

**compressive strength**

THERMAL RESISTANCE COEFFICIENT OF MULTI LAYER STRUCTURE ELEMENTS

$$1/U = R_{iç} + R_1 + R_2 + R_3 + R_4... + R_n + R_{dış}$$

MULTI LAYER STRUCTURE COMPONENT «U» THERMAL PERFORMANCE COEFFICIENT ACCOUNT

	Inner surface thermal resistance	interior plaster	concrete bricks	İnsulation plaster	outer surface thermal resistance
	$1/\alpha_{iç}$	$d_1/\lambda_1$	$d_2/\lambda_2$	$d_3/\lambda_3$	$1/\alpha_{dış}$

$$1/U = 1/\alpha_{iç} + d_1/\lambda_1 + d_2/\lambda_2 + d_3/\lambda_3 + d_4/\lambda_4 + 1/\alpha_{dış} \text{ W/m}^2\text{K}$$

$$1/U = 0,13 + d_1/\lambda_1 + d_2/\lambda_2 + d_3/\lambda_3 + d_4/\lambda_4 + 0,04 \text{ W/m}^2\text{K}$$

SAMPLE:

Inner surface thermal resistance:**0,13**interior plaster *Thermal Conductivity*  $\lambda_1$ :**1,6W/mK** 2cmconcrete bricks *Thermal Conductivity*  $\lambda_1$ :**0,18W/mK** 25cmİnsulation plaster *Thermal Conductivity*  $\lambda_1$ :**0,064W/mK** 2cmouter surface thermal resistance:**0,04**

$$1/U = 0,13 + (0,02\text{m}/(1,4\text{W/mK})) + (0,25\text{m}/(0,18\text{W/mK})) + (0,02\text{m}/(0,064\text{W/mK})) + 0,04 =$$

$$1/U = 0,13 + 0,014 + 1,38 + 0,31 = 1,834 \text{ m}^2\text{K/W}$$

$$\mathbf{1/U = 1,834 \text{ m}^2\text{K/W} \approx \mathbf{U = 0,5434 \text{ W/m}^2\text{K}}$$

**ONLY for EKOPAST50 Heat Insulation Plaster****(plaster used 3cm thickness)**

$$\mathbf{R: d / \lambda = (0,03 \text{ m}) / (0,064 \text{ W/mK})}$$

$$\mathbf{R = 0,4687 \text{ m}^2\text{K/W}}$$

**R:** Isıl geçirgenlik direnci ( $\text{m}^2\text{K/W}$ )**d :**Yapı bileşeninin kalınlığı (m), **$\lambda$  :** Isıl iletkenlik hesap değeri ( $\text{W/m.K}$ )**U:**Yapı bileşeninin ısı geçirgenlik katsayısı ( $\text{W/m}^2\text{K}$ )

**compressive strength**

**resistance**

**EKOPLAST 50**

**compressive strength:**2,70 N/mm<sup>2</sup>

1 N/mm<sup>2</sup> = 1000 kPa =145,038 psi

2,70 N/mm<sup>2</sup>= 2700 kPa =391,6026 psi