Appendix 1

Relevant Parameters for Mixture Coefficients

Equation	Ω_a	Ω_b	Ω_c	m_i
PR	0.457235	0.077796	Not Applicable	$0.37464 + 1.54226\omega_i - 0.26992\omega_i^2$ (if $\omega_i \leq 0.49$) or $0.379642 + 1.48503\omega_i - 0.164423\omega_i^2 + 0.016666\omega_i^3$ (if $\omega_i > 0.49$)
PT	$3\eta_c^2 + 3(1-2\eta_c)\Omega_b + \Omega_b^2 + 1 - 3\eta_c$	Ω_b is the smallest root of the cubic equation: $\Omega_b^3 + (2-3\eta_c)\Omega_b^2 + 3\eta_c^2\Omega_b - \eta_c^3 = 0$ Where, $\eta_c = 0.329032 - 0.0767992\omega + 0.0211947\omega^2$	$1 - 3\eta_c$	$0.452413 + 1.30982\omega_i - 0.295937\omega_i^2$
NEW	$3\eta_c^2 + 3(1-2\eta_c)\Omega_b + \Omega_b^2 + 1 - 3\eta_c$	$\eta_c = 0.329032 - 0.0767992\omega + 0.0211947\omega^2$ Using this, solve for smallest root of $\Omega_b^3 + (2-3\eta_c)\Omega_b^2 + 3\eta_c^2\Omega_b - \eta_c^3 = 0$	$1 - 3\eta_c$	$0.359 + 0.288\omega_i + 1.846\omega_i^2$