

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	1/10/2018
Job End Date:	2/2/2018
State:	Texas
County:	Winkler
API Number:	42-495-33713-00-00
Operator Name:	XTO Energy/ExxonMobil
Well Name and Number:	University Blk 20 1310H
Latitude:	31.73286000
Longitude:	-103.27937000
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	11,988
Total Base Water Volume (gal):	2,452,884
Total Base Non Water Volume:	0



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	XTO Energy/ExxonMobil	Carrier Fluid					
			Water	7732-18-5	100.00000	77.25550	
Sand	C&J Energy Services	Sand - Bulk - Texas					
				Listed Below			

HC-10	C&J Energy Services	Bulk Acid					
				Listed Below			
NE-2	C&J Energy Services	Surfactants & Foamers					
				Listed Below			
Sand	C&J Energy Services	Proppants - Manufactured - Preferred Sands					
				Listed Below			
ICA-1	C&J Energy Services	Iron Control Additives					
				Listed Below			
CI-3	C&J Energy Services	Acid Corrosion Inhibitors					
				Listed Below			
BR-2	C&J Energy Services	Gel Breakers					
				Listed Below			
FR-23	C&J Energy Services	Friction Reducer					
				Listed Below			
GA-7F	C&J Energy Services	Gelling Agents					
				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			*Quartz (SiO2)	14808-60-7	98.00000	14.64971	

			Crystalline Silica, quartz	14808-60-7	99.90000	7.19861	
			Water	7732-18-5	90.00000	0.38259	
			Iron Oxide	1309-37-1	1.00000	0.14949	
			Aluminum Oxide	1344-28-1	1.10000	0.07926	
			Water	7732-18-5	47.00000	0.05567	
			Hydrochloric Acid	7647-01-0	10.00000	0.04251	
			2-Propenoic acid, polymer with 2-propenamide, sodium salt	25987-30-8	30.00000	0.03554	
			Distillates (Petroleum), Hydrotreated Light	64742-47-8	30.00000	0.03554	
			Buffering agents	Proprietary	22.00000	0.02606	
			CJENERGY-Hydrocarbon-00013	64742-47-8	60.00000	0.01753	
			Guar Gum	9000-30-0	60.00000	0.01753	
			Water	7732-18-5	60.00000	0.00760	
			Iron Oxide	1309-37-1	0.10000	0.00721	
			Titanium Oxide	13463-67-7	0.10000	0.00721	
			Trisodium Nitrilotriacetate	5064-31-3	50.00000	0.00633	
			Alcohols, C11-14-iso-, C13-rich, ethoxylated	78330-21-9	5.00000	0.00592	
			Proprietary	Proprietary	3.00000	0.00355	
			Proprietary Blend	Proprietary	100.00000	0.00204	
			Water	7732-18-5	100.00000	0.00204	
			Bentonite Clay	68953-58-2	5.00000	0.00146	
			Ethoxylated Alcohols	68002-97-1	100.00000	0.00146	
			Ethylene Glycol	107-21-1	40.00000	0.00082	
			Water	7732-18-5	30.00000	0.00062	
			Dimethylformamide	68-12-2	20.00000	0.00041	
			Ammonium Persulfate	7727-54-0	76.00000	0.00036	
			Cinnamaldehyde	104-55-2	15.00000	0.00031	

			Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	15.00000	0.00031	
			2-Butoxyethanol	111-76-2	15.00000	0.00031	
			Acrylamide as residual	79-06-1	0.10000	0.00012	
			Cured Resin	Proprietary	24.00000	0.00011	
			Poly(oxy-1,2-ethanediyl),alpha-(4-nonylphenyl)-omega hydroxy-, branched	127087-87-0	5.00000	0.00010	
			1-DECANOL	112-30-1	5.00000	0.00010	
			Proprietary	Proprietary	5.00000	0.00010	
			Proprietary	Proprietary	5.00000	0.00010	
			Proprietary	Proprietary	5.00000	0.00010	
			Proprietary	Proprietary	5.00000	0.00010	
			Proprietary	Proprietary	5.00000	0.00010	
			Proprietary	Proprietary	5.00000	0.00010	
			Proprietary	Proprietary	5.00000	0.00010	
			Triethyl Phosphate	78-40-0	2.50000	0.00005	
			Isopropanol	67-63-0	2.50000	0.00005	
			1-OCTANOL	111-87-5	2.50000	0.00005	
			Tar Bases, Quinoline Derivs.	68513-87-1	1.00000	0.00002	
			Proprietary	Proprietary	100.00000	0.00000	
			Castor Oil	8001-79-4			

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

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

*** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

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)