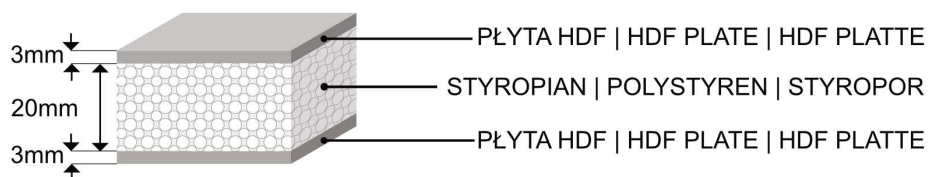


## DECLARATION

**Thermal transmittance for the center of the trap door in all loft ladders  
with the trap door thickness of 26mm.**



Thermal transmittance factor of the polystyrene – foamy polystyrene

$$\lambda_{\text{polystyrene}} = 0,031 \text{ W/(mK)}$$

Thermal transmittance factor of the hard fibreboard

$$\lambda_{\text{hdf}} = 0,18 \text{ W/(m}\cdot\text{K)}$$

### Thermal resistance for the partition

- for the polystyrene

$$R_{\text{polystyrene}} = \frac{d_{\text{polystyrene}}}{\lambda_{\text{polystyrene}}} = \frac{0,02}{0,031} = 0,645 \frac{\text{m}^2 \cdot \text{K}}{\text{W}}$$

- for the fibreboard

$$R_{\text{hdf}} = \frac{d_{\text{hdf}}}{\lambda_{\text{hdf}}} = \frac{0,003}{0,18} = 0,017 \frac{\text{m}^2 \cdot \text{K}}{\text{W}}$$

Thermal resistance-absorption:

$$R_{\text{si}} = 0,10 \frac{\text{m}^2 \cdot \text{K}}{\text{W}}$$

$$R_{\text{se}} = 0,04 \frac{\text{m}^2 \cdot \text{K}}{\text{W}}$$

### Thermal transmittance factor $k_0$ for the partition wall without thermal bridges

$$U = \frac{1}{R_{\text{si}} + R_{\text{hdf}} + R_{\text{polystyrene}} + R_{\text{hdf}} + R_{\text{se}}} = \frac{1}{0,8185} = 1,22 \frac{\text{W}}{\text{m}^2 \cdot \text{K}}$$