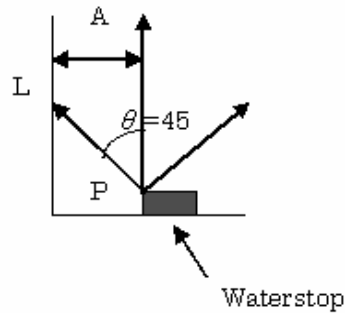


Calculation of minimum concrete coverage for ADEKA ULTRASEAL MC-2010MN

We need 4 inch coverage as a minimum coverage for MC-2010MN.(strength of concrete = 300kgf/cm²)

Our newest calculation for minimum coverage for MC-2010MN is as follows.



$$P = p * B \quad (1)$$

$$P' = P * \cos\theta \quad (2)$$

$$L = P'/\tau_a \quad (3)$$

$$A = L * \sin\theta \quad (4)$$

P	repulsive force (kgf/cm)
p	swelling pressure of waterstop (kgf/cm ²)
B	width of waterstop (cm)
P'	swelling pressure of waterstop for 45 direction (kgf/cm)
L	Length of 45 direction (cm)
τ_a	allowable shear stress of concrete (kg/cm ²)
A	Minimum coverage (cm)

In this case, $p = 60$ (kgf/cm²) for ADEKA ULTRASEAL MC from our data.

strength of concrete	(psi)	2600	3000	3400	3800	4300
	(kgf/cm ²)	180	210	240	270	300
τ_a		5.3	5.6	5.9	6.1	6.4
p		60	60	60	60	60
B		2	2	2	2	2
P		120	120	120	120	120
P'		84.9	84.9	84.9	84.9	84.9
L		16.0	15.2	14.4	13.9	13.3
A	(cm)	11.3	10.7	10.2	9.8	9.4
	(inch)	4.5	4.2	4.0	3.9	3.7
minimum coverage	(cm)	12	11	11	10	10
	(inch)	5	5	5	4	4