following sizes:

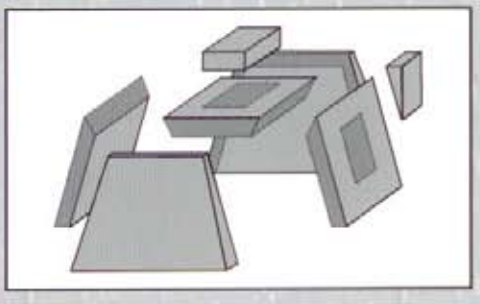
in mm	BF 100 AL	HD 100 AL	HD 210 AL
500x500x10 - 400	•	•	•
1000x500x15 - 200		•	•

Adhesive System for METAPOR

Larger plates are easily constructed by joining multiple slabs of METAPOR together using Araldite 2014 heat and chemical resistant adhesive.

The adhesive is also used to attach METAPOR inserts to aluminium, as well as to combine "left-over" pieces of METAPOR in order to minimize waste.





For large & deep draw moulds, hollow constructions are created by assembling multiple plates together.

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