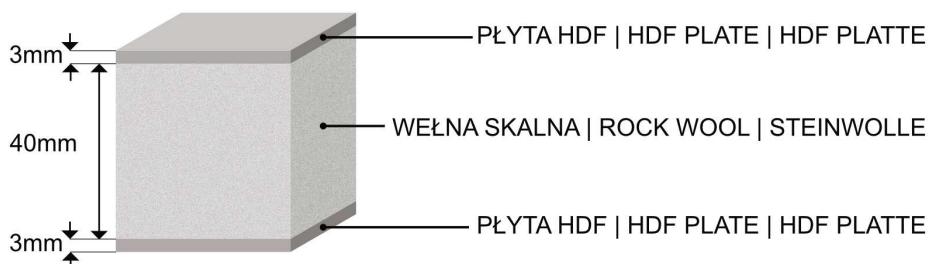


DECLARATION

Thermal transmittance for the center of the trap door in all fire resistant loft ladders with the trap door thickness of 46mm.



Thermal transmittance factor of the hard fibreboard

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

Thermal transmittance factor of the mineral wool

$$\lambda_{wełny \text{ min.}}=0,035 \text{ W/(m}\cdot\text{K)}$$

Thermal resistance for the partition

- for the fibreboard

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

- for the mineral wool

$$R_{\text{mineral wool}} = \frac{d_{\text{mineral wool}}}{\lambda_{\text{mineral wool}}} = \frac{0,04}{0,035} = 1,143 \frac{\text{m}^2 \cdot \text{K}}{\text{W}}$$

Thermal resistance-absorption:

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

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

Thermal transmittance factor k_0 for the partition wall without thermal bridges

$$U = \frac{1}{R_{si} + R_{hdf} + R_{\text{mineral wool}} + R_{hdf} + R_{se}} = \frac{1}{1,31} = 0,76 \frac{\text{W}}{\text{m}^2 \cdot \text{K}}$$