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(atm
  (cont-len-fac 1.0) (cont-area-fac 2.0)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 1.0e+08) (porosity 0.99)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.0e+08)
  (tcond tcondLin (solid 0.17) (liquid 0.17) (gas 0.17))
  (K0 1.0e-8) (K1 1.0e-8) (K2 1.0e-8)
  (tort (gas 1.0) (liquid 0.000e+00))
  (kr (gas krgLinear (Smax 1.000e+00) (Sr 0.000e+00))
      (liquid krlLinear (Smax 1.000e+00) (Sr 0.000e+00)))
  (pc (liquid 0.0))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-tcw11
  (cont-len-fac 1.812e-01) (cont-area-fac 1.560e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 3.214E+03) (porosity 2.530e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 8.570E+02)
  (tcond tcondLin (solid 5.236E-01) (liquid 9.517E-01) (gas 5.236E-01))
  (K0 3.860e-15) (K1 3.860e-15) (K2 3.860e-15)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 7.000e-02) (m 4.700e-01) (Smax 1.0))
      (gas krgModCorey (Srl 7.000e-02) (m 4.700e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 7.000e-02) (m 4.700e-01) (alpha 4.000e-05) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-tcw12
  (cont-len-fac 8.726e-02) (cont-area-fac 1.339e+01)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.637E+03) (porosity 8.200e-02)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 8.570E+02)
  (tcond tcondLin (solid 5.279E-01) (liquid 9.596E-01) (gas 5.279E-01))
  (K0 2.740e-19) (K1 2.740e-19) (K2 2.740e-19)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.900e-01) (m 2.410e-01) (Smax 1.0))
      (gas krgModCorey (Srl 1.900e-01) (m 2.410e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.900e-01) (m 2.410e-01) (alpha 1.810e-05) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-tcw13
  (cont-len-fac 5.974e-02) (cont-area-fac 3.770e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 3.053E+03) (porosity 2.030e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 8.570E+02)
  (tcond tcondLin (solid 5.306E-01) (liquid 9.645E-01) (gas 5.306E-01))
  (K0 9.230e-17) (K1 9.230e-17) (K2 9.230e-17)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 3.100e-01) (m 3.980e-01) (Smax 1.0))
      (gas krgModCorey (Srl 3.100e-01) (m 3.980e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 3.100e-01) (m 3.980e-01) (alpha 3.440e-06) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-ptn21
  (cont-len-fac 2.488e-01) (cont-area-fac 1.000e+00)

  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 3.840E+03) (porosity 3.870e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.037E+03)
  (tcond tcondLin (solid 4.952E-01) (liquid 1.056E+00) (gas 4.952E-01))
  (K0 9.900e-13) (K1 9.900e-13) (K2 9.900e-13)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 2.300e-01) (m 1.760e-01) (Smax 1.0))
      (gas krgModCorey (Srl 2.300e-01) (m 1.760e-01) (Slmax 1.0)))

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    (pc (liquid pcVanGen (Sr 2.300e-01) (m 1.760e-01) (alpha 1.010e-05) (Smax 1.0)))
    (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
  ) ;;End of the material
(m-ptn22
  (cont-len-fac 3.623e-01) (cont-area-fac 1.410e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 4.121E+03) (porosity 4.390e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.077E+03)
  (tcond tcondLin (solid 3.444E-01) (liquid 4.947E-01) (gas 3.444E-01))
  (K0 2.650e-12) (K1 2.650e-12) (K2 2.650e-12)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.600e-01) (m 3.260e-01) (Smax 1.0))
    (gas krgModCorey (Srl 1.600e-01) (m 3.260e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.600e-01) (m 3.260e-01) (alpha 1.600e-04) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-ptn23
  (cont-len-fac 2.924e-01) (cont-area-fac 1.750e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 3.209E+03) (porosity 2.540e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 8.490E+02)
  (tcond tcondLin (solid 4.394E-01) (liquid 9.672E-01) (gas 4.394E-01))
  (K0 1.230e-13) (K1 1.230e-13) (K2 1.230e-13)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 8.000e-02) (m 3.970e-01) (Smax 1.0))
    (gas krgModCorey (Srl 8.000e-02) (m 3.970e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 8.000e-02) (m 3.970e-01) (alpha 5.580e-06) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-ptn24
  (cont-len-fac 3.623e-01) (cont-area-fac 3.400e-01)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 3.975E+03) (porosity 4.110e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.016E+03)
  (tcond tcondLin (solid 4.540E-01) (liquid 1.008E+00) (gas 4.540E-01))
  (K0 7.860e-14) (K1 7.860e-14) (K2 7.860e-14)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.400e-01) (m 2.250e-01) (Smax 1.0))
    (gas krgModCorey (Srl 1.400e-01) (m 2.250e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.400e-01) (m 2.250e-01) (alpha 1.530e-04) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-ptn25
  (cont-len-fac 3.205e-01) (cont-area-fac 1.090e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 4.483E+03) (porosity 4.990e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.330E+03)
  (tcond tcondLin (solid 3.464E-01) (liquid 8.156E-01) (gas 3.464E-01))
  (K0 7.000e-14) (K1 7.000e-14) (K2 7.000e-14)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 6.000e-02) (m 3.230e-01) (Smax 1.0))
    (gas krgModCorey (Srl 6.000e-02) (m 3.230e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 6.000e-02) (m 3.230e-01) (alpha 5.270e-05) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-ptn26
  (cont-len-fac 1.718e-01) (cont-area-fac 3.560e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 4.649E+03) (porosity 4.920e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.224E+03)
  (tcond tcondLin (solid 2.305E-01) (liquid 6.662E-01) (gas 2.305E-01))
  (K0 2.210e-13) (K1 2.210e-13) (K2 2.210e-13)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 5.000e-02) (m 2.850e-01) (Smax 1.0)))

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        (gas krgModCorey (Srl 5.000e-02) (m 2.850e-01) (Slmax 1.0)))
    (pc (liquid pcVanGen (Sr 5.000e-02) (m 2.850e-01) (alpha 2.490e-04) (Smax 1.0)))
    (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-tsw31
  (cont-len-fac 7.680e-02) (cont-area-fac 3.860e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.636E+03) (porosity 5.300e-02)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 8.340E+02)
  (tcond tcondLin (solid 3.687E-01) (liquid 9.927E-01) (gas 3.687E-01))
  (K0 6.320e-17) (K1 6.320e-17) (K2 6.320e-17)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 2.200e-01) (m 3.030e-01) (Smax 1.0))
    (gas krgModCorey (Srl 2.200e-01) (m 3.030e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 2.200e-01) (m 3.030e-01) (alpha 3.610e-05) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-tsw32
  (cont-len-fac 1.488e-01) (cont-area-fac 3.210e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.996E+03) (porosity 1.570e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 8.660E+02)
  (tcond tcondLin (solid 1.048E+00) (liquid 1.604E+00) (gas 1.048E+00))
  (K0 5.830e-16) (K1 5.830e-16) (K2 5.830e-16)

  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 7.000e-02) (m 3.330e-01) (Smax 1.0))
    (gas krgModCorey (Srl 7.000e-02) (m 3.330e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 7.000e-02) (m 3.330e-01) (alpha 3.610e-05) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-tsw33
  (cont-len-fac 2.058e-01) (cont-area-fac 4.440e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.947E+03) (porosity 1.540e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 8.829E+02)
  (tcond tcondLin (solid 7.237E-01) (liquid 1.765E+00) (gas 7.237E-01))
  (K0 3.080e-17) (K1 3.080e-17) (K2 3.080e-17)
  (tort (gas 7.000e-01) (liquid 0.000e+00))

  (kr (liquid krlVanGen (Sr 1.200e-01) (m 2.980e-01) (Smax 1.0))
    (gas krgModCorey (Srl 1.200e-01) (m 2.980e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.200e-01) (m 2.980e-01) (alpha 2.130e-05) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-tsw34
  (cont-len-fac 3.858e-02) (cont-area-fac 1.354e+01)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.814E+03) (porosity 1.100e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 9.480E+02)
  (tcond tcondLin (solid 1.543E+00) (liquid 2.306E+00) (gas 1.543E+00))
  (K0 4.070e-18) (K1 4.070e-18) (K2 4.070e-18)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.900e-01) (m 2.910e-01) (Smax 1.0))
    (gas krgModCorey (Srl 1.900e-01) (m 2.910e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.900e-01) (m 2.910e-01) (alpha 3.860e-06) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-tsw35
  (cont-len-fac 5.274e-02) (cont-area-fac 9.680e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.891E+03) (porosity 1.310e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 9.000E+02)

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(tcond tcondLin (solid 1.185E+00) (liquid 1.996E+00) (gas 1.185E+00))
(K0 3.040e-17) (K1 3.040e-17) (K2 3.040e-17)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.200e-01) (m 2.360e-01) (Smax 1.0))
   (gas krgModCorey (Srl 1.200e-01) (m 2.360e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.200e-01) (m 2.360e-01) (alpha 6.440e-06) (Smax 1.0)))
(krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-tsw36
  (cont-len-fac 4.146e-02) (cont-area-fac 1.231e+01)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.840E+03) (porosity 1.120e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 8.650E+02)
  (tcond tcondLin (solid 1.398E+00) (liquid 1.810E+00) (gas 1.398E+00))
  (K0 5.710e-18) (K1 5.710e-18) (K2 5.710e-18)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.800e-01) (m 3.800e-01) (Smax 1.0))
     (gas krgModCorey (Srl 1.800e-01) (m 3.800e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.800e-01) (m 3.800e-01) (alpha 3.550e-06) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-tsw37
  (cont-len-fac 4.146e-02) (cont-area-fac 1.231e+01)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.783E+03) (porosity 9.400e-02)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 8.650E+02)
  (tcond tcondLin (solid 1.398E+00) (liquid 1.810E+00) (gas 1.398E+00))
  (K0 4.490e-18) (K1 4.490e-18) (K2 4.490e-18)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 2.500e-01) (m 4.250e-01) (Smax 1.0))
     (gas krgModCorey (Srl 2.500e-01) (m 4.250e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 2.500e-01) (m 4.250e-01) (alpha 5.330e-06) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-tsw38
  (cont-len-fac 3.823e-02) (cont-area-fac 1.334e+01)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.421E+03) (porosity 3.700e-02)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 9.840E+02)
  (tcond tcondLin (solid 1.669E+00) (liquid 2.054E+00) (gas 1.669E+00))
  (K0 4.530e-18) (K1 4.530e-18) (K2 4.530e-18)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 4.400e-01) (m 3.240e-01) (Smax 1.0))
     (gas krgModCorey (Srl 4.400e-01) (m 3.240e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 4.400e-01) (m 3.240e-01) (alpha 6.940e-06) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-tsw39
  (cont-len-fac 1.736e-01) (cont-area-fac 2.950e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.841E+03) (porosity 1.730e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 9.840E+02)
  (tcond tcondLin (solid 1.681E+00) (liquid 2.069E+00) (gas 1.681E+00))
  (K0 5.460e-17) (K1 5.460e-17) (K2 5.460e-17)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 2.900e-01) (m 3.800e-01) (Smax 1.0))
     (gas krgModCorey (Srl 2.900e-01) (m 3.800e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 2.900e-01) (m 3.800e-01) (alpha 2.290e-05) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-chlv
  (cont-len-fac 1.667e+00) (cont-area-fac 3.000e-01)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 3.175E+03) (porosity 2.730e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))

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(Cp 1.057E+03)
(tcond tcondLin (solid 6.998E-01) (liquid 1.308E+00) (gas 6.998E-01))
(K0 9.900e-13) (K1 9.900e-13) (K2 9.900e-13)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 3.000e-02) (m 3.500e-01) (Smax 1.0))
   (gas krgModCorey (Srl 3.000e-02) (m 3.500e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 3.000e-02) (m 3.500e-01) (alpha 1.430e-05) (Smax 1.0)))
(krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;End of the material
(m-ch2v
  (cont-len-fac 1.190e+00) (cont-area-fac 4.300e-01)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 3.417E+03) (porosity 3.450e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.201E+03)
  (tcond tcondLin (solid 5.794E-01) (liquid 1.168E+00) (gas 5.794E-01))
  (K0 9.270e-14) (K1 9.270e-14) (K2 9.270e-14)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 7.000e-02) (m 2.990e-01) (Smax 1.0))
     (gas krgModCorey (Srl 7.000e-02) (m 2.990e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 7.000e-02) (m 2.990e-01) (alpha 5.130e-05) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;End of the material
(m-ch3v
  (cont-len-fac 1.190e+00) (cont-area-fac 4.300e-01)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 3.417E+03) (porosity 3.450e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.201E+03)
  (tcond tcondLin (solid 5.794E-01) (liquid 1.168E+00) (gas 5.794E-01))
  (K0 9.270e-14) (K1 9.270e-14) (K2 9.270e-14)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 7.000e-02) (m 2.990e-01) (Smax 1.0))
     (gas krgModCorey (Srl 7.000e-02) (m 2.990e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 7.000e-02) (m 2.990e-01) (alpha 5.130e-05) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;End of the material
(m-ch4v
  (cont-len-fac 1.190e+00) (cont-area-fac 4.300e-01)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 3.417E+03) (porosity 3.450e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.201E+03)
  (tcond tcondLin (solid 5.794E-01) (liquid 1.168E+00) (gas 5.794E-01))
  (K0 9.270e-14) (K1 9.270e-14) (K2 9.270e-14)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 7.000e-02) (m 2.990e-01) (Smax 1.0))
     (gas krgModCorey (Srl 7.000e-02) (m 2.990e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 7.000e-02) (m 2.990e-01) (alpha 5.130e-05) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;End of the material
(m-ch5v
  (cont-len-fac 1.190e+00) (cont-area-fac 4.300e-01)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 3.417E+03) (porosity 3.450e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.201E+03)
  (tcond tcondLin (solid 5.794E-01) (liquid 1.168E+00) (gas 5.794E-01))
  (K0 9.270e-14) (K1 9.270e-14) (K2 9.270e-14)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 7.000e-02) (m 2.990e-01) (Smax 1.0))
     (gas krgModCorey (Srl 7.000e-02) (m 2.990e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 7.000e-02) (m 2.990e-01) (alpha 5.130e-05) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;End of the material
(m-ch1z
  (cont-len-fac 4.167e+00) (cont-area-fac 1.100e-01)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 3.146E+03) (porosity 2.880e-01)
  (Kd (water 0.0) (air 0.0))

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(KdFactor (water 0.0) (air 0.0))
(Cp 1.201E+03)
(tcond tcondLin (solid 5.798E-01) (liquid 1.169E+00) (gas 5.798E-01))
(K0 1.960E-19) (K1 1.960E-19) (K2 1.960E-19)
(tort (gas 7.000E-01) (liquid 0.000E+00))
(kr (liquid krlVanGen (Sr 3.300E-01) (m 3.160E-01) (Smax 1.0))
   (gas krgModCorey (Srl 3.300E-01) (m 3.160E-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 3.300E-01) (m 3.160E-01) (alpha 2.680E-07) (Smax 1.0)))
(krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;End of the material
(m-ch2z
  (cont-len-fac 1.190E+00) (cont-area-fac 4.300E-01)
  (exfac-adv (liquid 1.000E+00) (gas 1.000E+00))
  (solid-density 3.347E+03) (porosity 3.310E-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.201E+03)
  (tcond tcondLin (solid 5.796E-01) (liquid 1.169E+00) (gas 5.796E-01))
  (K0 6.070E-18) (K1 6.070E-18) (K2 6.070E-18)
  (tort (gas 7.000E-01) (liquid 0.000E+00))
  (kr (liquid krlVanGen (Sr 2.800E-01) (m 2.440E-01) (Smax 1.0))
     (gas krgModCorey (Srl 2.800E-01) (m 2.440E-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 2.800E-01) (m 2.440E-01) (alpha 3.470E-06) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;End of the material
(m-ch3z
  (cont-len-fac 1.190E+00) (cont-area-fac 4.300E-01)
  (exfac-adv (liquid 1.000E+00) (gas 1.000E+00))
  (solid-density 3.347E+03) (porosity 3.310E-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.201E+03)
  (tcond tcondLin (solid 5.796E-01) (liquid 1.169E+00) (gas 5.796E-01))
  (K0 6.070E-18) (K1 6.070E-18) (K2 6.070E-18)
  (tort (gas 7.000E-01) (liquid 0.000E+00))
  (kr (liquid krlVanGen (Sr 2.800E-01) (m 2.440E-01) (Smax 1.0))
     (gas krgModCorey (Srl 2.800E-01) (m 2.440E-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 2.800E-01) (m 2.440E-01) (alpha 3.470E-06) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;End of the material
(m-ch4z
  (cont-len-fac 1.190E+00) (cont-area-fac 4.300E-01)
  (exfac-adv (liquid 1.000E+00) (gas 1.000E+00))
  (solid-density 3.347E+03) (porosity 3.310E-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.201E+03)
  (tcond tcondLin (solid 5.796E-01) (liquid 1.169E+00) (gas 5.796E-01))
  (K0 6.070E-18) (K1 6.070E-18) (K2 6.070E-18)
  (tort (gas 7.000E-01) (liquid 0.000E+00))
  (kr (liquid krlVanGen (Sr 2.800E-01) (m 2.440E-01) (Smax 1.0))
     (gas krgModCorey (Srl 2.800E-01) (m 2.440E-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 2.800E-01) (m 2.440E-01) (alpha 3.470E-06) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;End of the material
(m-ch5z
  (cont-len-fac 1.190E+00) (cont-area-fac 4.300E-01)
  (exfac-adv (liquid 1.000E+00) (gas 1.000E+00))
  (solid-density 3.347E+03) (porosity 3.310E-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.201E+03)
  (tcond tcondLin (solid 5.796E-01) (liquid 1.169E+00) (gas 5.796E-01))
  (K0 6.070E-18) (K1 6.070E-18) (K2 6.070E-18)
  (tort (gas 7.000E-01) (liquid 0.000E+00))
  (kr (liquid krlVanGen (Sr 2.800E-01) (m 2.440E-01) (Smax 1.0))
     (gas krgModCorey (Srl 2.800E-01) (m 2.440E-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 2.800E-01) (m 2.440E-01) (alpha 3.470E-06) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;End of the material
(m-ch6
  (cont-len-fac 4.167E+00) (cont-area-fac 1.100E-01)
  (exfac-adv (liquid 1.000E+00) (gas 1.000E+00))
  (solid-density 3.051E+03) (porosity 2.660E-01)

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(Kd      (water 0.0) (air 0.0))
(KdFactor (water 0.0) (air 0.0))
(Cp 1.201E+03)
(tcond tcondLin (solid 5.798E-01) (liquid 1.169e+00) (gas 5.798E-01))
(K0 4.230e-19) (K1 4.230e-19) (K2 4.230e-19)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 3.700e-01) (m 5.100e-01) (Smax 1.0))
   (gas krgModCorey (Srl 3.700e-01) (m 5.100e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 3.700e-01) (m 5.100e-01) (alpha 3.380e-07) (Smax 1.0)))
(krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-pp4
  (cont-len-fac 1.190e+00) (cont-area-fac 4.300e-01)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.409e+03) (porosity 3.250e-01)
  (Kd      (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 5.770e+02)
  (tcond tcondLin (solid 6.197e-01) (liquid 1.209e+00) (gas 6.197e-01))
  (K0 4.280e-18) (K1 4.280e-18) (K2 4.280e-18)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 2.800e-01) (m 6.760e-01) (Smax 1.0))
   (gas krgModCorey (Srl 2.800e-01) (m 6.760e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 2.800e-01) (m 6.760e-01) (alpha 1.510e-07) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-pp3
  (cont-len-fac 8.333e-01) (cont-area-fac 6.100e-01)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.577e+03) (porosity 3.030e-01)
  (Kd      (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 8.410e+02)
  (tcond tcondLin (solid 6.593e-01) (liquid 1.259e+00) (gas 6.593e-01))
  (K0 2.560e-14) (K1 2.560e-14) (K2 2.560e-14)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.000e-01) (m 3.630e-01) (Smax 1.0))
   (gas krgModCorey (Srl 1.000e-01) (m 3.630e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.000e-01) (m 3.630e-01) (alpha 2.600e-05) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-pp2
  (cont-len-fac 8.333e-01) (cont-area-fac 6.100e-01)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.577e+03) (porosity 2.630e-01)
  (Kd      (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 8.410e+02)
  (tcond tcondLin (solid 6.593e-01) (liquid 1.259e+00) (gas 6.593e-01))
  (K0 1.570e-16) (K1 1.570e-16) (K2 1.570e-16)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.800e-01) (m 3.690e-01) (Smax 1.0))
   (gas krgModCorey (Srl 1.800e-01) (m 3.690e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.800e-01) (m 3.690e-01) (alpha 2.670e-06) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-pp1
  (cont-len-fac 1.190e+00) (cont-area-fac 4.300e-01)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.469e+03) (porosity 2.800e-01)
  (Kd      (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 6.350e+02)
  (tcond tcondLin (solid 7.197e-01) (liquid 1.329e+00) (gas 7.197e-01))
  (K0 6.400e-17) (K1 6.400e-17) (K2 6.400e-17)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 3.000e-01) (m 4.090e-01) (Smax 1.0))
   (gas krgModCorey (Srl 3.000e-01) (m 4.090e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 3.000e-01) (m 4.090e-01) (alpha 1.140e-06) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-bf3
  (cont-len-fac 8.333e-01) (cont-area-fac 6.100e-01)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))

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(solid-density 2.567e+03) (porosity 1.150e-01)
(Kd (water 0.0) (air 0.0))
(KdFactor (water 0.0) (air 0.0))
(Cp 7.630e+02)
(tcond tcondLin (solid 1.408e+00) (liquid 1.828e+00) (gas 1.408e+00))
(K0 2.340e-14) (K1 2.340e-14) (K2 2.340e-14)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.100e-01) (m 4.810e-01) (Smax 1.0))
    (gas krgModCorey (Srl 1.100e-01) (m 4.810e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.100e-01) (m 4.810e-01) (alpha 4.480e-06) (Smax 1.0)))
(krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
(m-bf2
  (cont-len-fac 1.190e+00) (cont-area-fac 4.300e-01)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.409e+03) (porosity 2.590e-01)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 6.330e+02)
  (tcond tcondLin (solid 7.397e-01) (liquid 1.359e+00) (gas 7.397e-01))
  (K0 2.510e-17) (K1 2.510e-17) (K2 2.510e-17)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.800e-01) (m 5.690e-01) (Smax 1.0))
      (gas krgModCorey (Srl 1.800e-01) (m 5.690e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.800e-01) (m 5.690e-01) (alpha 1.540e-07) (Smax 1.0)))
  (krMC (liquid krMCintrinsic) (gas krMCintrinsic))
) ;;End of the material
;;Fracture materials
(f-tcw11
  (cont-len-fac 1.522e-02) (cont-area-fac 1.000e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 7.114E+01) (porosity 2.800e-02)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 8.570E+02)
  (tcond tcondLin (solid 1.508E-02) (liquid 2.741E-02) (gas 1.508E-02))
  (K0 2.410e-12) (K1 2.410e-12) (K2 2.410e-12)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.000e-02) (m 6.270e-01) (Smax 1.0) (gamma 3.000e-01))
      (gas krgModCorey (Srl 1.000e-02) (m 6.270e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.000e-02) (m 6.270e-01) (alpha 3.150e-03) (Smax 1.0) (gamma
3.000e-01)))
  (krMC (liquid krMCActiveFrac (gamma 3.000e-01) (Sr 1.000e-02))
      (gas krMCActiveFrac (gamma 3.000e-01) (Sr 0.0)))
) ;;End of the material
(f-tcw12
  (cont-len-fac 5.236e-03) (cont-area-fac 1.000e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 5.040E+01) (porosity 2.000e-02)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 8.570E+02)
  (tcond tcondLin (solid 1.077E-02) (liquid 1.958E-02) (gas 1.077E-02))
  (K0 1.000e-10) (K1 1.000e-10) (K2 1.000e-10)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.000e-02) (m 6.130e-01) (Smax 1.0) (gamma 3.000e-01))
      (gas krgModCorey (Srl 1.000e-02) (m 6.130e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.000e-02) (m 6.130e-01) (alpha 2.130e-03) (Smax 1.0) (gamma
3.000e-01)))
  (krMC (liquid krMCActiveFrac (gamma 3.000e-01) (Sr 1.000e-02))
      (gas krMCActiveFrac (gamma 3.000e-01) (Sr 0.0)))
) ;;End of the material
(f-tcw13
  (cont-len-fac 2.688e-03) (cont-area-fac 1.000e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 3.761E+01) (porosity 1.500e-02)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 8.570E+02)
  (tcond tcondLin (solid 8.080E-03) (liquid 1.469E-02) (gas 8.080E-03))
  (K0 5.420e-12) (K1 5.420e-12) (K2 5.420e-12)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.000e-02) (m 6.070e-01) (Smax 1.0) (gamma 3.000e-01))
      (gas krgModCorey (Srl 1.000e-02) (m 6.070e-01) (Slmax 1.0)))

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    (pc (liquid pcVanGen (Sr 1.000e-02) (m 6.070e-01)(alpha 1.260e-03) (Smax 1.0) (gamma
3.000e-01)))
    (krMC (liquid krMCActiveFrac (gamma 3.000e-01) (Sr 1.000e-02))
      (gas krMCActiveFrac (gamma 3.000e-01) (Sr 0.0)))
  ) ;;End of the material
(f-ptn21
  (cont-len-fac 8.209e-03) (cont-area-fac 1.000e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.647E+01) (porosity 1.100e-02)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.037E+03)
  (tcond tcondLin (solid 5.507E-03) (liquid 1.175E-02) (gas 5.507E-03))
  (K0 1.860e-12) (K1 1.860e-12) (K2 1.860e-12)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.000e-02) (m 5.800e-01) (Smax 1.0) (gamma 9.000e-02))
    (gas krgModCorey (Srl 1.000e-02) (m 5.800e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.000e-02) (m 5.800e-01)(alpha 1.680e-03) (Smax 1.0) (gamma
9.000e-02)))
  (krMC (liquid krMCActiveFrac (gamma 9.000e-02) (Sr 1.000e-02))
    (gas krMCActiveFrac (gamma 9.000e-02) (Sr 0.0)))
  ) ;;End of the material
(f-ptn22
  (cont-len-fac 1.304e-02) (cont-area-fac 1.000e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.842E+01) (porosity 1.200e-02)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.077E+03)
  (tcond tcondLin (solid 4.183E-03) (liquid 6.008E-03) (gas 4.183E-03))
  (K0 2.000e-11) (K1 2.000e-11) (K2 2.000e-11)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.000e-02) (m 5.800e-01) (Smax 1.0) (gamma 9.000e-02))
    (gas krgModCorey (Srl 1.000e-02) (m 5.800e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.000e-02) (m 5.800e-01)(alpha 7.680e-04) (Smax 1.0) (gamma
9.000e-02)))
  (krMC (liquid krMCActiveFrac (gamma 9.000e-02) (Sr 1.000e-02))
    (gas krMCActiveFrac (gamma 9.000e-02) (Sr 0.0)))
  ) ;;End of the material
(f-ptn23
  (cont-len-fac 2.193e-03) (cont-area-fac 1.000e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 6.015E+00) (porosity 2.500e-03)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 8.490E+02)
  (tcond tcondLin (solid 1.101E-03) (liquid 2.424E-03) (gas 1.101E-03))
  (K0 2.600e-13) (K1 2.600e-13) (K2 2.600e-13)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.000e-02) (m 6.100e-01) (Smax 1.0) (gamma 9.000e-02))
    (gas krgModCorey (Srl 1.000e-02) (m 6.100e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.000e-02) (m 6.100e-01)(alpha 9.230e-04) (Smax 1.0) (gamma
9.000e-02)))
  (krMC (liquid krMCActiveFrac (gamma 9.000e-02) (Sr 1.000e-02))
    (gas krMCActiveFrac (gamma 9.000e-02) (Sr 0.0)))
  ) ;;End of the material
(f-ptn24
  (cont-len-fac 1.304e-02) (cont-area-fac 1.000e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.878E+01) (porosity 1.200e-02)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.016E+03)
  (tcond tcondLin (solid 5.513E-03) (liquid 1.224E-02) (gas 5.513E-03))
  (K0 4.670e-13) (K1 4.670e-13) (K2 4.670e-13)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.000e-02) (m 6.230e-01) (Smax 1.0) (gamma 9.000e-02))
    (gas krgModCorey (Srl 1.000e-02) (m 6.230e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.000e-02) (m 6.230e-01)(alpha 3.370e-03) (Smax 1.0) (gamma
9.000e-02)))
  (krMC (liquid krMCActiveFrac (gamma 9.000e-02) (Sr 1.000e-02))
    (gas krMCActiveFrac (gamma 9.000e-02) (Sr 0.0)))
  ) ;;End of the material
(f-ptn25

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(cont-len-fac 5.962e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 1.410E+01) (porosity 6.200e-03)
(Kd          (water 0.0) (air 0.0))
(KdFactor    (water 0.0) (air 0.0))
(Cp 1.330E+03)
(tcond tcondLin (solid 2.161E-03) (liquid 5.088E-03) (gas 2.161E-03))
(K0 7.030e-13) (K1 7.030e-13) (K2 7.030e-13)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 6.440e-01) (Smax 1.0) (gamma 9.000e-02))
    (gas krgModCorey (Srl 1.000e-02) (m 6.440e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.000e-02) (m 6.440e-01)(alpha 6.330e-04) (Smax 1.0) (gamma
9.000e-02)))
(krMC (liquid krMCActiveFrac (gamma 9.000e-02) (Sr 1.000e-02))
    (gas krMCActiveFrac (gamma 9.000e-02) (Sr 0.0)))
) ;;End of the material
(f-ptn26
(cont-len-fac 1.856e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 8.565E+00) (porosity 3.600e-03)
(Kd          (water 0.0) (air 0.0))
(KdFactor    (water 0.0) (air 0.0))
(Cp 1.224E+03)
(tcond tcondLin (solid 8.329E-04) (liquid 2.408E-03) (gas 8.329E-04))
(K0 4.440e-13) (K1 4.440e-13) (K2 4.440e-13)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 5.520e-01) (Smax 1.0) (gamma 9.000e-02))
    (gas krgModCorey (Srl 1.000e-02) (m 5.520e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.000e-02) (m 5.520e-01)(alpha 2.790e-04) (Smax 1.0) (gamma
9.000e-02)))
(krMC (liquid krMCActiveFrac (gamma 9.000e-02) (Sr 1.000e-02))
    (gas krMCActiveFrac (gamma 9.000e-02) (Sr 0.0)))
) ;;End of the material
(f-tsw31
(cont-len-fac 1.267e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 1.388E+01) (porosity 5.500e-03)
(Kd          (water 0.0) (air 0.0))
(KdFactor    (water 0.0) (air 0.0))
(Cp 8.340E+02)
(tcond tcondLin (solid 2.039E-03) (liquid 5.488E-03) (gas 2.039E-03))
(K0 3.210e-11) (K1 3.210e-11) (K2 3.210e-11)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 5.660e-01) (Smax 1.0) (gamma 6.000e-02))
    (gas krgModCorey (Srl 1.000e-02) (m 5.660e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.000e-02) (m 5.660e-01)(alpha 2.490e-04) (Smax 1.0) (gamma
6.000e-02)))
(krMC (liquid krMCActiveFrac (gamma 6.000e-02) (Sr 1.000e-02))
    (gas krMCActiveFrac (gamma 6.000e-02) (Sr 0.0)))
) ;;End of the material
(f-tsw32
(cont-len-fac 4.241e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 2.445E+01) (porosity 9.500e-03)
(Kd          (water 0.0) (air 0.0))
(KdFactor    (water 0.0) (air 0.0))
(Cp 8.660E+02)
(tcond tcondLin (solid 1.005E-02) (liquid 1.538E-02) (gas 1.005E-02))
(K0 1.260e-12) (K1 1.260e-12) (K2 1.260e-12)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 6.080e-01) (Smax 1.0) (gamma 4.100e-01))
    (gas krgModCorey (Srl 1.000e-02) (m 6.080e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.000e-02) (m 6.080e-01)(alpha 1.270e-03) (Smax 1.0) (gamma
4.100e-01)))
(krMC (liquid krMCActiveFrac (gamma 4.100e-01) (Sr 1.000e-02))
    (gas krMCActiveFrac (gamma 4.100e-01) (Sr 0.0)))
) ;;End of the material
(f-tsw33
(cont-len-fac 4.074e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 1.668E+01) (porosity 6.600e-03)
(Kd          (water 0.0) (air 0.0))
(KdFactor    (water 0.0) (air 0.0))
(Cp 8.829E+02)

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(tcond tcondLin (solid 4.810E-03) (liquid 1.173E-02) (gas 4.810E-03))
(K0 5.500e-13) (K1 5.500e-13) (K2 5.500e-13)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 6.080e-01) (Smax 1.0) (gamma 4.100e-01))
(gas krgModCorey (Srl 1.000e-02) (m 6.080e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.000e-02) (m 6.080e-01)(alpha 1.460e-03) (Smax 1.0) (gamma
4.100e-01)))
(krMC (liquid krMCActiveFrac (gamma 4.100e-01) (Sr 1.000e-02))
(gas krMCActiveFrac (gamma 4.100e-01) (Sr 0.0)))
) ;;End of the material
(f-tsw34
(cont-len-fac 1.157e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 2.555E+01) (porosity 1.000e-02)
(Kd (water 0.0) (air 0.0))
(KdFactor (water 0.0) (air 0.0))
(Cp 9.480E+02)
(tcond tcondLin (solid 1.559E-02) (liquid 2.329E-02) (gas 1.559E-02))
(K0 2.760e-13) (K1 2.760e-13) (K2 2.760e-13)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 6.080e-01) (Smax 1.0) (gamma 4.100e-01))
(gas krgModCorey (Srl 1.000e-02) (m 6.080e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.000e-02) (m 6.080e-01)(alpha 5.160e-04) (Smax 1.0) (gamma
4.100e-01)))
(krMC (liquid krMCActiveFrac (gamma 4.100e-01) (Sr 1.000e-02))
(gas krMCActiveFrac (gamma 4.100e-01) (Sr 0.0)))
) ;;End of the material
(f-tsw35
(cont-len-fac 1.741e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 2.825E+01) (porosity 1.100e-02)
(Kd (water 0.0) (air 0.0))
(KdFactor (water 0.0) (air 0.0))
(Cp 9.000E+02)
(tcond tcondLin (solid 1.318E-02) (liquid 2.220E-02) (gas 1.318E-02))
(K0 1.290e-12) (K1 1.290e-12) (K2 1.290e-12)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 6.110e-01) (Smax 1.0) (gamma 4.100e-01))
(gas krgModCorey (Srl 1.000e-02) (m 6.110e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.000e-02) (m 6.110e-01)(alpha 7.390e-04) (Smax 1.0) (gamma
4.100e-01)))
(krMC (liquid krMCActiveFrac (gamma 4.100e-01) (Sr 1.000e-02))
(gas krMCActiveFrac (gamma 4.100e-01) (Sr 0.0)))
) ;;End of the material
(f-tsw36
(cont-len-fac 1.866e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 3.898E+01) (porosity 1.500e-02)
(Kd (water 0.0) (air 0.0))
(KdFactor (water 0.0) (air 0.0))
(Cp 8.650E+02)
(tcond tcondLin (solid 2.129E-02) (liquid 2.756E-02) (gas 2.129E-02))
(K0 9.910e-13) (K1 9.910e-13) (K2 9.910e-13)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 6.100e-01) (Smax 1.0) (gamma 4.100e-01))
(gas krgModCorey (Srl 1.000e-02) (m 6.100e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.000e-02) (m 6.100e-01)(alpha 7.840e-04) (Smax 1.0) (gamma
4.100e-01)))
(krMC (liquid krMCActiveFrac (gamma 4.100e-01) (Sr 1.000e-02))
(gas krMCActiveFrac (gamma 4.100e-01) (Sr 0.0)))
) ;;End of the material
(f-tsw37
(cont-len-fac 1.866e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 3.898E+01) (porosity 1.500e-02)
(Kd (water 0.0) (air 0.0))
(KdFactor (water 0.0) (air 0.0))
(Cp 8.650E+02)
(tcond tcondLin (solid 2.129E-02) (liquid 2.756E-02) (gas 2.129E-02))
(K0 9.910e-13) (K1 9.910e-13) (K2 9.910e-13)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 6.100e-01) (Smax 1.0) (gamma 4.100e-01))
(gas krgModCorey (Srl 1.000e-02) (m 6.100e-01) (Slmax 1.0)))

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    (pc (liquid pcVanGen (Sr 1.000e-02) (m 6.100e-01)(alpha 7.840e-04) (Smax 1.0) (gamma
4.100e-01)))
    (krMC (liquid krMCActiveFrac (gamma 4.100e-01) (Sr 1.000e-02))
      (gas krMCActiveFrac (gamma 4.100e-01) (Sr 0.0)))
  ) ;;End of the material
(f-tsw38
  (cont-len-fac 1.376e-03) (cont-area-fac 1.000e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.866E+01) (porosity 1.200e-02)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 9.840E+02)
  (tcond tcondLin (solid 2.026E-02) (liquid 2.494E-02) (gas 2.026E-02))
  (K0 5.920e-13) (K1 5.920e-13) (K2 5.920e-13)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.000e-02) (m 6.120e-01) (Smax 1.0) (gamma 4.100e-01))
    (gas krgModCorey (Srl 1.000e-02) (m 6.120e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.000e-02) (m 6.120e-01)(alpha 4.870e-04) (Smax 1.0) (gamma
4.100e-01)))
  (krMC (liquid krMCActiveFrac (gamma 4.100e-01) (Sr 1.000e-02))
    (gas krMCActiveFrac (gamma 4.100e-01) (Sr 0.0)))
  ) ;;End of the material
(f-tsw39
  (cont-len-fac 2.396e-03) (cont-area-fac 1.000e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 1.091E+01) (porosity 4.600e-03)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 9.840E+02)
  (tcond tcondLin (solid 7.773E-03) (liquid 9.566E-03) (gas 7.773E-03))
  (K0 4.570e-13) (K1 4.570e-13) (K2 4.570e-13)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.000e-02) (m 6.340e-01) (Smax 1.0) (gamma 4.100e-01))
    (gas krgModCorey (Srl 1.000e-02) (m 6.340e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.000e-02) (m 6.340e-01)(alpha 9.630e-04) (Smax 1.0) (gamma
4.100e-01)))
  (krMC (liquid krMCActiveFrac (gamma 4.100e-01) (Sr 1.000e-02))
    (gas krMCActiveFrac (gamma 4.100e-01) (Sr 0.0)))
  ) ;;End of the material
(f-chlv
  (cont-len-fac 3.450e-03) (cont-area-fac 1.000e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 1.595E+00) (porosity 6.900e-04)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.057E+03)
  (tcond tcondLin (solid 4.833E-04) (liquid 9.032E-04) (gas 4.833E-04))
  (K0 1.840e-12) (K1 1.840e-12) (K2 1.840e-12)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.000e-02) (m 6.240e-01) (Smax 1.0) (gamma 1.300e-01))
    (gas krgModCorey (Srl 1.000e-02) (m 6.240e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.000e-02) (m 6.240e-01)(alpha 1.090e-03) (Smax 1.0) (gamma
1.300e-01)))
  (krMC (liquid krMCActiveFrac (gamma 1.300e-01) (Sr 1.000e-02))
    (gas krMCActiveFrac (gamma 1.300e-01) (Sr 0.0)))
  ) ;;End of the material
(f-ch2v
  (cont-len-fac 3.179e-03) (cont-area-fac 1.000e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 1.996E+00) (porosity 8.900e-04)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 1.201E+03)
  (tcond tcondLin (solid 5.162E-04) (liquid 1.041E-03) (gas 5.162e-04))
  (K0 2.890e-13) (K1 2.890e-13) (K2 2.890e-13)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.000e-02) (m 6.280e-01) (Smax 1.0) (gamma 1.300e-01))
    (gas krgModCorey (Srl 1.000e-02) (m 6.280e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.000e-02) (m 6.280e-01)(alpha 5.180e-04) (Smax 1.0) (gamma
1.300e-01)))
  (krMC (liquid krMCActiveFrac (gamma 1.300e-01) (Sr 1.000e-02))
    (gas krMCActiveFrac (gamma 1.300e-01) (Sr 0.0)))
  ) ;;End of the material
(f-ch3v

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(cont-len-fac 3.179e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 1.996E+00) (porosity 8.900e-04)
(Kd          (water 0.0) (air 0.0))
(KdFactor    (water 0.0) (air 0.0))
(Cp 1.201E+03)
(tcond tcondLin (solid 5.162e-04) (liquid 1.041e-03) (gas 5.162e-04))
(K0 2.890e-13) (K1 2.890e-13) (K2 2.890e-13)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 6.280e-01) (Smax 1.0) (gamma 1.300e-01))
    (gas krgModCorey (Srl 1.000e-02) (m 6.280e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.000e-02) (m 6.280e-01)(alpha 5.180e-04) (Smax 1.0) (gamma
1.300e-01)))
(krMC (liquid krMCActiveFrac (gamma 1.300e-01) (Sr 1.000e-02))
    (gas      krMCActiveFrac (gamma 1.300e-01) (Sr 0.0)))
) ;;End of the material
(f-ch4v
(cont-len-fac 3.179e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 1.996E+00) (porosity 8.900e-04)
(Kd          (water 0.0) (air 0.0))
(KdFactor    (water 0.0) (air 0.0))
(Cp 1.201E+03)
(tcond tcondLin (solid 5.162e-04) (liquid 1.041e-03) (gas 5.162e-04))
(K0 2.890e-13) (K1 2.890e-13) (K2 2.890e-13)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 6.280e-01) (Smax 1.0) (gamma 1.300e-01))
    (gas krgModCorey (Srl 1.000e-02) (m 6.280e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.000e-02) (m 6.280e-01)(alpha 5.180e-04) (Smax 1.0) (gamma
1.300e-01)))
(krMC (liquid krMCActiveFrac (gamma 1.300e-01) (Sr 1.000e-02))
    (gas      krMCActiveFrac (gamma 1.300e-01) (Sr 0.0)))
) ;;End of the material
(f-ch5v
(cont-len-fac 3.179e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 1.996E+00) (porosity 8.900e-04)
(Kd          (water 0.0) (air 0.0))
(KdFactor    (water 0.0) (air 0.0))
(Cp 1.201E+03)
(tcond tcondLin (solid 5.162e-04) (liquid 1.041e-03) (gas 5.162e-04))
(K0 2.890e-13) (K1 2.890e-13) (K2 2.890e-13)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 6.280e-01) (Smax 1.0) (gamma 1.300e-01))
    (gas krgModCorey (Srl 1.000e-02) (m 6.280e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.000e-02) (m 6.280e-01)(alpha 5.180e-04) (Smax 1.0) (gamma
1.300e-01)))
(krMC (liquid krMCActiveFrac (gamma 1.300e-01) (Sr 1.000e-02))
    (gas      krMCActiveFrac (gamma 1.300e-01) (Sr 0.0)))
) ;;End of the material
(f-ch1z
(cont-len-fac 2.125e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 3.808E-01) (porosity 1.700e-04)
(Kd          (water 0.0) (air 0.0))
(KdFactor    (water 0.0) (air 0.0))
(Cp 1.201E+03)
(tcond tcondLin (solid 9.856E-05) (liquid 1.987E-04) (gas 9.856E-05))
(K0 3.400e-13) (K1 3.400e-13) (K2 3.400e-13)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 6.310e-01) (Smax 1.0) (gamma 1.000e-01))
    (gas krgModCorey (Srl 1.000e-02) (m 6.310e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.000e-02) (m 6.310e-01)(alpha 1.430e-03) (Smax 1.0) (gamma
1.000e-01)))
(krMC (liquid krMCActiveFrac (gamma 1.000e-01) (Sr 1.000e-02))
    (gas      krMCActiveFrac (gamma 1.000e-01) (Sr 0.0)))
) ;;End of the material
(f-ch2z
(cont-len-fac 1.536e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 9.631E-01) (porosity 4.300e-04)
(Kd          (water 0.0) (air 0.0))
(KdFactor    (water 0.0) (air 0.0))
(Cp 1.201E+03)

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(tcond tcondLin (solid 2.492E-04) (liquid 5.025E-04) (gas 2.492E-04))
(K0 3.120e-14) (K1 3.120e-14) (K2 3.120e-14)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 5.980e-01) (Smax 1.0) (gamma 1.000e-01))
(gas krgModCorey (Srl 1.000e-02) (m 5.980e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.000e-02) (m 5.980e-01)(alpha 4.880e-04) (Smax 1.0) (gamma
1.000e-01)))
(krMC (liquid krMCActiveFrac (gamma 1.000e-01) (Sr 1.000e-02))
(gas krMCActiveFrac (gamma 1.000e-01) (Sr 0.0)))
) ;;End of the material
(f-ch3z
(cont-len-fac 1.536e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 9.631E-01) (porosity 4.300e-04)
(Kd (water 0.0) (air 0.0))
(KdFactor (water 0.0) (air 0.0))
(Cp 1.201E+03)
(tcond tcondLin (solid 2.492E-04) (liquid 5.025E-04) (gas 2.492E-04))
(K0 3.120e-14) (K1 3.120e-14) (K2 3.120e-14)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 5.980e-01) (Smax 1.0) (gamma 1.000e-01))
(gas krgModCorey (Srl 1.000e-02) (m 5.980e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.000e-02) (m 5.980e-01)(alpha 4.880e-04) (Smax 1.0) (gamma
1.000e-01)))
(krMC (liquid krMCActiveFrac (gamma 1.000e-01) (Sr 1.000e-02))
(gas krMCActiveFrac (gamma 1.000e-01) (Sr 0.0)))
) ;;End of the material
(f-ch4z
(cont-len-fac 1.536e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 9.631E-01) (porosity 4.300e-04)
(Kd (water 0.0) (air 0.0))
(KdFactor (water 0.0) (air 0.0))
(Cp 1.201E+03)
(tcond tcondLin (solid 2.492E-04) (liquid 5.025E-04) (gas 2.492E-04))
(K0 3.120e-14) (K1 3.120e-14) (K2 3.120e-14)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 5.980e-01) (Smax 1.0) (gamma 1.000e-01))
(gas krgModCorey (Srl 1.000e-02) (m 5.980e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.000e-02) (m 5.980e-01)(alpha 4.880e-04) (Smax 1.0) (gamma
1.000e-01)))
(krMC (liquid krMCActiveFrac (gamma 1.000e-01) (Sr 1.000e-02))
(gas krMCActiveFrac (gamma 1.000e-01) (Sr 0.0)))
) ;;End of the material
(f-ch5z
(cont-len-fac 1.536e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 9.631E-01) (porosity 4.300e-04)
(Kd (water 0.0) (air 0.0))
(KdFactor (water 0.0) (air 0.0))
(Cp 1.201E+03)
(tcond tcondLin (solid 2.492E-04) (liquid 5.025E-04) (gas 2.492E-04))
(K0 3.120e-14) (K1 3.120e-14) (K2 3.120e-14)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 5.980e-01) (Smax 1.0) (gamma 1.000e-01))
(gas krgModCorey (Srl 1.000e-02) (m 5.980e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.000e-02) (m 5.980e-01)(alpha 4.880e-04) (Smax 1.0) (gamma
1.000e-01)))
(krMC (liquid krMCActiveFrac (gamma 1.000e-01) (Sr 1.000e-02))
(gas krMCActiveFrac (gamma 1.000e-01) (Sr 0.0)))
) ;;End of the material
(f-ch6
(cont-len-fac 2.125e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 3.808E-01) (porosity 1.700e-04)
(Kd (water 0.0) (air 0.0))
(KdFactor (water 0.0) (air 0.0))
(Cp 1.201E+03)
(tcond tcondLin (solid 9.856E-05) (liquid 1.987E-04) (gas 9.856E-05))
(K0 1.670e-14) (K1 1.670e-14) (K2 1.670e-14)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 6.040e-01) (Smax 1.0) (gamma 1.000e-01))
(gas krgModCorey (Srl 1.000e-02) (m 6.040e-01) (Slmax 1.0)))

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    (pc (liquid pcVanGen (Sr 1.000e-02) (m 6.040e-01)(alpha 7.490e-04) (Smax 1.0) (gamma
1.000e-01)))
    (krMC (liquid krMCActiveFrac (gamma 1.000e-01) (Sr 1.000e-02))
      (gas krMCActiveFrac (gamma 1.000e-01) (Sr 0.0)))
  ) ;;End of the material
(f-pp4
  (cont-len-fac 1.536e-03) (cont-area-fac 1.000e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 1.036e+00) (porosity 4.300e-04)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 5.770e+02)
  (tcond tcondLin (solid 2.666e-04) (liquid 5.203e-04) (gas 2.666e-04))
  (K0 3.840e-14) (K1 3.840e-14) (K2 3.840e-14)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.000e-02) (m 6.270e-01) (Smax 1.0) (gamma 1.000e-01))
    (gas krgModCorey (Srl 1.000e-02) (m 6.270e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.000e-02) (m 6.270e-01)(alpha 5.720e-04) (Smax 1.0) (gamma
1.000e-01)))
  (krMC (liquid krMCActiveFrac (gamma 1.000e-01) (Sr 1.000e-02))
    (gas krMCActiveFrac (gamma 1.000e-01) (Sr 0.0)))
  ) ;;End of the material
(f-pp3
  (cont-len-fac 2.750e-03) (cont-area-fac 1.000e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.838e+00) (porosity 1.100e-03)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 8.410e+02)
  (tcond tcondLin (solid 7.260e-04) (liquid 1.386e-03) (gas 7.260e-04))
  (K0 7.600e-12) (K1 7.600e-12) (K2 7.600e-12)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.000e-02) (m 6.550e-01) (Smax 1.0) (gamma 4.600e-01))
    (gas krgModCorey (Srl 1.000e-02) (m 6.550e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.000e-02) (m 6.550e-01)(alpha 8.730e-04) (Smax 1.0) (gamma
4.600e-01)))
  (krMC (liquid krMCActiveFrac (gamma 4.600e-01) (Sr 1.000e-02))
    (gas krMCActiveFrac (gamma 4.600e-01) (Sr 0.0)))
  ) ;;End of the material
(f-pp2
  (cont-len-fac 2.750e-03) (cont-area-fac 1.000e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 2.838e+00) (porosity 1.100e-03)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 8.410e+02)
  (tcond tcondLin (solid 7.260e-04) (liquid 1.386e-03) (gas 7.260e-04))
  (K0 1.380e-13) (K1 1.380e-13) (K2 1.380e-13)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.000e-02) (m 6.060e-01) (Smax 1.0) (gamma 4.600e-01))
    (gas krgModCorey (Srl 1.000e-02) (m 6.060e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.000e-02) (m 6.060e-01)(alpha 1.210e-03) (Smax 1.0) (gamma
4.600e-01)))
  (krMC (liquid krMCActiveFrac (gamma 4.600e-01) (Sr 1.000e-02))
    (gas krMCActiveFrac (gamma 4.600e-01) (Sr 0.0)))
  ) ;;End of the material
(f-pp1
  (cont-len-fac 1.536e-03) (cont-area-fac 1.000e+00)
  (exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
  (solid-density 1.062e+00) (porosity 4.300e-04)
  (Kd (water 0.0) (air 0.0))
  (KdFactor (water 0.0) (air 0.0))
  (Cp 6.350e+02)
  (tcond tcondLin (solid 3.096e-04) (liquid 5.719e-04) (gas 3.096e-04))
  (K0 1.120e-13) (K1 1.120e-13) (K2 1.120e-13)
  (tort (gas 7.000e-01) (liquid 0.000e+00))
  (kr (liquid krlVanGen (Sr 1.000e-02) (m 6.220e-01) (Smax 1.0) (gamma 1.000e-01))
    (gas krgModCorey (Srl 1.000e-02) (m 6.220e-01) (Slmax 1.0)))
  (pc (liquid pcVanGen (Sr 1.000e-02) (m 6.220e-01)(alpha 5.330e-04) (Smax 1.0) (gamma
1.000e-01)))
  (krMC (liquid krMCActiveFrac (gamma 1.000e-01) (Sr 1.000e-02))
    (gas krMCActiveFrac (gamma 1.000e-01) (Sr 0.0)))
  ) ;;End of the material
(f-bf3

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(cont-len-fac 2.750e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 2.827e+00) (porosity 1.100e-03)
(Kd (water 0.0) (air 0.0))
(KdFactor (water 0.0) (air 0.0))
(Cp 7.630e+02)
(tcond tcondLin (solid 1.551e-03) (liquid 2.013e-03) (gas 1.551e-03))
(K0 4.080e-13) (K1 4.080e-13) (K2 4.080e-13)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 6.240e-01) (Smax 1.0) (gamma 4.600e-01))
    (gas krgModCorey (Srl 1.000e-02) (m 6.240e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.000e-02) (m 6.240e-01) (alpha 9.950e-04) (Smax 1.0) (gamma
4.600e-01)))
(krMC (liquid krMCActiveFrac (gamma 4.600e-01) (Sr 1.000e-02))
    (gas krMCActiveFrac (gamma 4.600e-01) (Sr 0.0)))
) ;;End of the material
(f-bf2
(cont-len-fac 1.536e-03) (cont-area-fac 1.000e+00)
(exfac-adv (liquid 1.000e+00) (gas 1.000e+00))
(solid-density 1.036e+00) (porosity 4.300e-04)
(Kd (water 0.0) (air 0.0))
(KdFactor (water 0.0) (air 0.0))
(Cp 6.330e+02)
(tcond tcondLin (solid 3.182e-04) (liquid 5.848e-04) (gas 3.182e-04))
(K0 1.300e-14) (K1 1.300e-14) (K2 1.300e-14)
(tort (gas 7.000e-01) (liquid 0.000e+00))
(kr (liquid krlVanGen (Sr 1.000e-02) (m 6.080e-01) (Smax 1.0) (gamma 1.000e-01))
    (gas krgModCorey (Srl 1.000e-02) (m 6.080e-01) (Slmax 1.0)))
(pc (liquid pcVanGen (Sr 1.000e-02) (m 6.080e-01) (alpha 5.420e-04) (Smax 1.0) (gamma
1.000e-01)))
(krMC (liquid krMCActiveFrac (gamma 1.000e-01) (Sr 1.000e-02))
    (gas krMCActiveFrac (gamma 1.000e-01) (Sr 0.0)))
) ;;End of the material

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