

velocity

in mass transport

The flux density $N_{\mathbf{B}}$ is related to the velocity by the equation

$$N_{\mathbf{B}} = c_{\mathbf{B}} \mathbf{v}_{\mathbf{B}}$$

The vector $\mathbf{v}_{\mathbf{B}}$ is the macroscopic average velocity at which the species B moves (which is to be distinguished from the random molecular velocity); $c_{\mathbf{B}}$ is the concentration of species B (mol m^{-3}). Note that the velocity is defined with respect to a frame of reference.

Source:

PAC, 1981, 53, 1827 (*Nomenclature for transport phenomena in electrolytic systems*) on page 1830