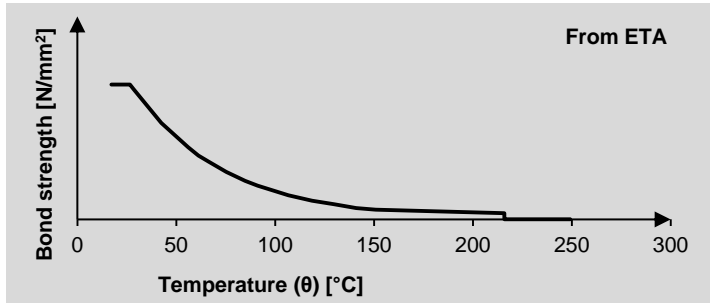


New approval for HIT-RE 500 V3 subjected to fire, the slow cure pioneer product

The fire performance of HIT RE 500 V3, the only slow cure product approved for fire

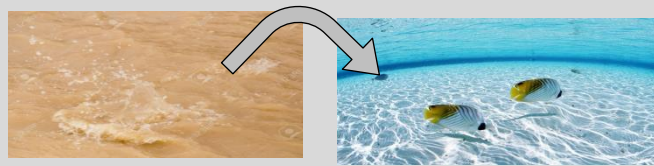


A new EAD

The European Assessment Document (EAD) is a harmonised technical specification and it contains methods and criteria for assessing the performance of the product. The ETA of the product includes the performance of the product subjected to high temperature based on the new EAD

Differences with the past

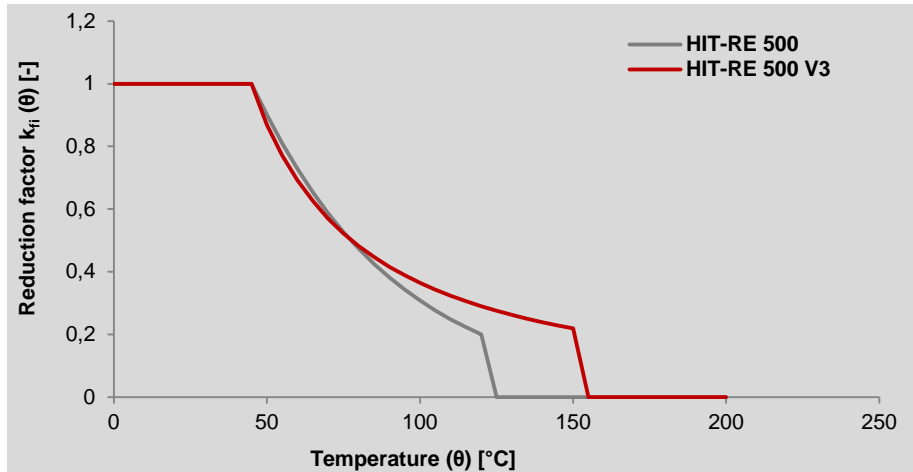
In the past DIBt, CSTB, efectis, CTICM issued fire reports based on their internal guidelines and safety concept. The same product could have a different performance if assessed based on CSTB or DIBt. HY 200 is an example. With the new EAD we moves from black/unclear qualification criteria, to clear and transparent qualification criteria.



Important benefits for specifiers

EAD's features	Benefits for the specifiers	Value proposition
Products are tested according to a specific established procedure.	No confusion on the market. Clear and transparent data. In case of HY 200 A/R CSTB and DIBt fire reports have different data. Which is more correct?	...transparency and innovation data
ETA includes the bond strength as function of the temperature.	Every applications can be designed on fire, including beams and columns. The old CSTB and DIBt provided bond strength values as function of geometry and application as a consequence only few applications are covered.	...unlimited scope
Every type of analysis can be performed, from the global structural analysis to the member analysis. Every fire criteria can be chosen.	The new ETA provides the relationship bond strength-temperature which can be easily implemented in a FEM simulation software in order to perform a performance based fire design analysis. In addition in a simply global structural analysis the interaction between different members, including fire stop element, can be considered.	...flexibility and optimization
EAD ensures a standardized and more conservative safety concept, taking into consideration additional factors in the heat transfer concept	Specifier can rely on an higher level of safety in case of fire.	...higher safety margins

HIT RE 500 V3 vs. HIT RE 500



What advantages we have over the competitors

- Safety concept in line with EC2 and specific established test procedure of the product subjected to high temperatures.
- Possibilities to design up to 240 minutes, most of competition has data only up to 180 minutes.
- Optimizing the design solution by input in PROFIS the real temperature the connection is subjected to (valid for 'parallel case').
- Besides of slab-to-wall and slab-to-slab system connection design, possibility to design beam-to-wall connections and beam-to-column connections subjected to fire with PROFIS. Most of competitors provide design data for slab-to-wall and slab-to-slab connections only.

Which 4 objections could come from the customer?

Customer objection	Argumentation
HIT-RE 500 had a performance better than HIT-RE 500 V3. How is it possible?	HIT-RE 500 V3 performs better than HIT RE 500 (show the comparison). The qualification criteria are completely different. HIT-RE 500 was qualified for fire by DIBt, based on internal qualification criteria, which is not transparent. HIT-RE 500 V3 is qualified for fire based on a European assessment document and the results are included in the approval.
Which are the main differences with the past?	With the new EAD, the qualification process is transparent. On contrary in the past, the same product could have different fire performances if assessed with CSTB or DIBt, for example HY200. In addition the approval includes the real behavior of a mortar when subjected to fire and not the load capacity of the bond strength of the connection for specific applications. As a consequence, every system connection can be designed subjected to fire. On contrary in the past data were available for a limited number of applications.
In this case, Hilti is a pioneer in the market. I will continue to use FIS-EM which has a fire report which requires less anchorage length.	First, in future no local fire qualification reports will be issued. Second, when a new EAD is published, products must be qualified based on this document. Any other qualification criteria based on different rules is based on an unclear safety concept and does not follow EC2 safety concept.
FIS-EM performs better than HIT-RE500V3 in case of fire design.	The fire performance of the two products cannot be compared. FIS-EM is not approved for fire design, it has a report which includes bond strength/load values for specific applications only. The real behavior of the mortar subjected to high temperatures is unknown.