mass-average velocity

Also contains definition of: molar average velocity in electrolytes

in electrolytes

Mass-average velocity:

\[ v_b = \rho^{-1} \sum C_i M_i v_i \]

Cf. molar average velocity:

\[ v_m = c_t^{-1} \sum c_i v_i \]

with \( c_t = \sum c_i \) where \( M_i \) = molar mass, \( c_t \) = total concentration (mol m\(^{-1}\)), \( \rho \) = density of the solution (kg m\(^{-3}\)).

Source:
PAC, 1981, 53, 1827 (Nomenclature for transport phenomena in electrolytic systems) on page 1831