

## Product Information

### EPIBLOCK EB 690

### WORKABLE PLATE

#### ELANTAS Italia S.r.l.

Antolini Road No. 1 Lemignano 43044

Collecchio (PR)

#### ELANTAS EUROPE Sales offices:

Italy  
Strada Antolini n°1 loc. Lemignano

43044 Collecchio (PR)

Italy  
Tel +39 0521 804777

Fax +39 0521 804410

Italy  
Tel +39 0521 804777

Europe: [ELANTAS@altana.com](mailto:ELANTAS@altana.com)

Italy  
Fax +39 0521 804410

info.[elantas.italia@altana.com](mailto:elantas.italia@altana.com)

[www.elantas.com](http://www.elantas.com)

Grossmannstr. 105

20539 Hamburg

Germany

Tel +49 40 78946 0

Fax +49 40 78946 349

[info.elantas.europe@altana.com](mailto:info.elantas.europe@altana.com)

[www.elantas.com](http://www.elantas.com)

Resin

**EPIBLOCK EB 690**

- Applications:** Master models and high dimensional stability molds for epoxy pre-pregs. Vacuum thermoforming molds.
- Method of use:** EPIBLOCK EB 690 is machine-workable with chip formation. Structural bonding of the plates must be carried out with epoxy adhesive AS 15/AW 15 + EF 18T green after adequate sanding of the surface.
- Description:** EPIBLOCK EB 690 is a compact hardened material based on filled epoxy resins. High thermal resistance. Good compressive strength. Low thermal expansion. Machinable. Good surface finish.
- Instructions:** The plates are supplied with milled/planed faces to facilitate gluing with the recommended adhesive (AS 15/AW 15+ EF18T green). Before gluing, it is necessary to sand and remove dust. Apply the adhesive with a toothed spatula on one face to be glued and then join by applying uniform pressure with a clamp or press and release the pressure only after the first hardening has taken place (4-6 hours).
- Hardening / Post-curing:** Post-cure at least 50°C for 5 hours or 70°C for 2.5 hours to achieve a bond heat resistance suitable for operating temperatures up to 60°C. Slower post-cure cycles up to 110°C are required for a heat resistance of 120°C.
- If post-curing is not performed, wait at least 24 hours before performing mechanical processing and at least 7 days at 25°C before subjecting the tool and its glued parts to operating temperatures of 60°C. Failure to comply with the specifications may generate movement of the model or markings on the mold in correspondence with the glued parts.
- Storage:** EPIBLOCK EB 690 is chemically stable and must be stored flat, in dry environments and away from naked flames, sparks and heat sources at a temperature of 15-25°C. Avoid direct exposure to sunlight. Exposure to light without protection generates a slight variation in surface color that does not alter the characteristics of the plate.
- Precautions:** Consult the safety data sheet and comply with the provisions relating to industrial hygiene and waste disposal.

## Epoxy workable plate

## EPIBLOCK EB 690

## TYPICAL PRODUCT CHARACTERISTICS

## Processing data

Physical state			Solid
Shape			Plate
Color			Light green
Density	IO-10-51 (ASTM D 1475)	g/ml	0,67 0,71
Linear thermal expansion (Tg -10°C)	IO-10-71 (ASTM E 831)	10-6/°C	38 42(*)
Linear thermal expansion (Tg +10°C)	IO-10-71 (ASTM E 831)	10-6/°C	92 96
Shore hardness (23°C)	IO-10-58 (ASTM D 2240)	D/15	74 78
Maximum operating temperature	(***)	°C	115 120
Bending resistance	IO-10-65 (DIN 53452)	MN/m <sup>2</sup>	32 40
Breaking deformation	IO-10-65 (DIN 53452)	%	1,5 2,0
Flexural modulus of elasticity	IO-10-64 (DIN 53457)	MN/m <sup>2</sup>	2.000 3.000
Compressive strength	IO-10-72 (ASTM D 695)	MN/m <sup>2</sup>	55 65
Abrasion resistance (Taber Index)	IO-10-85 (ASTM D 4060)	mm <sup>3</sup>	800 1.000
Glass transition	IO-10-69 (ASTM D 3418)	°C	132 138

(\*) every 10°C of thermal variation there is a linear thermal expansion of 0.40 mm/1000 mm

**Conditions of supply:** plates are available in the following dimensions: • 1500x500x100 mm = 75 dm<sup>3</sup>  
 • 1500x500x75 mm = 56,25 dm<sup>3</sup>  
 • 1500x500x50 mm = 37,5 dm<sup>3</sup>

IO-00-00 = Elantas Europe internal method . Where applicable, the reference to the international standard is given.

nd = not determined na = not applicable TA = laboratory ambient temperature (23±2°C)

Conversion factors: 1 mPas = 1 cPs 1MN/m

° = 10 kg/cm<sup>2</sup> = 1 MPa

(\*\*\*) The recommended operating temperature is given on the basis of available laboratory information, as it depends on the curing conditions used and the type of materials coupled. For any further indications, see the post-curing paragraph.

date of issue	October	2007
revision no. 00	July	2012

All information provided in this bulletin is believed to be accurate to the best of available technical knowledge but is the responsibility of the user to verify the suitability of the product for the specific application considered.