

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/9/2017
Job End Date:	6/26/2017
State:	Texas
County:	Reagan
API Number:	42-383-38225-00-00
Operator Name:	FDL Operating, LLC
Well Name and Number:	University 10 2703H
Latitude:	31.23509900
Longitude:	-101.52574500
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7,967
Total Base Water Volume (gal):	15,931,009
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	Schlumberger	N/A					
			Water (Including Mix Water Supplied by Client)*	7732-18-5		89.24509	
A286	Schlumberger	Acid Corrosion Inhibitor					
				Listed Below			

H036	Schlumberger	Acid					
				Listed Below			
F114	Schlumberger	Surfactant					
				Listed Below			
J627	Schlumberger	Friction Reducer					
				Listed Below			
S012-3050	Schlumberger	Propping Agent					
				Listed Below			
U042	Schlumberger	Chelating Agent					
				Listed Below			
S012-4070	Schlumberger	Propping Agent					
				Listed Below			
S100	Schlumberger	Fluid Loss Additive					
				Listed Below			
B534	Schlumberger	Temporary Clay Stabilizer					
				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			Quartz, Crystalline silica	14808-60-7	98.63375	10.60798	
			Hydrochloric acid	7647-01-0	0.47517	0.05110	

			Distillates, petroleum, hydrotreated light	64742-47-8	0.24831	0.02671	
			2-hydroxy-N,N,N-trimethylethanaminium chloride	67-48-1	0.20019	0.02153	
			Acrylamide/ammonium acrylate copolymer	26100-47-0	0.18919	0.02035	
			Ammonium chloride	12125-02-9	0.11823	0.01272	
			Magnesium chloride	7786-30-3	0.03378	0.00363	
			Ethoxylated oleic acid	9004-96-0	0.02365	0.00254	
			Sorbitan monooleate	1338-43-8	0.02365	0.00254	
			Sodium chloride	7647-14-5	0.02252	0.00242	
			Sorbitol Tetraoleate	61723-83-9	0.00709	0.00076	
			Sodium sulfocyanate	540-72-7	0.00615	0.00066	
			2-Propenoic acid, ammonium salt	10604-69-0	0.00579	0.00062	
			Alcohols, C10-C16, ethoxylated	68002-97-1	0.00473	0.00051	
			Calcium chloride	10043-52-4	0.00450	0.00048	
			Alcohols, C12-C16, ethoxylated	68551-12-2	0.00423	0.00045	
			C14 alpha olefin ethoxylate	84133-50-6	0.00355	0.00038	
			Alcohols, C12-C14, ethoxylated	68439-50-9	0.00355	0.00038	
			Tetrasodium ethylenediaminetetraacetate	64-02-8	0.00213	0.00023	
			Propan-2-ol	67-63-0	0.00210	0.00023	
			2-Propenamid (impurity)	79-06-1	0.00106	0.00011	
			Fatty acid, tall-oil reaction products with acetophenone	68188-40-9	0.00082	0.00009	
			Isodecanol w/6-7 Moles Ethylene Oxide	26183-52-8	0.00046	0.00005	
			Polyethylene glycol monohexyl ether	31726-34-8	0.00028	0.00003	
			Cinnamaldehyde	104-55-2	0.00030	0.00003	

			Sodium Glycolate (impurity)	2836-32-0	0.00017	0.00002	
			Trisodium Ethylenediaminetetraacetate (impurity)	150-38-9	0.00006	0.00001	
			Sodium hydroxide	1310-73-2	0.00006	0.00001	
			Amines, tallow alkyl, ethoxylated	61791-26-2	0.00009	0.00001	
			Disodium Ethylene Diamine Tetra Acetate (impurity)	139-33-3	0.00006	0.00001	
			Glycols, polyethylene, monotetradecyl ether	27306-79-2	0.00003		
			Trisodium nitrilotriacetate (impurity)	5064-31-3	0.00003		
			Dicoco dimethyl quaternary ammonium chloride	61789-77-3	0.00002		
			Dodecyl poly (oxyethylene) ether	9002-92-0	0.00004		
			Amines, dicoco alkylmethyl	61788-62-3			

* 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)