

Technical Data Sheet

Model Board M690

0.70 g/cm³ Polyurethane Model Board

Model Board M690 is a board and block material with very high temperature resistance at low density. The product has very low coefficient of thermal expansion.

Applications

- Tools for serial production of small batch sizes (e.g. draw die moulds and foam moulds)
- Laminating tools
- Models and patterns
- RIM tools
- Vacuum forming
- Deep draw dies

Technical Data

Property	Units	Typical Value
Colour	-	Grey
Coefficient of Thermal Expansion	K ⁻¹	35 x 10 ⁻⁶
Temperature Resistance	°C	105
Hardness	Shore D	76
Compressive Strength	N/mm ²	34
Flexural Strength	N/mm ²	30
Density	g/cm ³	0.70
Fire Protection Classification	-	B2

Model Board M690 contains no halogens, plasticizer or solvent. Model Board M690 is manufactured fluorocarbohydrate-free and is physiologically harmless.

Board Measurements

Product Code	Board Size (mm)
M690-2	1500 x 500 x 50
M690-3	1500 x 500 x 75
M690-4	1500 x 500 x 100

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Processing

Model Board M690 should be processed using metal working tools. Boards of M690 can be combined using Model Board Adhesive EP 5941.

Milling Parameters

Property	Units	Roughing	Finishing
Type of Tool	-	Finishing tools d = 80mm	Finishing tools d = 80mm
Tool Diameter [d]	mm	80	80
Cutting Speed [Vc]	m/sec	50	50
Speed [n]	1/min	12,000	8,000
Feed Speed	m/min	10	7.5
Tooth Speed [fz]	mm	0.21	0.21
Number of Teeth [z]	-	4	4
Cutting Depth [ae]	mm	4	0.5
Cutter Mark Length [f _{zeff}]	mm	38	5

Storage

Model Board M690 should be stored on a flat underground and in a dry space at a temperature between 18 and 25°C. Variation in temperature should be avoided during transport and storage.

Further Information

This data is not to be used for specifications. Values listed are for typical properties and should not be considered minimum or maximum.

Our technical advice, whether verbal, or in writing is given in good faith, but without warranty – this also applies where proprietary rights of third parties are involved. It does not release you from the obligation to test the products supplied by us as to their suitability for the intended process and use.

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Before using any of our products, users should familiarise themselves with the relevant Technical and MSDS provided by Alchemie Ltd.

This material does not contain any fillers that release harmful dust during machining. Nevertheless the dust content in the air should not rise above 6 mg/m³. Safety procedures recommended by the vocational co-operative of the chemical industry should be complied with.

The article is not a regulatory product according to ICC regulations. In accordance with general local and national regulations waste is to be disposed by incineration in authorised places or conveyed to authorised tips (EAK 120105).

Alchemie Limited

Alchemie Ltd develop, formulate and distribute Epoxy Resins, Polyurethane Resins, Silicones, Model Boards and Sheet Wax for use in the following applications:

- Electrical encapsulation
- Rapid Prototyping
- Prototypes
- Casting
- Gel Coating
- Laminating
- Model Making
- Master Models
- Flexible and rigid mould making

We offer fast service, technical support, development expertise, innovative products, diverse knowledge and experience.

We are a well-established company, with a high level of investment and experience. We implement BS EN ISO 9001.

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