



## **Wood - Reliability and Safety, Even in Case of Fire**

### **RUBNER HAUS Receives Internationally Recognised Fire Prevention Certifications**

Rubner recently performed a series of tests on its *Blockhaus* and *Residenz* systems in order to challenge the prejudice that wooden structures are more susceptible to fire; the results were impressive. Under stringent testing conditions, the materials that Rubner uses to build its timber homes were proven to be stable and resilient in the event of a fire, and to possess exceptional static conditions. The fire studies were carried out by the CSI, an independent testing centre that follows European standards and is the only institution authorised in Italy to perform these types of inspections and to issue the relevant, internationally recognised certifications. Rubner's *Residenz* and *Blockhaus* systems passed the standardised tests without difficulty whatsoever – and with above average results.



The tests that were carried out confirmed that wood loses its mechanical stability very slowly at high temperatures, thanks to its low thermal conductivity. The material is characteristically prone to surface charring, which means that solid wood and wooden frame construction are especially resistant to fire. If a wall panel made of wood is exposed directly to flames, it forms a carbon layer on its surface. This protects the underlying fibres and thus actually slows down the combustion process.

Thus using wood as a building material gives an especially high margin of safety, even in the case of a fire. It is actually far superior to other building materials – even to more resistant materials such as steel, which loses its stability faster due to its higher heat conductivity.



A series of tests were carried out on the wall elements used for construction of Rubner timber homes; various criteria were measured, including the mechanical resistance of the structure to high temperatures, the rate of flammability, and thermal insulation values. In these tests, the *Residenz* system reached the compliance level of **REI 103** certification in the standard version, the *Blockhaus* system reached an even higher level of fire classification: **REI 146**.

These excellent results not only go far beyond the minimum values required, but also confirm once more the fine reputation of Rubner timber homes, which consistently meet the highest standards of quality.