

Technical Data Sheet

ALCHEMIX® EP 5941 / EP 5941F

High Temperature Modelboard Adhesive

ALCHEMIX EP 5941 is an unfilled, low viscosity, epoxy resin system formulated for adhesion of large planks of modelboard. A choice of hardeners is available, giving extremely short curing times (H5941F) or long working time (H5941). ALCHEMIX EP 5941 is specifically formulated for high temperature applications.

Special Features

- High temperature tolerance (125 °C)
- Low viscosity, easy to apply
- Choice of standard or fast hardener

Mix Ratio

By Weight **EP 5941 : H5941 / H5941F**
 100 : 25

Product Data

Property	Units	EP 5941	H5941	H5941F
Material	-	Epoxy Resin	Amine Hardener	Amine Hardener
Appearance	-	Straw coloured liquid	Straw coloured liquid	Straw coloured liquid
Density (25 °C)	g/cm ³	1.15 – 1.20	0.94 – 0.99	0.94 – 0.99
Viscosity (25 °C)	mPa.s	5000 – 11000	60 – 120	60 – 120
Mix Viscosity (25 °C)	mPa.s	-	2000 – 3000	2000 – 3000
Pot Life (200g, 25 °C)	Minutes	-	40 – 60	20 – 30
Clamping Time	Hours	-	12 – 16	4 – 5

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Cured Properties

Properties	Standard	Units	Result (Full Cure)
Hardness	BS EN ISO 868	Shore D	87 – 92
Tensile Strength	BS EN ISO 527	MPa	31.0 – 36.0
Elongation at Break	BS EN ISO 527	%	1.5 – 2.5
Tensile Modulus	BS EN ISO 527	MPa	1000 – 1200
Flexural Strength	BS EN ISO 178	MPa	80 – 100
Flexural Modulus	BS EN ISO 178	MPa	2100 – 2400

Method of Use

Before use, ensure that the boards are clean and free from grease. Be sure that there is sufficient time to mix the adhesive, apply the adhesive and clamp the boards before the pot life expires. Add the Hardener to the Resin at a ratio of 100 : 25 and mix thoroughly. When thoroughly mixed, brush the adhesive onto the top surface of the board and then place the next board on top. Repeat if necessary. Boards should be held in position by light clamping or placing a weighed object over the entire top surface of the stack to ensure equal pressure throughout the board. Over clamping will cause the adhesive to spread unevenly, which could result in stress build up in the board and lead to stress micro cracking and / or warping. Allow adequate time for the adhesive to cure before machining or further processing.

Storage

ALCHEMIX EP 5941 and HARDENERS H5941 / H5941F should be stored in original, unopened containers between 15 and 25°C. KEEP THE PACKING TIGHTLY SEALED WHEN NOT IN USE.

If stored under the above conditions, ALCHEMIX EP 5941 / H5941 / H5941F will have a shelf life of 12 months, from the date of production.

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Packaging

EP 5941 is supplied in 1kg containers.
H5941 / H5941F is supplied in 250g containers.

(Please contact Alchemie Ltd for bulk supply)

Further Information

All data listed relates to typical values. This data should not be considered a product specification.

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.

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

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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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