

## PRODUCT DATA SHEET

### DESCRIPTION

Toray MicroPly™ SC72A is a 120°C (248°F) curing low-density unsupported epoxy syntactic core. Toray MicroPly™ SC72A offers reduced processing, a one-shot cure, the ability to anchor inserts or fastenings, and increases the opportunity to consider lightweight, thin walled composite sandwich structures.

Considerable cost reductions can be realized when SC72A replaces prepreg as the core material, and where sandwich cores below 3 mm are difficult to achieve in honeycomb core, Toray MicroPly™ is a superior alternative.

Toray MicroPly™ SC72A is available in a variety of thicknesses down to 1 mm, is easily contoured and shaped. SC72A is supplied on a roll (15 m x 400 mm) or in sheets (625 mm x 400 mm). Toray MicroPly™ SC72A is compatible for co-cure with Toray E720 and E722 mid temperature curing prepreps.

### FEATURES

- ▶ **Low cost**
- ▶ **Easily contoured and shaped**
- ▶ **Available in a variety of thicknesses**
- ▶ **Reduced processing**
- ▶ **Allows for the opportunity to achieve lightweight, thin walled composite sandwich structures**
- ▶ **One-shot cure**
- ▶ **Ability to anchor inserts or fastenings**
- ▶ **Long out life at ambient temperature**

### PRODUCT TYPE

120°C (248°F) Cure

Syntactic Epoxy Resin Film

### TYPICAL APPLICATIONS

- ▶ Core material in sandwich structures

### SHELF LIFE

**Out Life:** 1 month at 20°C (68°F)

**Storage Life:** 12 months at -18°C (0°F) when stored in sealed polythene bags

Out life is the maximum time allowed at room temperature before cure.

### TYPICAL UNCURED PROPERTIES

Thickness	1 mm and 2 mm ± 10% as standard, other thicknesses available on request
Color	Charcoal gray
Tack	Medium
Flexibility	Pliable at room temperature
Surface weight	570 g/m <sup>2</sup> nom. for 1 mm thickness 1140 g/m <sup>2</sup> nom. for 2 mm thickness
Volatiles	1% by wt. max
Gel time	12 minutes
Curing temperature	120°C (248°F)

### TYPICAL CURED PROPERTIES

Density	0.57 g/cm <sup>3</sup> ± 10% depending upon curing conditions
T <sub>g</sub> after 1 hr at 120°C (DMTA)	Onset: 106°C (222°F) Peak tan δ: 116°C (240°F)



Contact us for more information:

**North America/Asia/Pacific**

**e** [explore@toraytac-usa.com](mailto:explore@toraytac-usa.com)

**t** +1 408 465 8500

**Europe/Middle East/Africa**

**e** [explore@toraytac-europe.com](mailto:explore@toraytac-europe.com)

**t** +44 (0)1773 530899

**MicroPly™**

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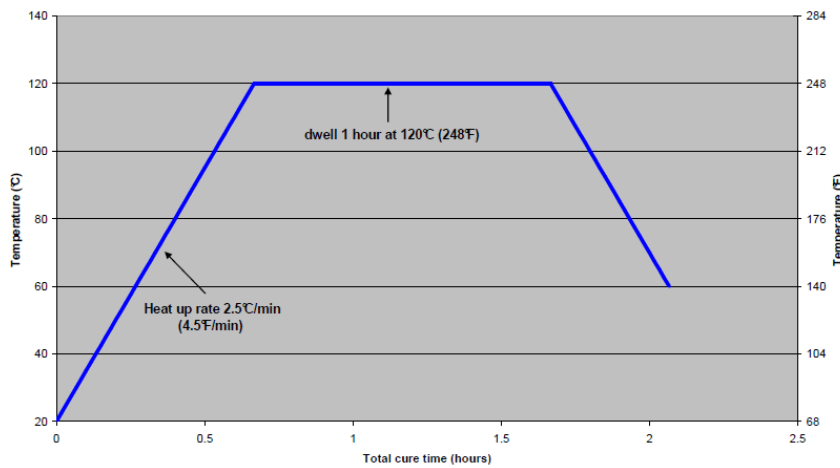
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### MATRIX PROPERTIES

Property	Condition	Method	Results	
Flexural Strength	RTD	CRAG 200	50 MPa	7.3 ksi
Flexural Modulus	RTD	CRAG 200	2.6 GPa	0.6 Msi

These properties were achieved with a 1 hour at 120°C (248°F) cure of a 2 mm thick sample of SC72A

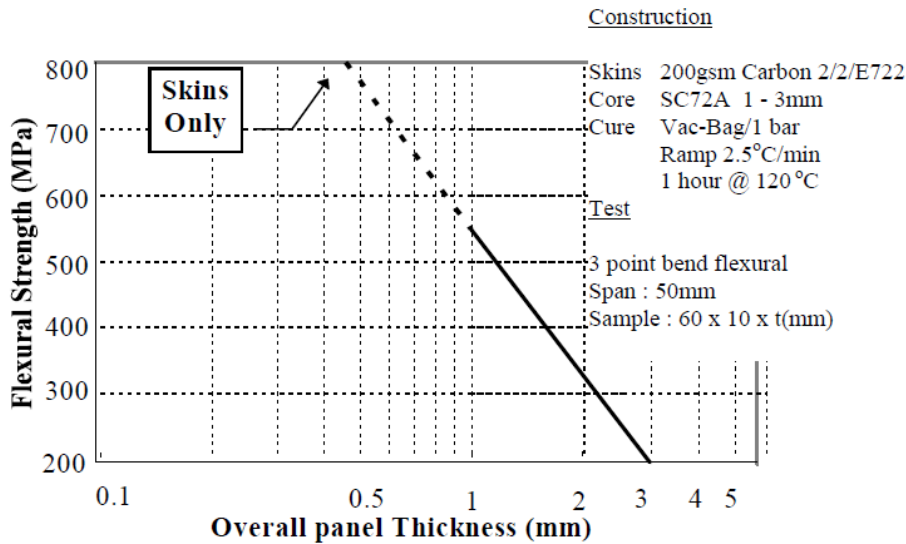
### INITIAL MINIMUM CURE SCHEDULE



### CURING CYCLE

- ▶ Increase air temperature at 2.5°C (4.5°F)/min to 120°C (248°F) and hold for 1 hour
- ▶ Allow to cool to 60°C (140°F) prior to releasing vacuum and removal from mold

### TYPICAL SANDWICH PROPERTIES



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### APPLICATION

Remove from cold storage and allow to reach room temperature before removing from polythene bag. Trim to required shape, and remove release paper from one side. Place in position and remove remaining release paper.

**Caution:** SC72A syntactic core contains a reactive resin system and care must be taken to avoid exothermic heating during the cure.

### HANDLING SAFETY

This product may cause skin irritation. Avoid skin contact. If contact occurs, wash with soap and water at first opportunity.

For further information refer to the Safety Data Sheet.