

Hydraulic Fracturing Fluid Product Component Information Disclosure

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|--------------------------------|---------------------------|
| Job Start Date: | 9/22/2017 |
| Job End Date: | 10/8/2017 |
| State: | Texas |
| County: | Reagan |
| API Number: | 42-383-39840-00-00 |
| Operator Name: | EP Energy |
| Well Name and Number: | University Central 0803CH |
| Latitude: | 31.17851800 |
| Longitude: | -101.63257600 |
| Datum: | NAD83 |
| Federal Well: | NO |
| Indian Well: | NO |
| True Vertical Depth: | 8,463 |
| Total Base Water Volume (gal): | 13,505,164 |
| Total Base Non Water Volume: | 837,752 |



Hydraulic Fracturing Fluid Composition:

| Trade Name | Supplier | Purpose | Ingredients | Chemical Abstract Service Number (CAS #) | Maximum Ingredient Concentration in Additive (% by mass)** | Maximum Ingredient Concentration in HF Fluid (% by mass)** | Comments |
|-----------------------|-----------------------------|----------------------------|--|--|--|--|----------|
| Water | Operator | Base Carrier Fluid | Water | 7732-18-5 | 100.00000 | 86.66805 | |
| Sand | Multiple Suppliers | Proppants | Silicon Dioxide | 14808-60-7 | 100.00000 | 12.72807 | |
| 15% Hydrochloric Acid | Reagent | Scale Dissolver | Water | 7732-18-5 | 85.00000 | 0.32761 | |
| | | | 36% Hydrochloric Acid | 7647-01-0 | 15.00000 | 0.05781 | |
| ClayBlok 35 | Downhole Chemical Solutions | Clay Control / Stabilizers | Water | 7732-18-5 | 80.00000 | 0.06842 | |
| | | | Choline chloride | 67-48-1 | 35.00000 | 0.02994 | |
| | | | Bio-polymer | Proprietary | 1.00000 | 0.00086 | |
| EnviroSurf 6 | Downhole Chemical Solutions | Surfactants | Water | 7732-18-5 | 90.00000 | 0.03535 | |
| | | | alpha-sulfo-w-(dodecyloxy)-poly(oxyethane-1,2-diyl), sodium salt | 9004-82-4 | 8.00000 | 0.00314 | |
| | | | Alcohols, C12-C16, Ethoxylated | 68551-12-2 | 6.00000 | 0.00236 | |
| | | | Quaternary Ammonium Salt | 107-64-2 | 3.00000 | 0.00118 | |

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|--------------|-----------------------------|----------------------------|---|-------------|-----------|---------|--|
| HiFlow 5 | Downhole Chemical Solutions | Friction Reducers | | | | | |
| | | | Petroleum Distillate Hydrotreated Light | 64742-47-8 | 28.00000 | 0.01509 | Rest of Components are Trade Secrets |
| MBC-516 | Multiple Suppliers | Biocides | | | | | |
| | | | Water | 7732-18-5 | 57.00000 | 0.00755 | Water is not listed on the all the SDS Forms |
| | | | Glutaraldehyde | 111-30-8 | 27.00000 | 0.00358 | |
| | | | Didecyl dimethyl ammonium chloride | 7173-51-5 | 8.00000 | 0.00106 | |
| | | | Alkyl dimethyl benzyl ammonium chloride(C12-16) | 68424-85-1 | 6.00000 | 0.00080 | |
| | | | Ethanol | 64-17-5 | 3.00000 | 0.00040 | |
| ScaleBlok 10 | Downhole Chemical Solutions | Scale Inhibitors | | | | | |
| | | | Anionic Polymer | Proprietary | 25.00000 | 0.00580 | CAS is Proprietary |
| FeBlok 50 | Downhole Chemical Solutions | Iron Controller / Reducers | | | | | |
| | | | Citric Acid | 77-92-9 | 60.00000 | 0.00115 | Water +/- 40-70% Not listed on SDS |
| CorHib 20 | Downhole Chemical Solutions | Acid Corrosion Inhibitors | | | | | |
| | | | Methyl Alcohol | 67-56-1 | 100.00000 | 0.00078 | |
| | | | Fatty Acids | Proprietary | 10.00000 | 0.00008 | |
| NonEmul 10 | Downhole Chemical Solutions | Non and De-Emulsifiers | | | | | |
| | | | Methanol | 67-56-1 | 30.00000 | 0.00018 | 70% not listed on SDS |

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)