The effective conductivity, *k*eff is currently calculated in terms of porosity ε according to the equation:

 Archie’s Law

Ks for SiC 0.1165 cal/cm s K and 0.7165 10-2 cal/cm s K for Cordierite

If you have direct experimental/manufacturer values for *k*eff pick the appropriate *k*solid that gives the desired *k*eff value.

**Filter wall density**

The wall density of the filter (g/cm3) can be input directly in this field.

Nominal values of the wall density are:

2.60 g/cm3 (Cordierite)

3.20 g/cm3 (Silicon Carbide)

The above values are for generic materials. Filter manufacturers usually employ various dopant/modifiers in their formulations and the values of actual samples may be different. The user should use manufacturer specified values, if available.

**Filter Heat Capacity Coefficients (probably with porosity)**

The Substrate Heat Capacity of the filter is calculated by the following equation.

 (probably C1 without T)

Set the value of the *C1*, *C2*, *C3*, *C4*, *C5* and *C6* parameters. Typical values for these paramereters for SiC and Cordierite filters are as follows:

*Table 7.5 Typical Values for Substrate Heat Capacity*

|  |  |  |
| --- | --- | --- |
|  | Cordierite | Silicon Carbide |
| C1 | 0.256 | 0.27 |
| C2 | 0.376E-4 | 0.135E-4 |
| C3 | -8210.0 | -9720.0 |
| C4 | 0.0 | 0.204E-7 |
| C5 | 0.0 | 0.0 |
| C6 | 0.0 | 0.0 |