

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/13/2017
Job End Date:	6/13/2017
State:	Texas
County:	Andrews
API Number:	42-003-47448-00-00
Operator Name:	XTO Energy/ExxonMobil
Well Name and Number:	Fullerton Clearfork Unit 7620
Latitude:	32.39662100
Longitude:	-102.81043700
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7,550
Total Base Water Volume (gal):	344,367
Total Base Non Water Volume:	33,465



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	82.79552	
SLC,SDC,TLC,THS,PowerProp,OptiProp,Spe	Sanrol Proppants	Proppants					
arProp,CoolSet			Crystalline Silica(Quartz)	14808-60-7	98.00000	8.33822	
			Phenol-formaldehyde Novolak Resin	9003-35-4	5.00000	0.42542	
Sand	Multiple Suppliers	Proppants					
			Silicon Dioxide	14808-60-7	100.00000	5.94209	
15% Hydrochloric Acid	Reagent	Scale Dissolver					
			Water	7732-18-5	85.00000	1.53770	
			36% Hydrochloric Acid	7647-01-0	15.00000	0.27136	
SG-15G	ACE Completions	Gelling Agents					
			Petroleum Distillate	64742-47-8	60.00000	0.25959	
			Guar Gum	9000-30-0	50.00000	0.21632	
			Surfactant	Proprietary	10.00000	0.04326	CAS # Proprietary
			Bentonite Clay	Proprietary	10.00000	0.04326	CAS # is Proprietary
Gypton T-249	Nalco Champion	Scale Inhibitors					

			Amine Phosphonate 1	Proprietary	60.00000	0.09440	CAS # is Proprietary
			Hydrochloric Acid	7647-01-0	10.00000	0.01573	
			Phosphoric Acid	7664-38-2	1.00000	0.00157	
BF-200	Ace Completions	Buffers / Ph Control					
			Water	7732-18-5	80.00000	0.07140	% is unlisted
			Potassium Hydroxide	1310-58-3	35.00000	0.03124	
MCS-376	Ace Completions	Surfactants					
			Water	7732-18-5	75.00000	0.04490	
			Proprietary	Proprietary	15.00000	0.00898	Proprietary Data
			Ethylene oxide/propylene Oxide co-polymer	9003-11-6	10.00000	0.00599	
			Coconut diethanolamide	68603-42-9	8.00000	0.00479	
			Poly(oxy-01,2-ethanediyl), alpha hexyl-omega-hydroxy-	31726-34-8	5.00000	0.00299	
			Alcohol	68609-68-7	5.00000	0.00299	
			Isotridecanol, ethoxylated	9043-30-5	5.00000	0.00299	
			Diethanolamine	111-42-2	1.00000	0.00060	
			Solvent Naptha(Petroleum), Heavy	64742-94-5	1.00000	0.00060	
GB-150	Chemplex/Solvay	Gel Breakers/Delayed Breakers					
			Water	7732-18-5	90.00000	0.04522	Proprietary Not Listed on SDS
			Sodium Chloride	7647-14-5	15.00000	0.00754	Proprietary Not Listed on SDS
			Ethylene Glycol	107-21-1	5.00000	0.00251	Proprietary Not Listed on SDS
			Mannanase Enzymes	37288-54-3	1.00000	0.00050	Proprietary Not Listed on SDS
CX-14G	Rockwater Energy Solutions	Crosslinkers					
			Inorganic Borates	1319-33-1	40.00000	0.02763	
			ETHANE-1,2-DIOL	107-21-1	30.00000	0.02072	
Bactron K-139/BIOC11139W	Nalco Champion	Biocides					
			Isopropanol	67-63-0	60.00000	0.01216	Revised Version 7-15-2016
			Ethylene Glycol	107-21-1	30.00000	0.00608	Revised Version 7-15-2016
			Benzyl-C12-16-alkyldimethyl-Ammonium chloride	68424-85-1	30.00000	0.00608	
			Glutaraldehyde	111-30-8	10.00000	0.00203	
			Ethanol	64-17-5	5.00000	0.00101	
PAS-C	Rockwater Energy Solutions	Solvents					
			Dodecylbenzene Sulfonic Acid	27176-87-0	100.00000	0.00458	% Confidential used 100
			Isopropanol	67-63-0	100.00000	0.00458	% Confidential used 100
			Ethylene Glycol monbutyl Ether	111-76-2	100.00000	0.00458	% Confidential used 100
			Glacial Acetic Acid	64-19-7	100.00000	0.00458	% Confidential used 100
			Alkyl Aryl Sulfonate	26264-05-1	100.00000	0.00458	% Confidential used 100
NE-217	PfP	Non and De-Emulsifiers					
			Water	7732-18-5	91.00000	0.00823	
			Mixture of surfactants and copolymers	Proprietary	40.00000	0.00362	CAS # is Proprietary

			Propylene Glycol	57-55-6	10.00000	0.00090	
FE-360	Chemplex/Solvay	Iron Controller / Reducers					
			2-Mercaptoethanol	60-24-2	100.00000	0.00926	
			Water	7732-18-5	7.00000	0.00065	
			Aqua Ammonia	1336-21-6	5.00000	0.00046	
			Cupric Chloride Dihydrate	10125-13-0	5.00000	0.00046	
			Potassium Iodide	7681-11-0	1.00000	0.00009	
EMS-44 Plus	Flotek Chemistry	Surfactants					
			Isopropyl Alcohol	67-63-0	30.00000	0.00240	
			Citrus Terpenes	68647-72-3	30.00000	0.00240	
			Denatured Ethyl Alcohol	64-17-5	30.00000	0.00240	
			Methyl Alcohol	67-56-1	5.00000	0.00040	
			Methylisobutyl Ketone	108-10-1	0.50000	0.00004	
GB-2	Multiple Suppliers	Gel Breakers/Delayed Breakers					
			Ammonium Persulfate	7727-54-0	100.00000	0.00476	
CX-10	Rockwater Energy Solutions	Crosslinkers					
			Proprietary Inorganic Borates	Proprietary	10.00000	0.00289	Components and CAS # are proprietary
I-123	Finoric LLC	Acid Corrosion Inhibitors					
			Ethylene Glycol	107-21-1	40.00000	0.00071	
			N,N-Dimethylformamide	68-12-2	20.00000	0.00036	
			Ethoxylated Nonylphenol	68412-54-4	10.00000	0.00018	
			2-Butoxyethanol	111-76-2	10.00000	0.00018	
			Cinnamaldehyde	104-55-2	10.00000	0.00018	
			1-Decanol	112-30-1	10.00000	0.00018	
			Tar based, quinoline derived, benzyl chloride-quaternized	72480-70-7	10.00000	0.00018	
			1-Octanol	111-87-5	2.50000	0.00004	
			Isopropyl Alcohol	67-63-0	2.50000	0.00004	
			Triethyl Phosphate	78-40-0	2.50000	0.00004	
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)