

DESIGN EXAMPLE F4

An external cavity wall has an inner loadbearing leaf. The applied design vertical load to that inner leaf is 21 kN/m. The wall consists of 102,5 mm Group 1 clay brick masonry units in the outer leaf, and 100 mm Group 1 autoclaved aerated concrete block masonry units to the inner loadbearing leaf. Masonry units are laid in a General Purpose mortar. The clay brick outer leaf masonry unit gross dry density is 1450 kg/m³ and the concrete block inner leaf masonry unit gross dry density is 600 kg/m³. Eurocode 6 Part 1.1 loading calculations show that the design vertical load resistance for the inner loadbearing blockwork leaf of the cavity wall construction is 42 kN/m. Determine the fire resistance period of the cavity wall construction.