**Fracture**

(1)

**Porous rock matrix**

(2)

where the subscripts and refer to the fracture and pore space of the rock matrix, respectively; and are the coordinates along and perpendicular to the fracture plane, respectively; denotes the time; represents the concentration of the tracer; the coefficient of longitudinal dispersion in the fracture or the coefficient of pore diffusion in the homogeneous rock matrix; the groundwater velocity in the fracture; the porosity; the aperture.

A screenshot of a cell phone

Description automatically generated

The **coupling term** (the third term at right hand side in Eq. (1)) refers to **the diffusive flux at the interface between fracture and porous matrix**.