

Kozeny-Carman Eqn

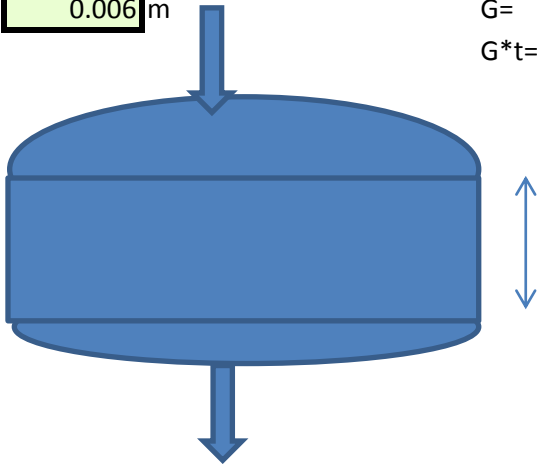
$$H/L = \left[5 \left(\frac{\mu}{\rho} \right) / g * (1-\epsilon)^2 / \epsilon^3 * (6/dp)^2 \right] v$$

H

T=	20 C	
L=	1 m	
μ	1.00E-03 kg/(m.s)	Pa.s
ρ	998.21286 kg/m ³	
ϵ	0.4	
dp=	10 mm	
	0.01 m	
v=	20 m/h	=Q/A
	0.00556 m/s	
tR=	180.0 s	

η =	Kin Visc	1.004E-06 m ² /s
μ =	Dynam. Visc:	0.00100221 kg/(m.s) Pa.s
ρ =	Density	998.212864 kg/m ³

= 0.006 m/m
= 0.006 m



G=
G=
G*t=

$$13.4 * (1 - \epsilon) / \epsilon^2 * v / dp$$

27.91667 1/s
5.03E+03

v-insterst
tf=

D= 3 m
L= 1 m
A= 7.07 m²

Graham's Eqn (1988)

$$G = 10.1 * (1 - \varepsilon) / \varepsilon * v / dp$$

$$G = 21.04167 \text{ 1/s}$$

$$v / \varepsilon = 0.013889 \text{ m/s}$$

$$L \varepsilon / v = 72 \text{ sec}$$

$$G * tf = 1515$$