

- DESCRIPTION** EnCap-A is a delayed release acid used to slowly decrease the pH of high pH fluids. EnCap-A is encapsulated citric acid, a weak triprotic acid. EnCap-A is designed to be functional below 130°F.
- ADVANTAGES**
- EnCap-A allows a delayed pH decrease in the fluid.
 - EnCap-A will insure the break of the borate crosslink by shifting the pH of the fluid below the pH needed to crosslink.
 - EnCap-A allows conventional enzyme breakers to be used in high pH fluids; the lowering of the pH will activate the enzyme.
 - EnCap-A will improve fracture conductivity in borate crosslinked fluids by aiding in breaking the formed filter cake and improving the clean-up of the proppant pack.
- APPLICATION**
- EnCap-A temperature limit is 130°F.
 - In borate crosslinked fluids, EnCap-A is used as a crosslink breaker.
 - EnCap-A is used as a conventional enzyme activator in high pH fluids. The pH of the fluid decreases to the active range of the enzyme, allowing the enzyme to break the guar based fluid. This application is typically limited to 125°F due to enzyme activity.
 - EnCap-A will aid in proppant pack and filtercake clean-up in borate fracturing fluids. EnCap-A will concentrate in the fracture during fluid leak-off.
- PROPERTIES**
- Blue Granules
 - Activity – 60 to 70%
 - Specific Gravity – 1.59
 - Bulk density – 60 lb./ft.³
 - Partially soluble in water
 - Final pH of 1% slurry in DI water – 2.2
 - Release profile at 70° and 100°F see FIGURE 1
 - Fluid pH profile at 75°F see FIGURE 2

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FIGURE 1

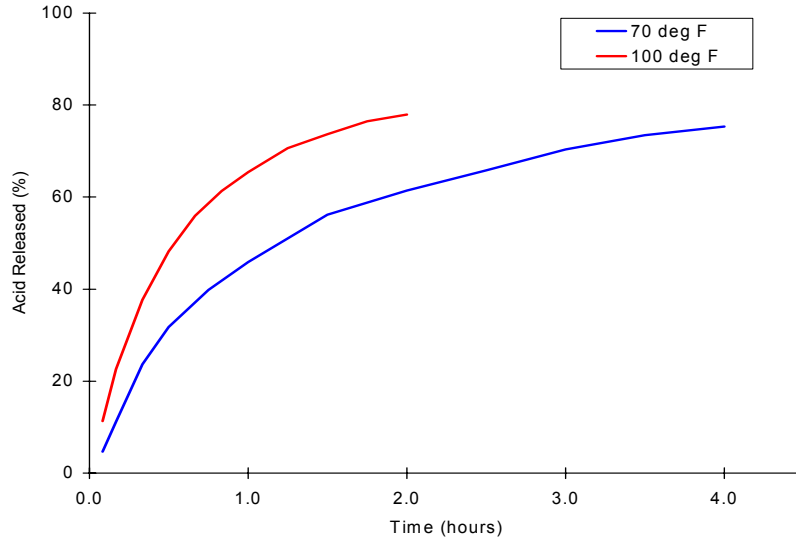
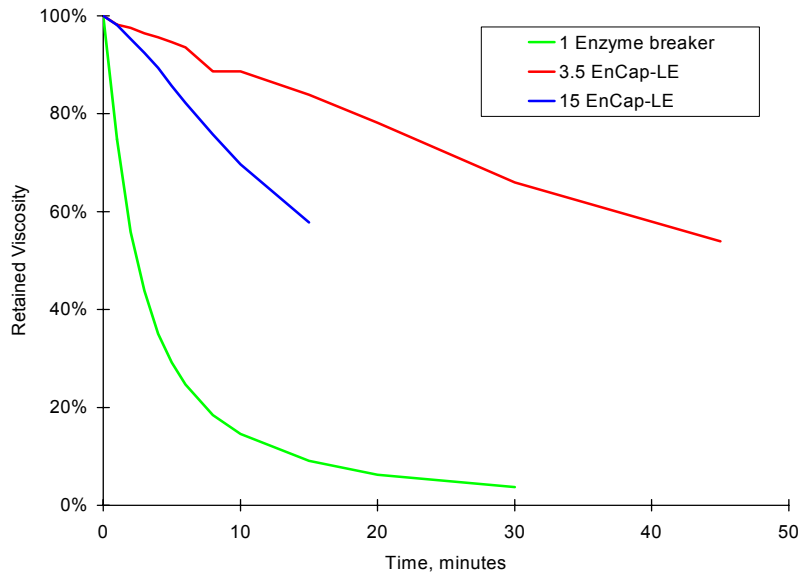


FIGURE 2



The information contained herein is based on data considered accurate with representative samples. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. The above data does not imply specifications for this product. Fritz Industries, Inc. assumes no responsibility for personal injury or property damage to vendees, users or third parties, caused by the material. Such vendees or users assume all risks associated with the use of the material. Consult the Material Safety Data Sheet before using this product.