Supplementary information

In order to consider the solubility and compatibilities (1 and 2) at various temperatures, the temperature dependencies of solubility parameters for both of the components as well as molar volume and surface tensions should be taken into account. The following equation describes the temperature dependence of the solubility parameter [1]:

$$\delta_T^2 = \frac{V\delta^2 + R(298 - T)}{V_T} \tag{1}$$

where V is the molar volume of the component at room temperature (298K); V_T is the molar volume at temperature T; δ is the solubility parameter at room temperature. The temperature dependence of the surface tension $\gamma_{p,T}$ is described by the following equation [1]:

$$\gamma_{p,T} = D_j \frac{V\delta^2 + R(298 - T)}{V_{p,T}} \left(\frac{\sum_i \Delta V_i}{m} \right)^{1/3} \tag{2}$$

Where $\left(\sum_i \Delta V_i \right)$ is the Van-der-Waals volume of the components (for a polymer the Van-der-Waals volume of the repeating unit is used); m is the number of atoms in this repeating unit. The constants D_j depend on the type of polymer (polar and non-polar polymers, etc.); the values D_j are described in [1-2] in detail.

1. A.A. Askadskii, Physical Properties of Polymers e Prediction and Control, Gordon and Breach Publishers, Amsterdam, 1996.
2. A.A. Askadskii, Computational Materials Science of Polymers, Cambridge International Science Publishing, Cambridge, 2003.

Table 1. Dendrimer concentrations in the studied PS-based compositions.

Dendrimer concentration, wt.%	Dendrimer concentration, vol.%	
	F1	F3
0	0	0
0.5	0.47	0.47
0.75	0.70	
1.0	0.94	0.93
1.5	1.41	
2.0	1.88	1.86
3.0	2.82	2.79