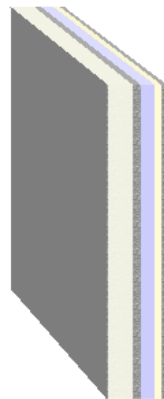


Source: **own catalogue - Own**  
Component: **Typical Shepherd Spacemaker House**

OUTSIDE

INSIDE



Assignment: External wall

|                                     | Manufacturer             | Name                                | Thickness<br>[m], number | Lambda<br>[W/(mK)] | Q        | R<br>[m²K/W] |
|-------------------------------------|--------------------------|-------------------------------------|--------------------------|--------------------|----------|--------------|
|                                     |                          | Rse                                 |                          |                    |          | 0.04         |
| <input checked="" type="checkbox"/> | 1 WBS                    | WBS Silicone Render                 | 0.008                    | 0.556              | <b>E</b> | 0.01         |
| <input checked="" type="checkbox"/> | 2 WBS                    | WBS EPS                             | 0.090                    | 0.038              | <b>E</b> | 2.37         |
|                                     |                          | Fixings                             | 8/m²                     | 0.500              | <b>D</b> | -            |
|                                     |                          | Air gaps                            |                          |                    |          | -            |
|                                     |                          | Level 1: dU" = 0.01 W/(m²K)         |                          |                    |          |              |
| <input checked="" type="checkbox"/> | 3 Own catalogue          | Concrete, Medium density 1800       | 0.032                    | 1.150              | <b>E</b> | 0.03         |
| <input checked="" type="checkbox"/> | 4 Own catalogue          | Normal cavity - 50 mm, unventilated | 0.050                    | 0.278              | <b>E</b> | 0.18         |
| <input checked="" type="checkbox"/> | 5 Glass Fibre Insulation | Glass Fibre insulation              | 0.025                    | 0.044              | <b>E</b> | 0.57         |
| <input checked="" type="checkbox"/> | 6 Own catalogue          | Gypsum Plasterboard                 | 0.013                    | 0.250              | <b>E</b> | 0.05         |
|                                     |                          | Rsi                                 |                          |                    |          | 0.13         |
|                                     |                          |                                     |                          |                    |          | <b>0.218</b> |

$$R_T = R_{si} + \sum R_i + R_{se} = 3.38 \text{ m}^2\text{K/W}$$

| Correction to U-value for  | according to           | delta U<br>[W/(m²K)] |
|--|------------------------|----------------------|
| Mechanical fasteners   | BS EN ISO 6946 Annex D | 0.000                |
| Air gaps   | BS EN ISO 6946 Annex D | 0.005                |
| <i>Air gaps and fixings corrections need not be applied, as their total effect is less than 3% (Annex D BS 6946:1996).</i> |                        |                      |
|  |                        | 0.000                |

$$U = 1/R_T + \sum \Delta U = 0.30 \text{ W/(m}^2\text{K)}$$

- Q .. The physical values of the building materials has been graded by their level of quality. These 5 levels are the following
- A** .. A: Data is entered and validated by the manufacturer or supplier. Data is continuously tested by 3rd party.
  - B** .. B: Data is entered and validated by the manufacturer or supplier. Data is certified by 3rd party
  - C** .. C: Data is entered and validated by the manufacturer or supplier.
  - D** .. D: Information is entered by BuildDesk without special agreement with the manufacturer, supplier or others.
  - E** .. E: Information is entered by the user of the BuildDesk software without special agreement with the manufacturer, supplier or others.

$$U_{\max} = \boxed{0.35 \text{ W/(m}^2\text{K)}}$$

$$U = \boxed{0.30 \text{ W/(m}^2\text{K)}} \quad R_T = \boxed{3.38 \text{ m}^2\text{K/W}}$$

Source of U<sub>max</sub> value: England, Wales: Approved Document L1A (2006), Table 2 - New Build Dwellings