

The STEP-XZ zirconium crosslinked carboxymethyl cellulose (CMC) is a temperature-activated fluid system which produces an initial viscosity capable of transporting high concentrations of proppant. It increases in thickness as it is exposed to high bottom-hole temperatures which allows for a high viscosity system to be pumped while minimizing surface pressures. Its low polymer content results in a clean break, leaving minimal residue in the formation. This system can be broken down by using oxidizers.

STEP-XZ can be customized for stability to accommodate large temperature ranges and crosslinked at a low pH. This enables the system to be used in acid fracturing operations in which borate gels would be ineffective.

**Properties:**

- Low pH crosslinked system
- Minimal residue when broken
- Can be used for acid fracturing jobs
- Ideal for high bottom-hole temperatures
- Lower surface treating pressures
- High viscosity fluid which provides a high proppant carrying capacity

**Technical Data:**

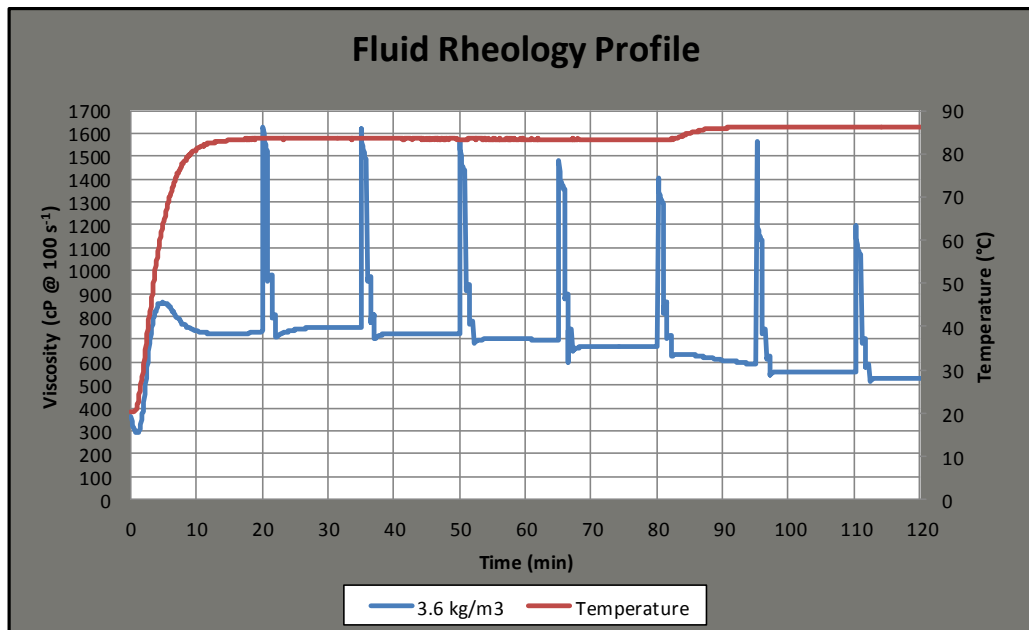


Figure 1: Temperature-activated STEP-XZ stability at 85°C

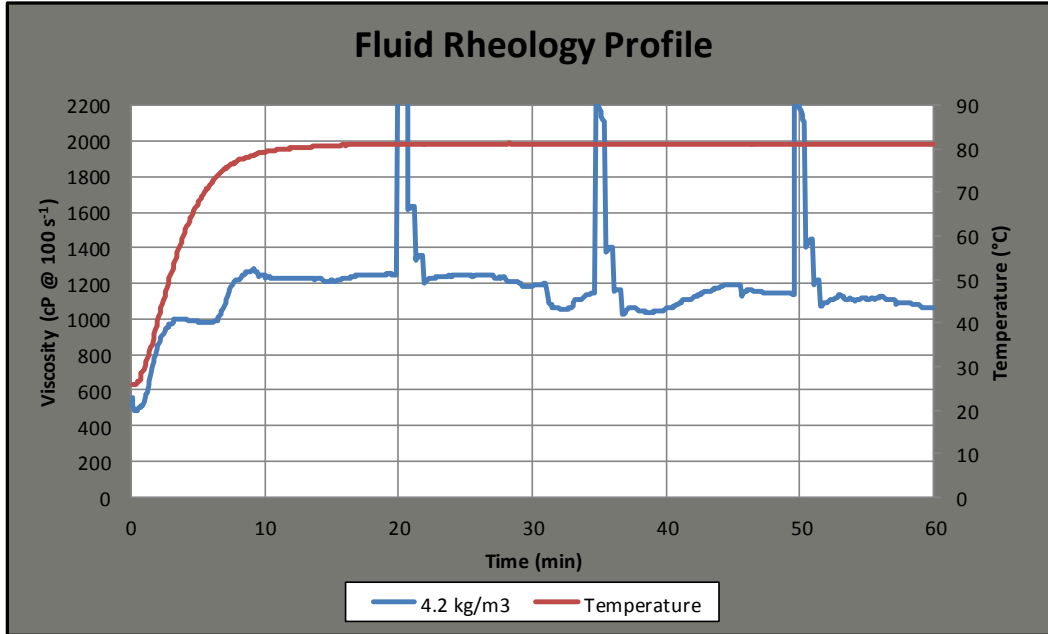


Figure 2: Temperature-activated STEP-XZ stability at 80°C with a high viscosity