

**DESCRIPTION**

EnCap-LP is an encapsulated oxidizing breaker used in hydraulic fracturing applications. EnCap-LP slowly releases ammonium persulfate into the fracturing fluid. This allows the break of the fracturing fluid to be delayed. Higher breaker concentrations can be added to the fracturing fluid without compromising fluid rheology. Since EnCap-LP is a solid, breaker will not be lost to the formation during fluid leak-off. Combining the higher breaker concentrations and not losing breaker to the formation, improved fracture conductivity can be attained using EnCap-LP.

**ADVANTAGES**

- Increased break times can be obtained.
- Higher concentrations can be used without compromising fluid viscosity during proppant placement.
- Solid breaker which will concentrate in the proppant pack during fluid leak-off.
- Increase conductivity of the created fracture by:
  - clean-up of proppant pack
  - breaking of filter cakes from linear or borate crosslinked fluids.

**APPLICATION**

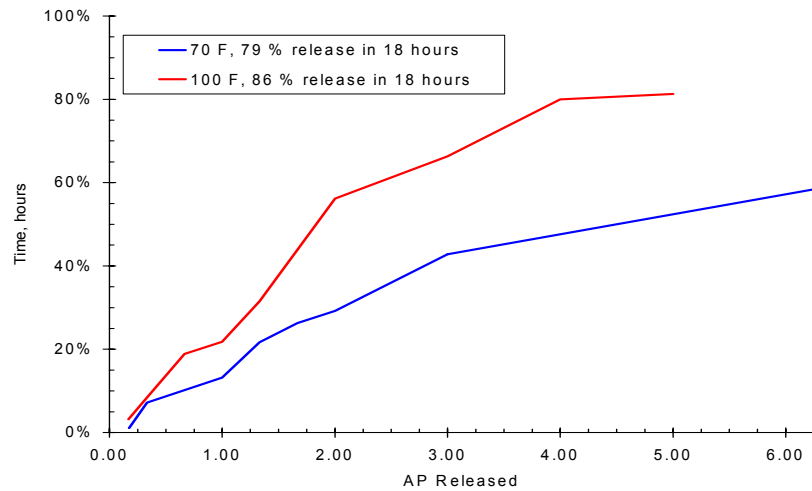
- EnCap-LP can be directly substituted into fluids using activated persulfate breaker systems to reduce viscosity.
- EnCap-LP can be used in higher temperature applications if fluid temperature models or experience suggests the fluid will remain below 130°F for sufficient time to place the proppant.
- Break guar and derivatized guar based fracturing fluids such as:
  - linear gel fluids
  - borate or organometallic crosslinked fluids
  - foams
- Breaker concentrations can be increased without effecting proppant transport capabilities of the fluid.
- Breaker will concentrate in fracture and break filter cakes from linear or borate crosslinked fluids.

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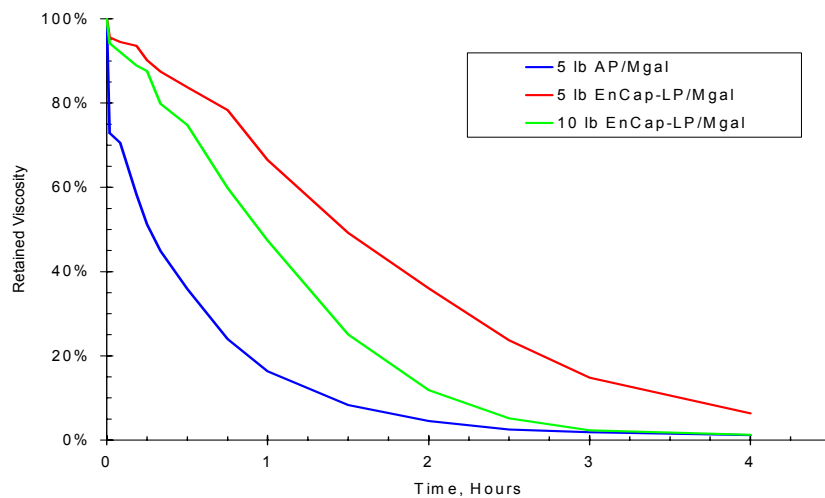
**PROPERTIES**

- Orange Granules
- Faint Organic Odor
- Partially soluble in water
- Specific Gravity – 1.81
- Bulk Density – 58 to 69 lb./ft.<sup>3</sup>
- Particle Size – 10/50 mesh
- Activity – 78 to 84 %
- Release profile at 70 and 100° F see Figure 1
- Viscosity profiles at 100°F with activator see Figure 2
- Packaged in 50-lb quantities in lined open top drums.

**FIGURE 1**



**FIGURE 2**



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