If the simulation is single phase then maximum simulation time is given by slightly different variable name. So there should be an option to include whether its single phase or multiphase.

Variables to be included as user specifications in simulation when particles (multiphase) are involved:

Within the multiphase system, there are two ways, Eulerian-Eulerian and Eulerian Lagrangian

If Eulerian-Lagrangian is selected then following properties/variables are required:

Particle variables:

const T radius = 1.5e-4; // particles radius

const T partRho = 998.2; //particles density

const T particleMaxPhysT = T( 10 ); // max. particle simulation time in s, SI unit

const int noOfParticles = 1000; // total number of inserted particles

Fluid variables:

Lattice relaxation time (has to be greater than 0.5)

Kinematic viscosity

Density

Resolution of the model (integer)

const T fluidMaxPhysT = T( 5 ); // max. fluid simulation time in s, SI unit

If Eulerian-Eulerian is selected then following additional properties/variables are required:

const T diffusion = 1.e-6; // diffusion coefficient for advection-diffusion equation