Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.
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Supplementary information:

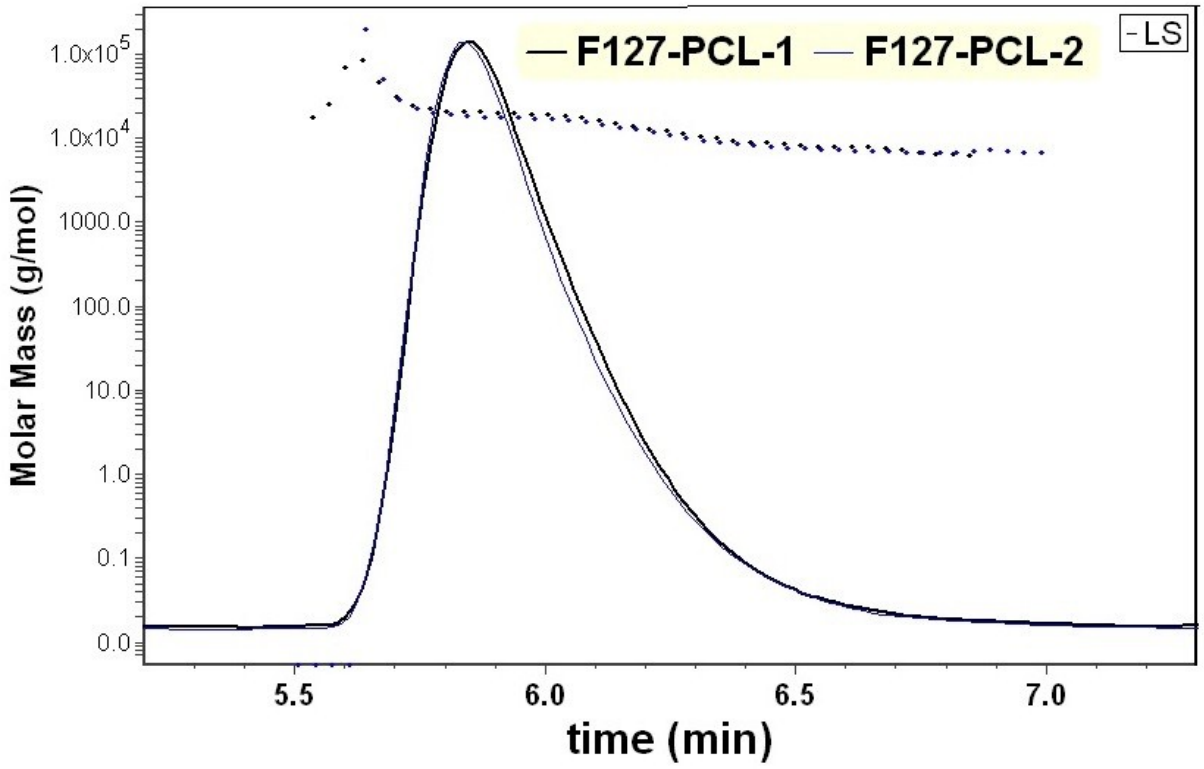

Fig.-S1. GPC Chromatograms for the two Pluronic/PCL samples. F127-PCL-1, n=11 with short name PCL(11) and F127-PCL-2, n=5 with short name PCL(5).

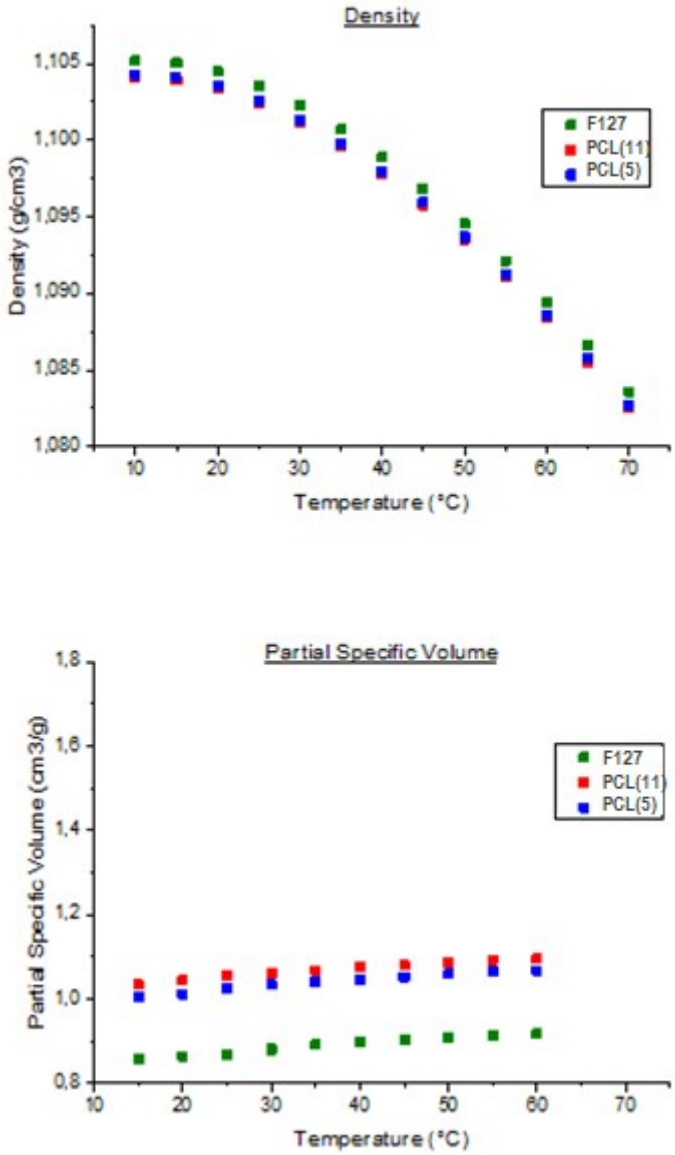

Fig.-S2. Measurements of density and partial specific volume on 0.5 wt% solutions of the modified and unmodified copolymers as a function of temperature. This information about the copolymers is used in the analysis of the SANS data.

Cylinder model for SANS data

The measured intensity is related to the form factor normalized by the particle volume as

$$I(q,\alpha) = \frac{scale}{V_s} F^2(q,\alpha).sin(\alpha) + background$$

where

$$F(q,\alpha) = (\rho_c - \rho_s)V_c \frac{sin\left(q\frac{1}{2}Lcos\alpha\right)}{q\frac{1}{2}Lcos\alpha} \frac{2J_1(qRsin\alpha)}{qRsin\alpha} +$$

$$(\rho_s - \rho_{solv})V_s \frac{sin\left(q(\frac{1}{2}L + T)cos\alpha\right)}{q(\frac{1}{2}L + T)cos\alpha} \frac{2J_1(q(R+T)sin\alpha)}{q(R+T)sin\alpha}$$

and

$$V_s = \pi(R+T)^2(L+2T)$$

Here α is the angle between the axis of the cylinder and the q-vector. V_S is the volume of the outer shell (i.e. the total volume, including the shell), Vc is the volume of the core, L is the length of the core, R is the radius of the core, T is the thickness of the shell, ρ_c is the scattering length density of the core, ρ_s is the scattering length density of the shell, ρ_{solv} is the scattering length density of the solvent, and *background* is the background level. The outer radius of the shell is given by R+T and the total length of the outer shell is given by L+2T. J_1 is the first order Bessel function.