



Texan Minerals and Chemicals



Product Data Sheet

TEXAN DRY-BRINE ANIONIC

High Brine Friction Reducer

Description

TEXAN DRY-BRINE is a premium anionic high molecular weight polyacrylamide friction reducer that offers excellent performance in high salinity brines. It is easily dispersed, inverted, and hydrated into solution with minimal amount of shear. TEXAN DRY- BRINE is APE (alkyl phenol ethoxylates) and NPE (nonyl phenol ethoxylates) free, thus making it environmentally friendly. Addition of small amounts, typically 0.65 – 2.60 ppt (pounds of powder per thousand gallons) to water based high brine frac fluids can deliver friction reduction (pressure loss) of over 70% in a short period of time. TEXAN DRY-BRINE contains high amount of (30 to 35%) acrylamido-methylpropane sulfonate polymer (AMPS) to tolerant friction reducer in high salt conditions.

Applications

TEXAN DRY- BRINE has been specifically optimized for use as a high brine friction reducer, which can be used directly in fine powder form, concentrate form, or dispersed in oil with excellent hydration properties. It is compatible with common non-ionic and anionic stimulation additives such as surfactants, scale inhibitors, biocides, and clay stabilizers.

Properties

Form	White Powder
Smell	Odorless
Mesh Size	60-100
Molecular Weight	12-14 (million)
Charge	25-30 (Anionic)
Density	0.73 g/cm ³
Insoluble Content	≤ 0.2%

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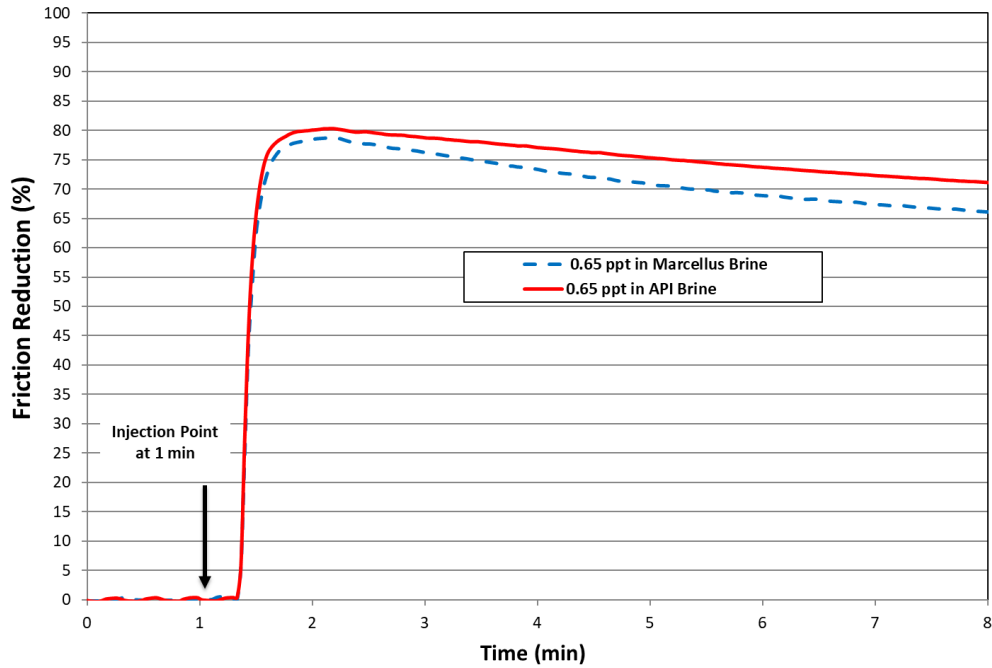
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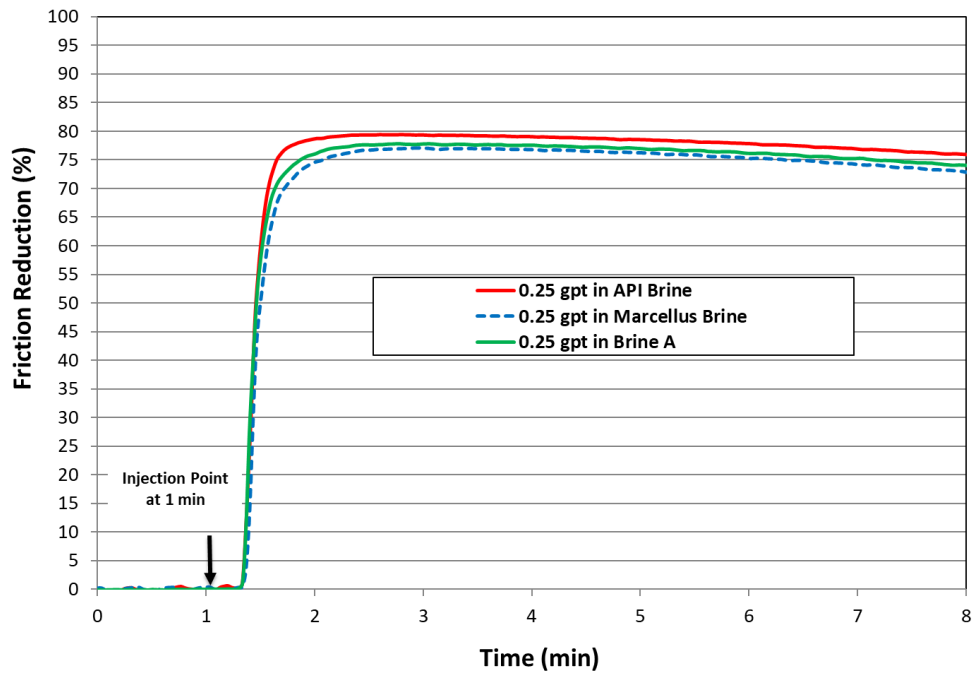
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See Appendix A for water Salt Conditions

3/8" OD Flow Loop Dry Powder Results



3/8" OD Flow Loop 3 lbs Slurry Results



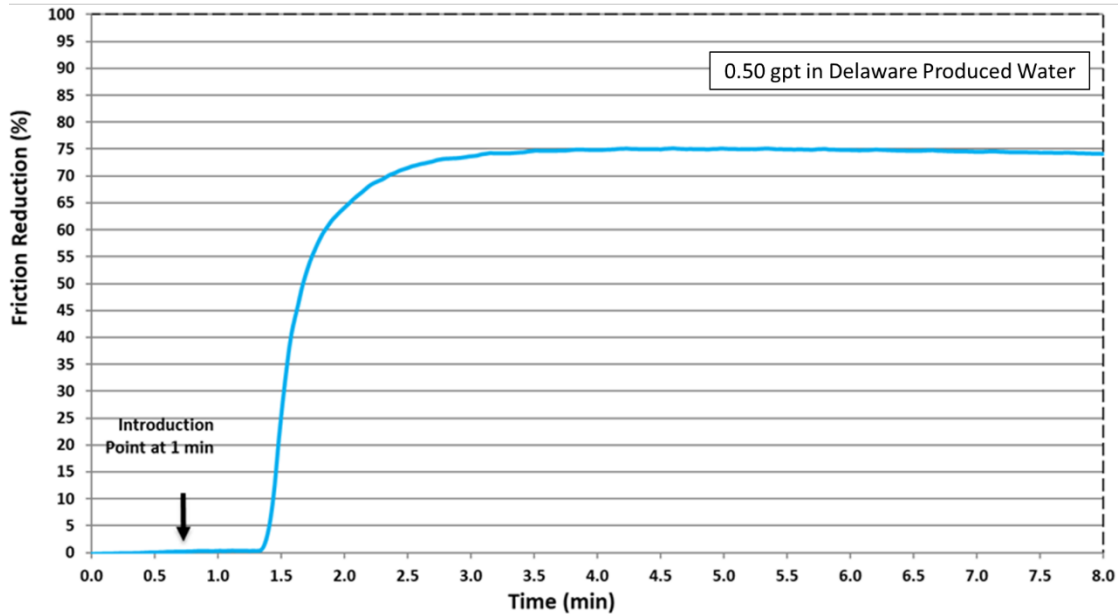


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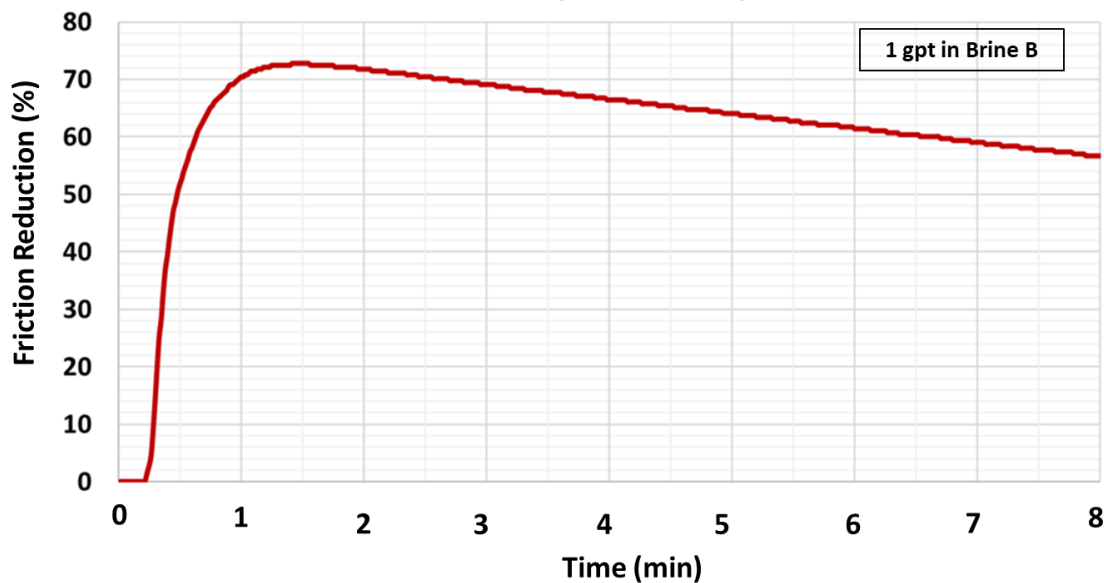


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3/8" OD Flow Loop 2.5 lbs Slurry Results



1/2" OD Flow Loop 2.5 lbs Slurry Results



The test results show that TEXAN DRY-BRINE achieves a FR value of 75% in the Delaware produced water and hydrating in less than 60 seconds after injecting the FR into the system suggesting that TEXAN DRY-BRINE can be used in Heavy TDS HARSH WATER conditions in both Dry and Slurry Form.

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APPENDIX A:

WATER COMPOSITION

	Ca ²⁺ ml/L	Mg ²⁺ ml/L	Na ⁺ ml/L	Cl ⁻ ml/L	Fe ²⁺ ml/L	TDS ml/L
API BRINE	10,147	-	37,594	75,928	-	108K
MARCELLUS BRINE	21,442	2,916	37,995	116,363	189	150K
BRINE A	9,170	1,460	74,400	132,500	5	231K
DELAWARE BRINE	19,200	2,460	66,000	142,900	8	250K
BRINE B	29,900	3,637	78,360	186,619	68	290K

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