Casco Adhesives AB
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Information

AkzoNobel
Tomorrow's Answers Today

Temperature properties of melamine and melamine-urea adhesives in load-bearing timber structures exposed to cold and hot climate.

Load-bearing timber structures bonded with melamine and melamine-urea adhesives will, during their time of use, be exposed to large variations regarding temperature and other climatic conditions depending on how the structures are used.

The temperature will from our experience normally have little impact on the quality of the glue joint. Thermosetting adhesives are normally not sensitive to temperatures within the range that can be expected due to the surrounding environment.

In EN 386 (Glued laminated timber-Performance requirements and minimum production requirements) three service classes are described of which melamine bonded laminated timber are placed in the highest class (service class 3).

In EN 14080 (Timber structures-Glued laminated timber-Requirements), a standard which gives the requirements for having laminated timber CE-marked, no limitations regarding the exposure of the bonded constructions to high or low temperatures are mentioned.

Exact temperature limits for use of a laminated construction cannot be given since not only the adhesive but also the humidity (climate) and the design of the timber construction will play a role in the behaviour of the construction over time. It is however well known that laminated structures bonded with melamine adhesives have been successfully erected in cold areas like Siberia and in hot areas like southern Europe and USA.

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