

APPLICATIONS

- *Production of composite structures by liquid resin infusion methods.*
- *Vacuum and low pressure injection.*
- *Filament winding.*

PROPERTIES

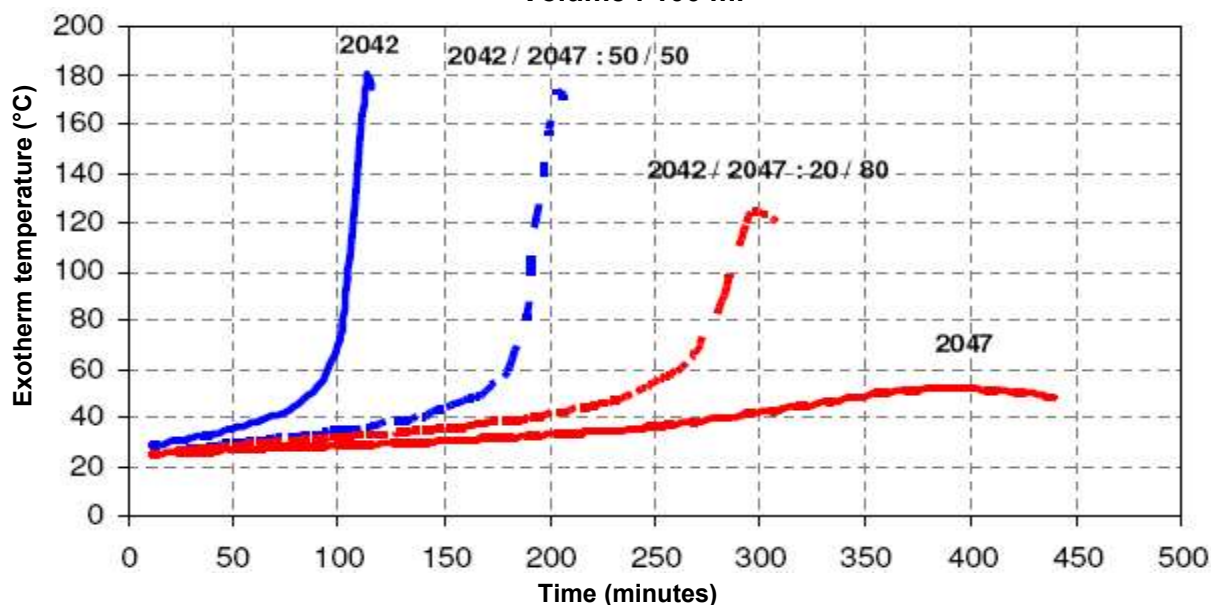
- *Very low viscosity*
- *Outstanding wetting ability of the reinforcements*
- *Good behaviour in moist environment*
- *Good mechanical properties*
- *Good wetting ability of balsa wood and foams*

PHYSICAL PROPERTIES				
		EPOLAM 2040 RESIN	EPOLAM 2042 HARDNER	EPOLAM 2047 HARDNER
Aspect		liquid	liquid	liquid
Colour		light amber	light amber	light amber
Viscosity at 25°C (mPa.s)	BROOKFIELD LVT	1,100	15	10
Density at 25°C	ISO 1675 : 1985	1.16	0.95	0.94
Mix ratio by weight		100	32	32
Mix ratio by volume		100	39	39
Mix viscosity at 25°C	BROOKFIELD LVT		310	240
Mix density at 25°C	ISO 1675:1985		1.10	1.10
Gel time at 25°C on 100ml (min)	ASTM D 2471-99		100	300

MECHANICAL AND THERMAL PROPERTIES AT 23 °C (1)				
			EPOLAM 2040/2042	EPOLAM 2040/2047
Flexural modulus	ISO 178 :1993	MPa	2900	2900
Maximum flexural strength	ISO 178 :1993	MPa	125	115
Tensile strength	ISO 527 :1993	MPa	75	71
Elongation at break	ISO 527 :1993	%	8.7	8.0

(1) : Average values obtained on standard specimens of neat resin/ Hardening 24h at 23°C and 16h at 70°C .

EXOTHERM VS TIME AT 23°C
EPOLAM 2040 Resin + EPOLAM 20 .. Hardener
Volume : 100 ml

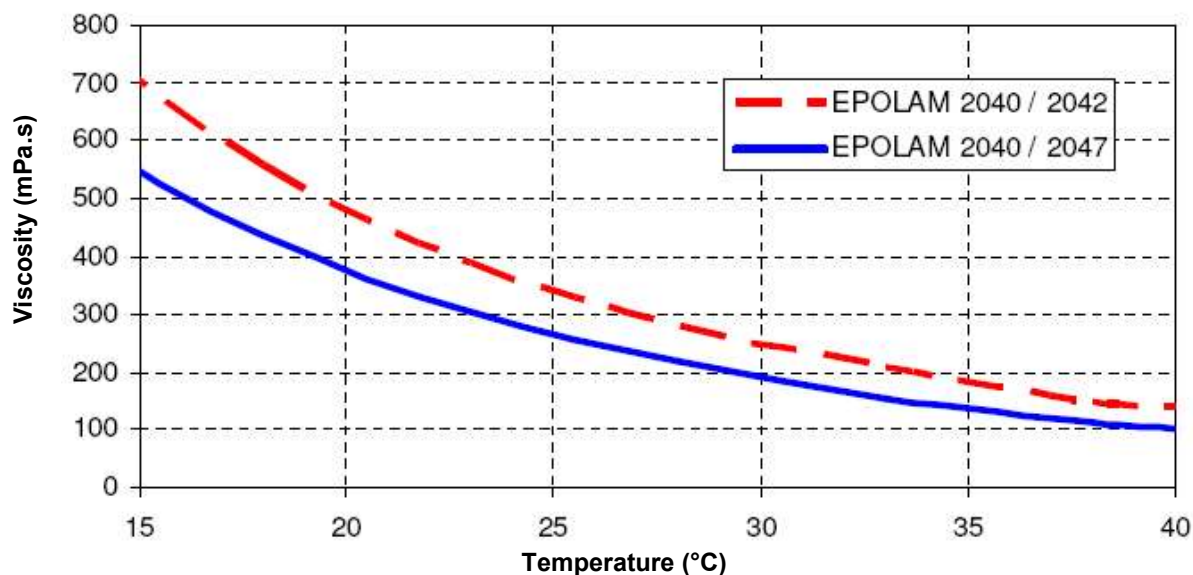


MIXING VISCOSITY VS TEMPERATURE

Rheometer CVO 100 Malvern

Cone – Plate 4° / 40 mm

Shear rate : 30 s⁻¹



MIXING VISCOSITY VS TIME

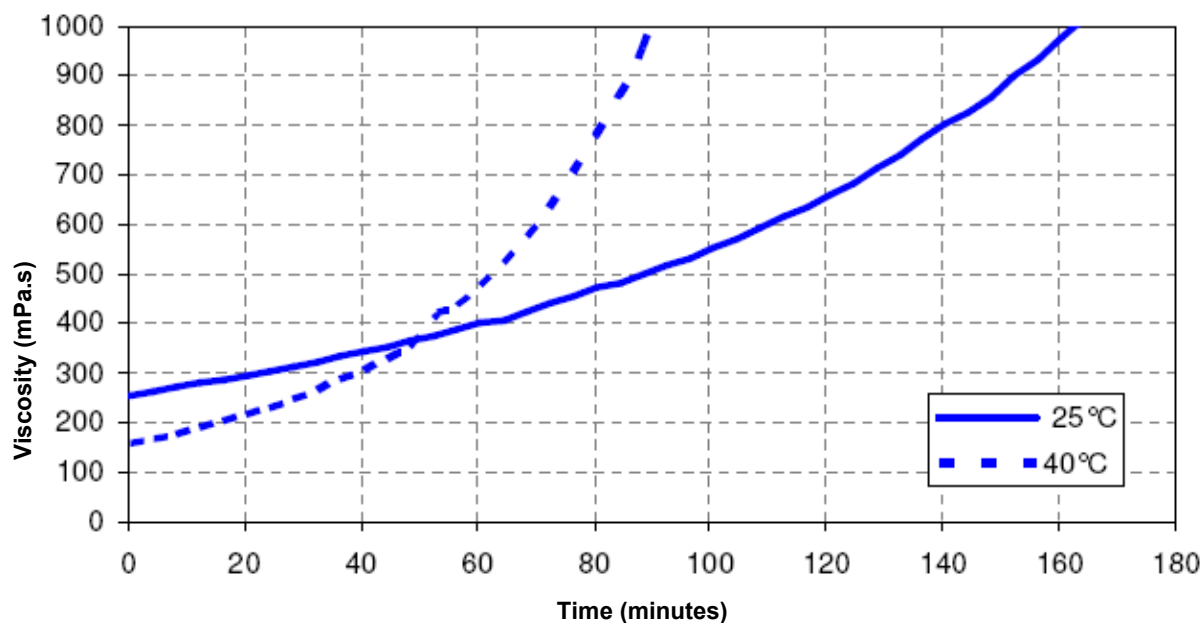
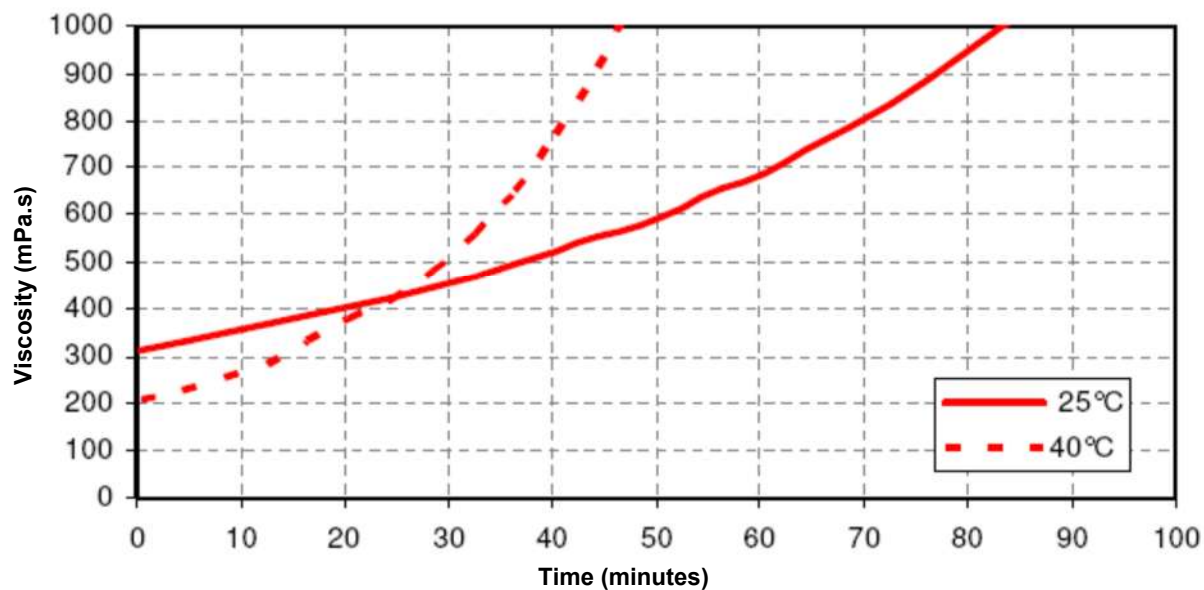
Rheometer CVO 100 Malvern

Plate – Plate 25 mm

Gap : 0.5 mm

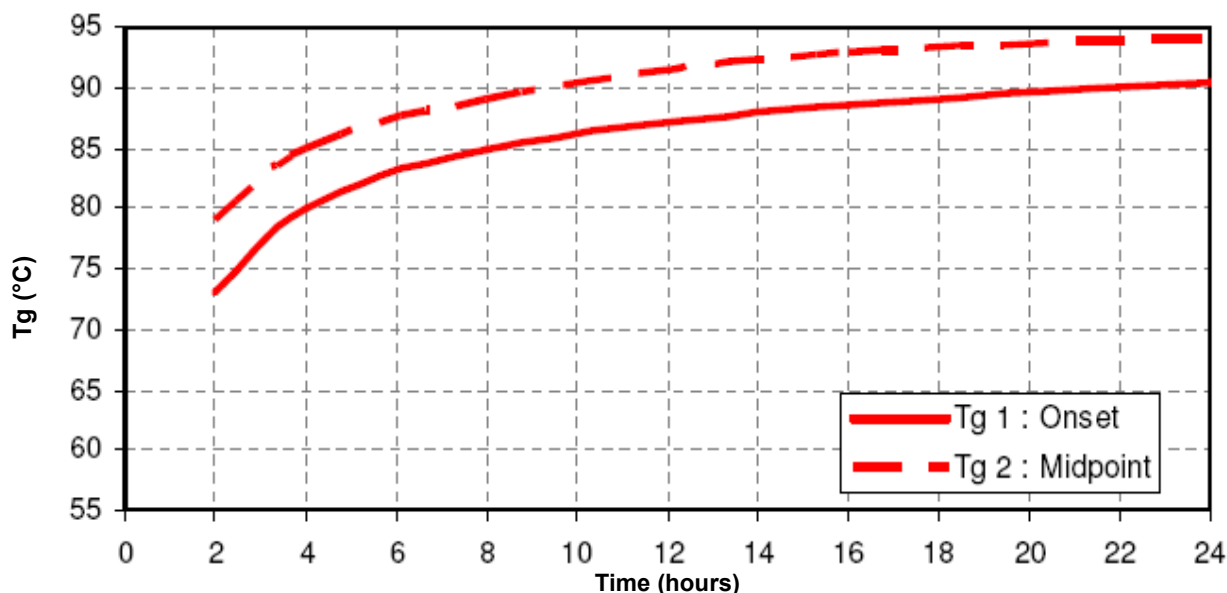
Shear rate : 30 s⁻¹

EPOLAM 2040 / 2042

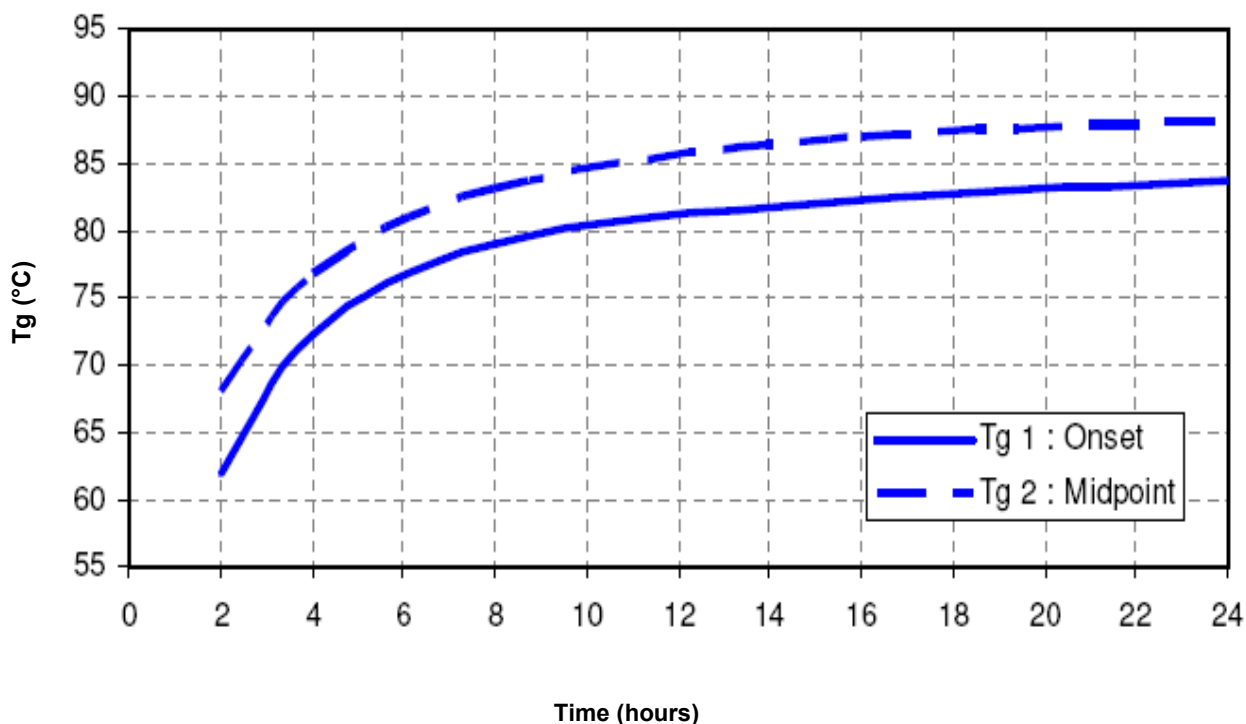


TG DSC VS TIME

Temperature: 70°C
EPOLAM 2040 / 2042

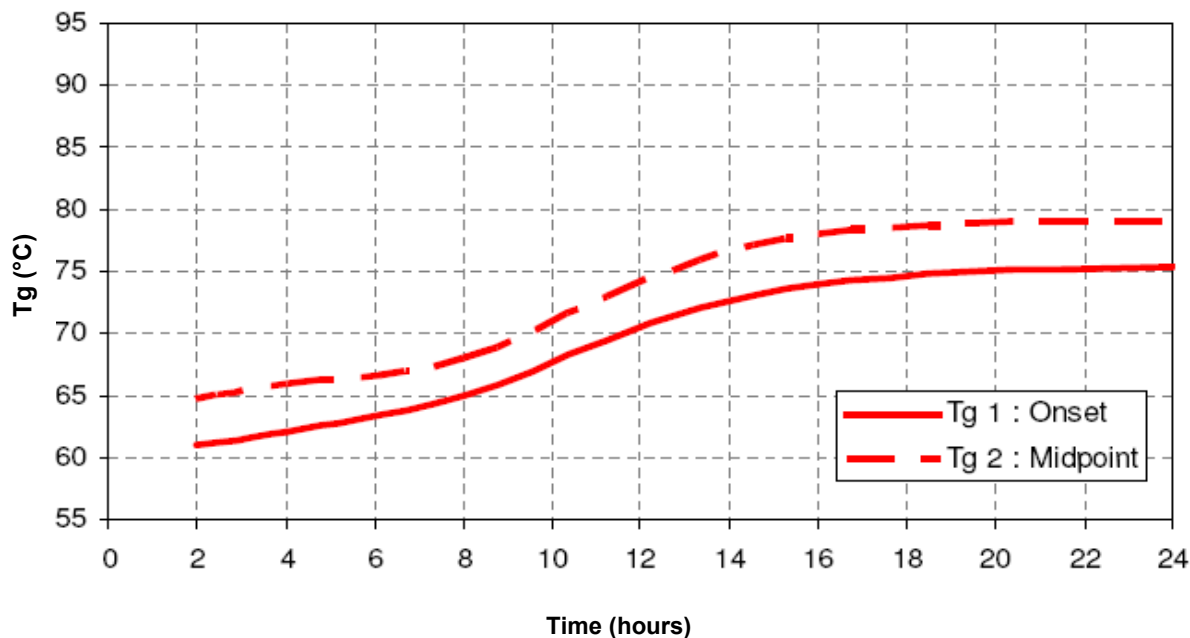


EPOLAM 2040 / 2047

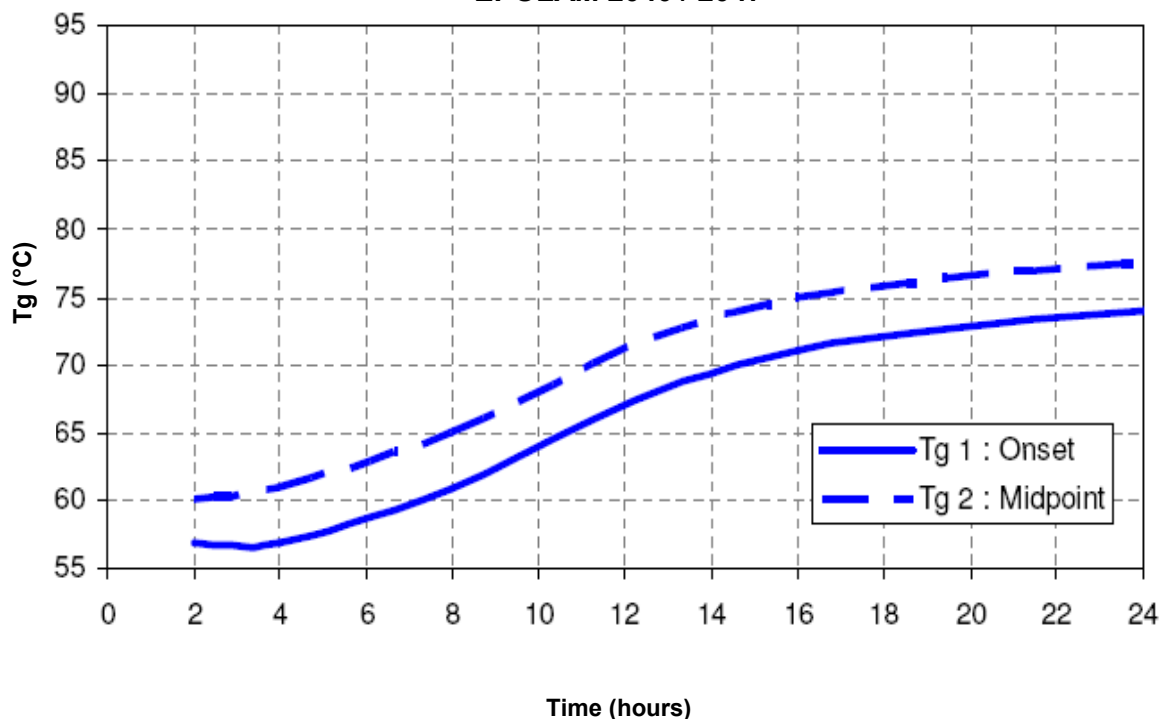


TG DSC VS TIME

Temperature : 50°C
EPOLAM 2040 / 2042



EPOLAM 2040 / 2047



PROCESSING CONDITIONS

- To obtain the temperature resistance and the maximum mechanical properties, shall follow this treatment: 24hrs under 23°C , then 16hrs under 70°C .
- To obtain an accelerator rate, it is necessary to refer to the curves on page 4 and 5 in order to start the heat treatment, follow this: 2hrs under 50°C , 8hrs under 70°C , 2hrs under 80°C

In order to avoid any deformation risk it is advised to place the part on a support frame during post curing.

PRECAUTIONS

Normal health and safety precautions should be observed when handling these products:

- Ensure good ventilation,
- Wear gloves and safety glasses

For further information, please consult the product safety data sheet.

STORAGE

Use within 24 months of the manufacturing date. Expiry date indicated on the packaging.

PACKAGING

EPOLAM 2040 Resin

1,130 kg

EPOLAM 2042 Hardener

925 kg

EPOLAM 2047 Hardener

925 kg

GUARANTEE

The information of our technical data sheet are based on our present knowledge and the result of tests conducted under precise conditions. It is the responsibility of the user to determine the suitability of **Sika Advanced Resins** products, under their own conditions before commencing with the proposed application. **Sika Advanced Resins** refuse any guarantee about the compatibility of a product with any particular application. **Sika Advanced Resins** disclaim all responsibility for damage from any incident which results from the use of these products. The guarantee conditions are regulated by our general sale conditions.