Passive Scalars Model Control Reference

The **Passive Scalars** *manager node allows you to add a passive scalar material to the simulation. A* **Passive Scalar** *child node represents a passive scalar material in the simulation tree. Its child objects function in the same way as standard material property methods.*

Passive Scalars Right-Click Action

New

Adds a passive scalar material to the simulation.

Passive Scalar Properties

Number

A read-only property that indicates the number of passive scalar materials preceding the current one. For example, for the first passive scalar material that you create, this property would equal zero. These values remain unchanged even when you delete one or more of these objects.

Maximum clip value

Sets the maximum scalar value used for clipping.

Minimum clip value

Sets the minimum scalar value used for clipping.

Clip

Clipping prevents scalar values from exceeding limits you set.

The following options are available:

- Off : No clipping applied.
- Below Min, Above Max : Prevents scalar values from rising above the ***Maximum clip value***, and falling below the ***Minimum clip value***.
- Below Min : Prevents scalar values from falling below the ***Minimum clip value***.
- Above Max : Prevents scalar values from rising above the ***Maximum clip value***.

Transport

Provides the option to deactivate the convection and/or diffusion term in Eqn. (1918). The source term is always active. The transient term is only active for transient simulations.

The following options are available:

- Convection and Diffusion : Activates both diffusion and convection.
- Convection only : Deactivates the diffusion term.
- Diffusion only : Activates the convection term.
- No Convection or Diffusion : Both convection and diffusion terms are deactivated.

Use GGDH **(only for Reynolds Stress Turbulence Models)**

When On , uses the Generalized Gradient Diffusion Hypothesis in calculating passive scalar transport.