

SR 1720 / SD 7840

High performance infusion systems

Two component epoxy system

Specially formulated with a low viscosity for RTM processes such as injection, vacuum assisted injection or infusion.

Reactivity suitable for large part processing.

Excellent mechanical properties even after a post cure of only 16 hours at 50 °C, allowing any parts to be un moulded.

Temperature resistance up to 200 °C

Epoxy resin SR 1720

		SR 1720
Aspect / colour		Yellow liquid
Viscosity (cps)	20 °C	8 500 ± 1 500
Rheometer CP 50 mm	25 °C	4 400 ± 800
Shear rate 10 s ⁻¹	30 °C	2 300 ± 500
	40 °C	800 ± 150
Density	20 °C	1.180 ± 0.01
Picnometer		
ISO 2811-1		

Hardener SD 7840

		SD 7840
Aspect / colour		Reddish yellow liquid
Viscosity (cps)	15 °C	30 ± 5
Rheometer CP 50 mm	20 °C	22 ± 4
Shear rate 10 s ⁻¹	25 °C	17 ± 3
	30 °C	14 ± 3
	40 °C	10 ± 2
Density		0.970 ± 0.01
Picnometer		
ISO 2811-1		

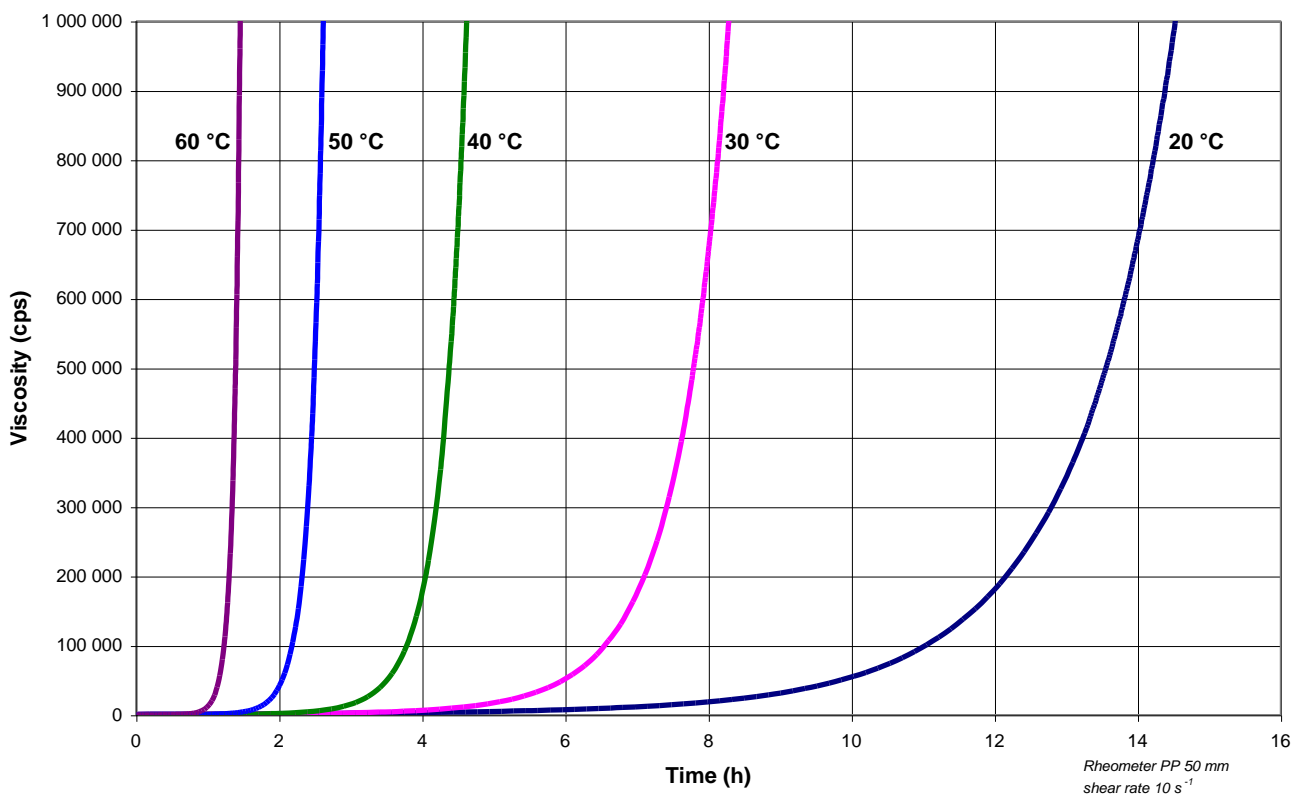
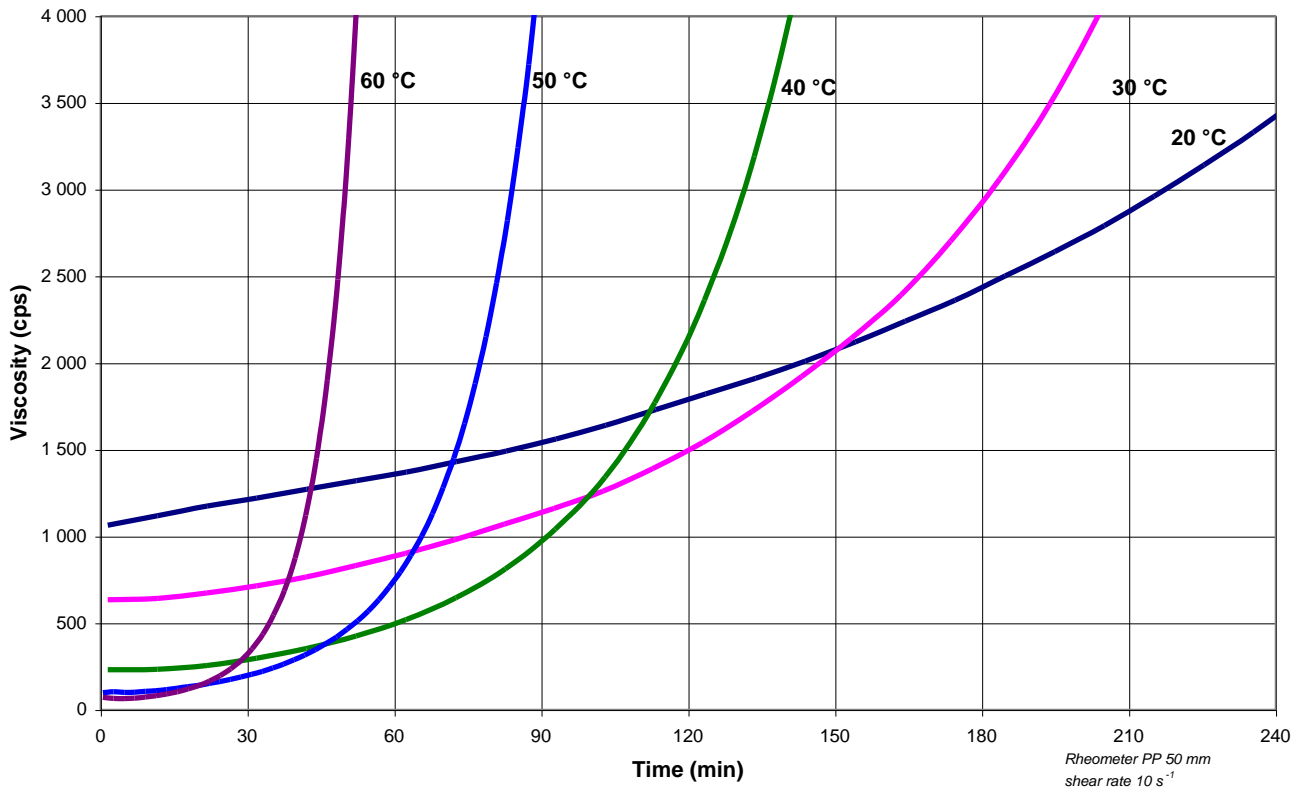
SR 1720 / SD 7840 mix properties

		SR 1720 / SD 7840
Weight ratio		100 / 26 g
Volume ratio		100 / 32 ml
Mix viscosity (cps)		
Rheometer PP 50 mm	30 °C	450 ± 100
Shear rate 10 s ⁻¹	40 °C	230 ± 40
	50 °C	80 ± 20
	60 °C	60 ± 15

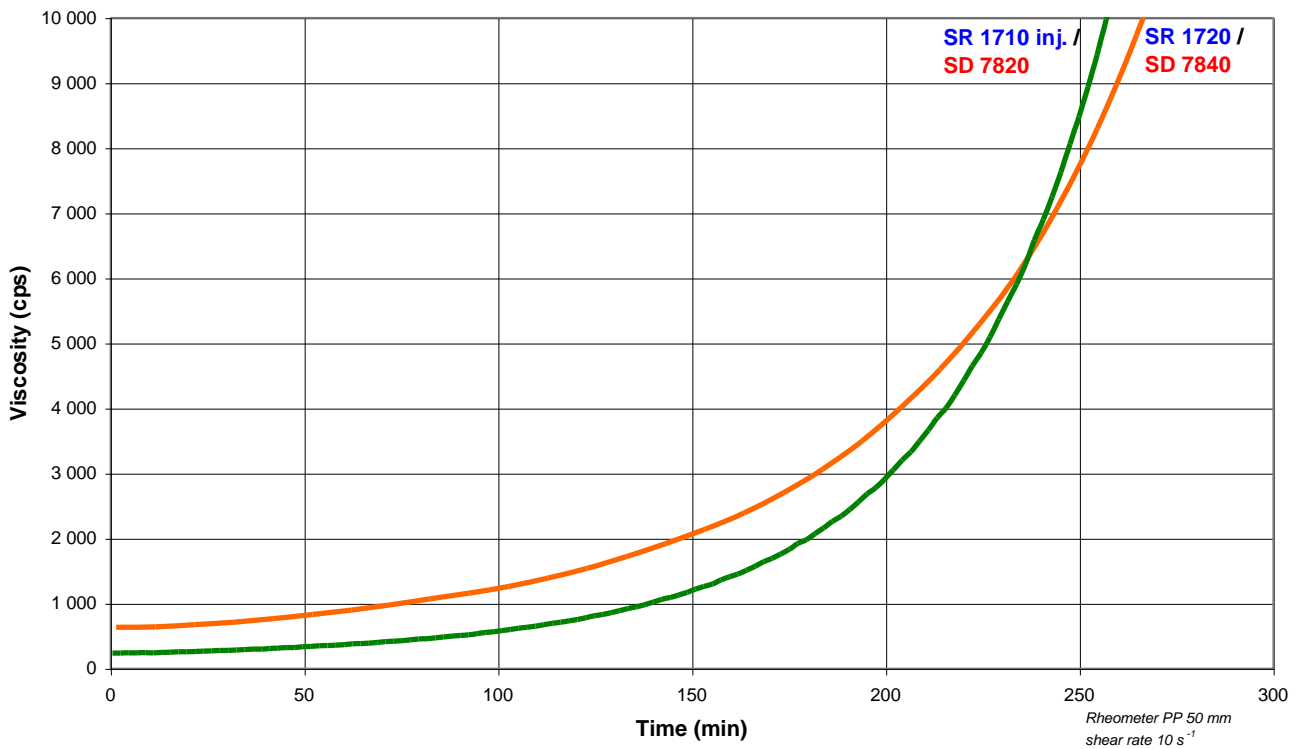
Reactivity – mass exotherm

		SR 1720 / SD 7840
Exothermic peak (°C) on 500 g mix :		
	20 °C	> 250 °C
	30 °C	
	40 °C	
Time to reach exothermic peak on 500 g mix :		
	20 °C	1 h 08'
	30 °C	
	40 °C	
Time to reach 50 °C on 500 g mix :		
	20 °C	42'
	30 °C	
	40 °C	

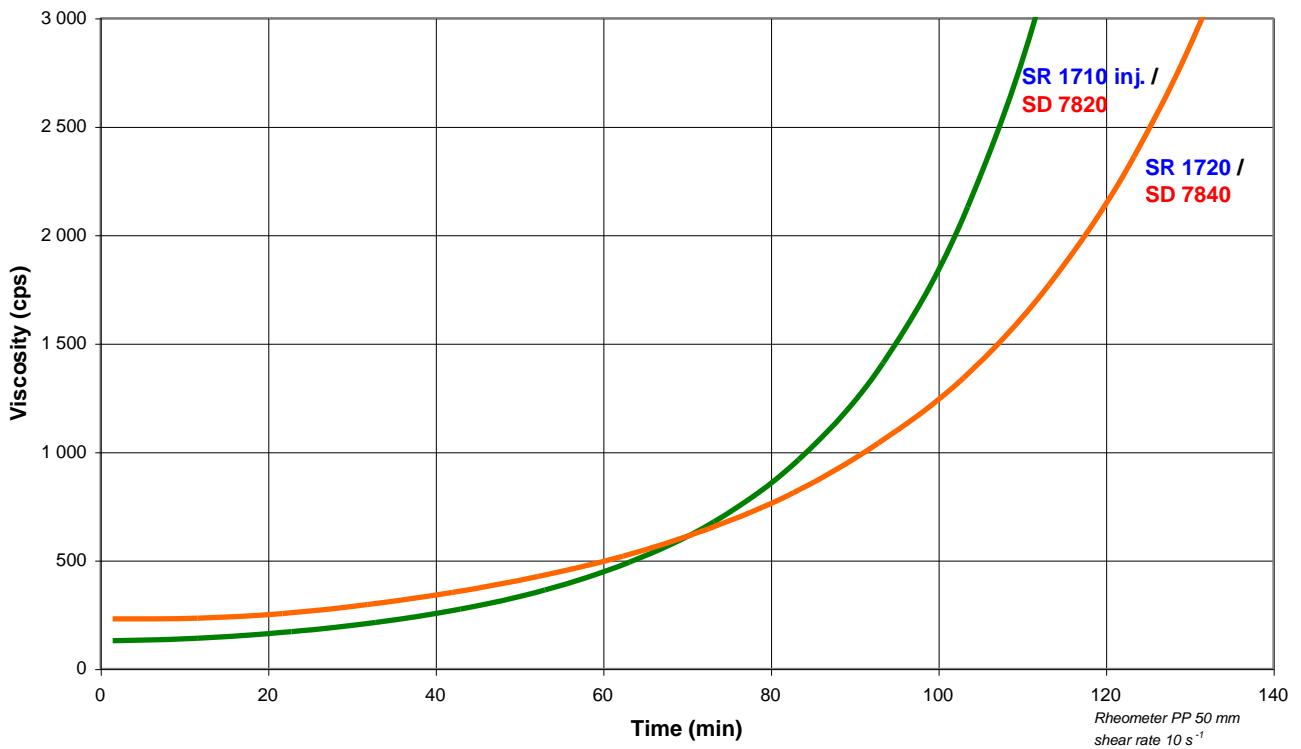
Reactivity – 1 mm film viscosity evolution



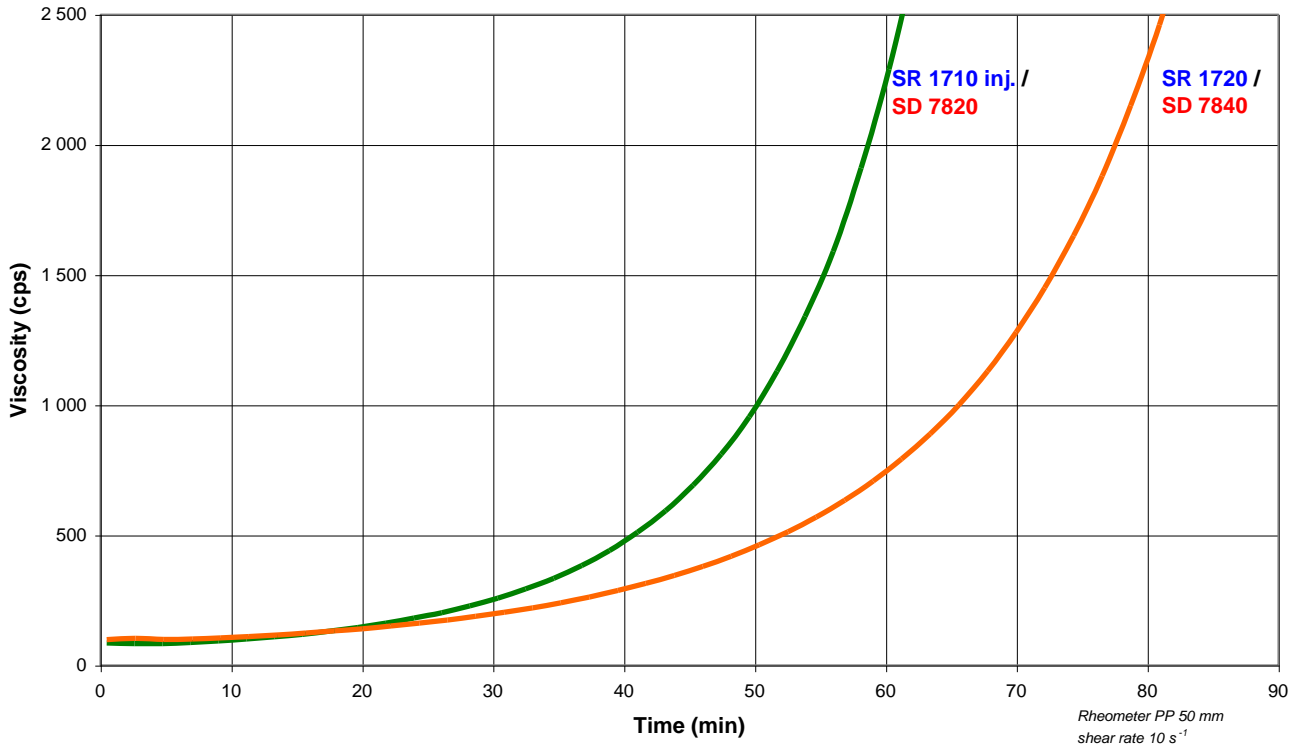
Comparative reactivity with SR 1710 inj. / SD 7820
- 30 °C



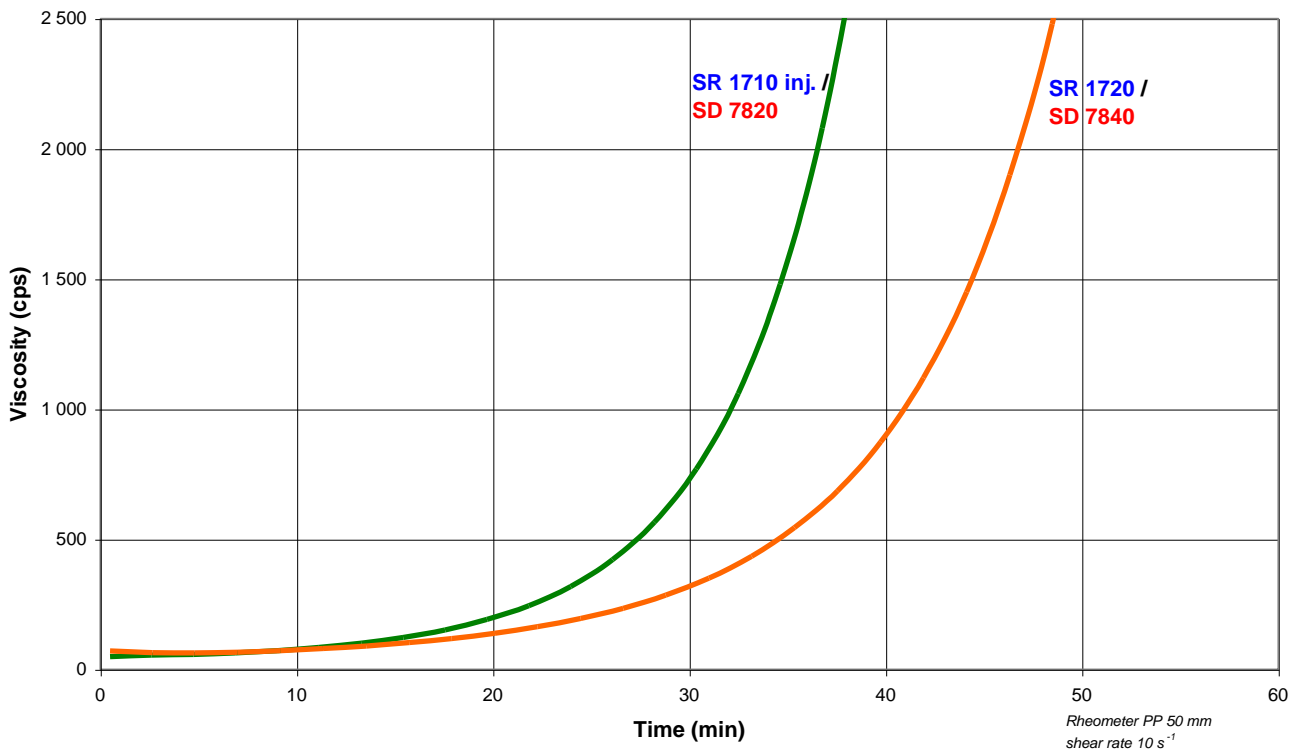
- 40 °C



- 50 °C



- 60 °C



Mechanical properties on pure cast resin

		SR 1720 / SD 7840	SR 1720 / SD 7840
Curing cycle		24 h 23 °C + 24 h 60°C	24 h à 23 °C + 8 h à 60 °C + 2 h à 80 °C + 2 h à 100 °C + 2 h à 120 °C + 2 h à 140 °C + 2 h à 160 °C + 2 h à 180 °C + 2 h à 200 °C
Tension			
Modulus of elasticity	N/mm ²	4 000	3 800
Maximum resistance	N/mm ²	44	45
Resistance at break	N/mm ²	44	45
Elongation at max. load	%	1.1	1.2
Elongation at break	%	1.1	1.2
Flexion			
Modulus of elasticity	N/mm ²	4 060	3 730
Maximum resistance	N/mm ²	95	58
Elongation at max. load	%	2.2	1.4
Elongation at break	%	2.2	1.4
Charpy impact strength			
Resilience	kJ/m ²	9	6
Glass Transition / DSC			
Tg1	°C	100	198
Tg1 max.	°C		200

Tests carried out on samples of pure cast resin, without prior degassing, between steel plates.

Measures undertaken according to the following norms :

Tension: NF T 51-034

Flexion : NF T 51-001

Charpy impact strength: NF T 51-035

Glass transition DSC : ISO 11357-2 : 1999 -5°C to 250°C under nitrogen gaz

Tg1 or Onset : 1st point at 20 °C/mn

Tg1 maximum or Onset : second passage