

Table S1. Experimental data on the refractive indices of the studied systems.

### Data set

Refractive index								
T, °C	PSU	DGEBA	AGE	DGEBA50/AGE50	DGEBA60/AGE40	DGEBA55/AGE45	DGEBA50/PSU50	DGEBA55/PSU45
20	1.6341 ± 0.0005	1.5752 ± 0.0005	1.4504 ± 0.0005	1.5145 ± 0.0005	1.5241 ± 0.0005	1.52 ± 0.0005	1.62 ± 0.0005	1.616 ± 0.0005
40	1.6321 ± 0.0005	1.5652 ± 0.0005	1.4424 ± 0.0005	1.5059 ± 0.0005	1.5142 ± 0.0005	1.5098 ± 0.0005	1.612 ± 0.0005	1.6086 ± 0.0005
60	1.6301 ± 0.0005	1.5552 ± 0.0005	1.4344 ± 0.0005	1.4976 ± 0.0005	1.5055 ± 0.0005	1.5009 ± 0.0005	1.604 ± 0.0005	1.5997 ± 0.0005
80	1.6281 ± 0.0005	1.5452 ± 0.0005	1.4264 ± 0.0005	1.4888 ± 0.0005	1.4971 ± 0.0005	1.4921 ± 0.0005	1.596 ± 0.0005	1.5929 ± 0.0005
100	1.6351 ± 0.0005	1.5352 ± 0.0005	1.4184 ± 0.0005	1.4802 ± 0.0005	1.4892 ± 0.0005	1.4837 ± 0.0005	1.588 ± 0.0005	1.5833 ± 0.0005
120	1.6241 ± 0.0005	1.5252 ± 0.0005	1.4104 ± 0.0005	1.4719 ± 0.0005	1.4821 ± 0.0005	1.4761 ± 0.0005	1.58 ± 0.0005	1.5756 ± 0.0005

Table S2-7. Experimental data on the compositions of the coexisting phases of the studied systems.

### Phase diagrams of bicomponent systems

PSU-AGE				
T, °C	Left		Right	
	$\Phi_{\text{PSU}}$	$\Phi_{\text{AGE}}$	$\Phi_{\text{PSU}}$	$\Phi_{\text{AGE}}$
40	$0.09 \pm 0.015$	$0.91 \pm 0.015$	$0.99 \pm 0.015$	$0.01 \pm 0.005$
60	$0.11 \pm 0.015$	$0.89 \pm 0.015$	$0.99 \pm 0.015$	$0.01 \pm 0.005$
80	$0.13 \pm 0.015$	$0.87 \pm 0.015$	$0.99 \pm 0.015$	$0.01 \pm 0.005$
100	$0.16 \pm 0.014$	$0.84 \pm 0.014$	$0.99 \pm 0.014$	$0.01 \pm 0.005$
120	$0.18 \pm 0.014$	$0.82 \pm 0.014$	$0.99 \pm 0.014$	$0.01 \pm 0.005$
140	$0.20 \pm 0.014$	$0.80 \pm 0.014$	$0.99 \pm 0.014$	$0.01 \pm 0.005$
160	$0.22 \pm 0.013$	$0.78 \pm 0.013$	$0.98 \pm 0.013$	$0.02 \pm 0.01$
180	$0.23 \pm 0.013$	$0.77 \pm 0.013$	$0.98 \pm 0.013$	$0.02 \pm 0.01$

PSU-DGEBA50/AGE50				
T, °C	Left		Right	
	$\Phi_{\text{PSU}}$	$\Phi_{\text{DGEBA50/AGE50}}$	$\Phi_{\text{PSU}}$	$\Phi_{\text{DGEBA50/AGE50}}$
40	$0.2 \pm 0.023$	$0.8 \pm 0.023$	$0.98 \pm 0.023$	$0.02 \pm 0.01$
60	$0.29 \pm 0.023$	$0.71 \pm 0.023$	$0.98 \pm 0.023$	$0.02 \pm 0.01$
80	$0.33 \pm 0.022$	$0.67 \pm 0.022$	$0.98 \pm 0.022$	$0.02 \pm 0.01$
100	$0.36 \pm 0.02$	$0.64 \pm 0.02$	$0.98 \pm 0.02$	$0.02 \pm 0.01$
120	$0.38 \pm 0.02$	$0.615 \pm 0.02$	$0.98 \pm 0.02$	$0.02 \pm 0.01$
140	$0.40 \pm 0.019$	$0.59 \pm 0.019$	$0.98 \pm 0.019$	$0.02 \pm 0.01$
160	$0.44 \pm 0.019$	$0.56 \pm 0.019$	$0.98 \pm 0.019$	$0.02 \pm 0.01$

180	$0.49 \pm 0.018$	$0.51 \pm 0.018$	$0.98 \pm 0.018$	$0.02 \pm 0.01$
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PSU-DGEBA60/AGE40				
T, °C	Left		Right	
	$\Phi_{\text{PSU}}$	$\Phi_{\text{DGEBA60/AGE40}}$	$\Phi_{\text{PSU}}$	$\Phi_{\text{DGEBA60/AGE40}}$
40	$0.33 \pm 0.025$	$0.67 \pm 0.025$	$0.95 \pm 0.025$	$0.05 \pm 0.0025$
60	$0.37 \pm 0.024$	$0.63 \pm 0.025$	$0.95 \pm 0.025$	$0.05 \pm 0.0025$
80	$0.42 \pm 0.023$	$0.58 \pm 0.023$	$0.95 \pm 0.023$	$0.05 \pm 0.0025$
100	$0.46 \pm 0.022$	$0.54 \pm 0.022$	$0.94 \pm 0.022$	$0.06 \pm 0.03$
120	$0.49 \pm 0.02$	$0.51 \pm 0.021$	$0.92 \pm 0.02$	$0.08 \pm 0.04$
136 (UCST)	$0.74 \pm 0.02$		$0.026 \pm 0.013$	

PSU50/DGEBA50-DGEBA50/AGE50				
T, °C	Left		Right	
	$\Phi_{\text{PSU50/DGEBA50}}$	$\Phi_{\text{DGEBA50/AGE50}}$	$\Phi_{\text{PSU50/DGEBA50}}$	$\Phi_{\text{DGEBA50/AGE50}}$
40	$0.3 \pm 0.028$	$0.7 \pm 0.028$	$0.3 \pm 0.028$	$0.7 \pm 0.028$
60	$0.31 \pm 0.028$	$0.69 \pm 0.028$	$0.31 \pm 0.028$	$0.69 \pm 0.028$
80	$0.32 \pm 0.028$	$0.68 \pm 0.028$	$0.32 \pm 0.028$	$0.68 \pm 0.028$
100	$0.33 \pm 0.028$	$0.67 \pm 0.028$	$0.33 \pm 0.028$	$0.67 \pm 0.028$
120	$0.35 \pm 0.028$	$0.65 \pm 0.028$	$0.35 \pm 0.028$	$0.65 \pm 0.028$
140	$0.37 \pm 0.028$	$0.63 \pm 0.028$	$0.37 \pm 0.028$	$0.63 \pm 0.028$
160	$0.4 \pm 0.028$	$0.6 \pm 0.028$	$0.4 \pm 0.028$	$0.6 \pm 0.028$
180	$0.42 \pm 0.028$	$0.58 \pm 0.028$	$0.42 \pm 0.028$	$0.58 \pm 0.028$

PSU45/DGEBA55-DGEBA55/AGE45				
T, °C	Left		Right	
	$\Phi_{\text{PSU45/DGEBA55}}$	$\Phi_{\text{DGEBA45/AGE55}}$	$\Phi_{\text{PSU45/DGEBA55}}$	$\Phi_{\text{DGEBA45/AGE55}}$
40	$0.34 \pm 0.03$	$0.66 \pm 0.03$	$0.04 \pm 0.02$	$0.96 \pm 0.03$
60	$0.43 \pm 0.03$	$0.57 \pm 0.03$	$0.08 \pm 0.03$	$0.92 \pm 0.03$
80	$0.53 \pm 0.03$	$0.47 \pm 0.03$	$0.15 \pm 0.03$	$0.85 \pm 0.03$
91 (UCST)	$0.69 \pm 0.03$		$0.31 \pm 0.03$	

### Ternary phase diagram of system

T, °C	$\Phi_{AGE}$	$\Phi_{DGEBA}$	$\Phi_{PSU}$
40	$0.085 \pm 0.025$	0.000	$0.915 \pm 0.025$
40	$0.1 \pm 0.025$	$0.1 \pm 0.025$	$0.8 \pm 0.025$
40	$0.132 \pm 0.025$	$0.198 \pm 0.025$	$0.67 \pm 0.025$
40	$0.38 \pm 0.025$	$0.57 \pm 0.025$	$0.05 \pm 0.0025$
40	$0.17 \pm 0.025$	$0.5 \pm 0.025$	$0.33 \pm 0.025$
40	$0.49 \pm 0.025$	$0.5 \pm 0.025$	$0.01 \pm 0.005$
40	$0.205 \pm 0.025$	$0.55 \pm 0.025$	$0.245 \pm 0.025$
40	$0.432 \pm 0.025$	$0.55 \pm 0.025$	$0.018 \pm 0.025$
40	$0.01 \pm 0.005$	0.000	$0.99 \pm 0.025$
120	$0.17 \pm 0.023$	0.000	$0.83 \pm 0.023$
120	$0.1925 \pm 0.023$	$0.1925 \pm 0.023$	$0.615 \pm 0.023$
120	$0.204 \pm 0.023$	$0.306 \pm 0.023$	$0.49 \pm 0.023$
120	$0.364 \pm 0.023$	$0.546 \pm 0.023$	$0.09 \pm 0.023$
120	$0.265 \pm 0.023$	$0.5 \pm 0.023$	$0.235 \pm 0.023$
120	$0.485 \pm 0.023$	$0.5 \pm 0.023$	$0.015 \pm 0.005$
120	$0.01 \pm 0.005$	0.000	$0.99 \pm 0.023$
180	$0.23 \pm 0.022$	0.000	$0.77 \pm 0.022$
180	$0.245 \pm 0.022$	$0.245 \pm 0.022$	$0.51 \pm 0.022$
180	$0.35 \pm 0.022$	$0.5 \pm 0.022$	$0.15 \pm 0.022$
180	$0.455 \pm 0.022$	$0.5 \pm 0.022$	$0.045 \pm 0.022$
180	$0.48 \pm 0.022$	$0.48 \pm 0.022$	$0.04 \pm 0.022$
180	$0.02 \pm 0.01$	0.000	$0.98 \pm 0.022$