



HYBRID CHEMICAL  
TECHNOLOGIES

# HIGH VISCOSITY FRICTION REDUCER

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## HVFR-110

HVFR-110 is an anionic, high molecular weight polyacrylamide friction reducer used for hydraulic fracturing operations. At low loadings, it behaves as a simple slickwater friction reducer, and as the loading increases it forms a strong viscoelastic gel with enhanced proppant suspension and transportation ability. HVFR-110 is available as a powder or as a liquid slurry. HVFR-110 is appropriate for use in freshwater to low TDS base fluids.

## VISCOSITY TESTING

L/M <sup>3</sup>	511 sec <sup>-1</sup>	100 sec <sup>-1</sup>
-	1	1
<b>4</b>	22	50
<b>5</b>	28	68
<b>6</b>	32	77

## BALL DROP TESTING

L/M <sup>3</sup>	Suspension Factor
-	1.0
<b>0.2</b>	1.1
<b>4.0</b>	3.4
<b>5.0</b>	4.8

Flowloop Data

