

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	9/19/2017
Job End Date:	10/3/2017
State:	Texas
County:	Upton
API Number:	42-461-40592-00-00
Operator Name:	Hunt Oil Company
Well Name and Number:	University 3-35 #102HB
Latitude:	31.20085690
Longitude:	-101.85580080
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8,459
Total Base Water Volume (gal):	16,879,933
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		89.82266	
B534	Schlumberger	Temporary Clay Stabilizer					
				Listed Below			

U028	Schlumberger	Activator					
				Listed Below			
B487	Schlumberger	Scale Inhibitor					
				Listed Below			
F114	Schlumberger	Surfactant					
				Listed Below			
B244	Schlumberger	Bactericide (Green-Cide 25G)					
				Listed Below			
B492	Schlumberger	Water Gelling Agent					
				Listed Below			
S100	Schlumberger	Fluid Loss Additive					
				Listed Below			
A286	Schlumberger	Acid Corrosion Inhibitor					
				Listed Below			
J218	Schlumberger	Breaker					
				Listed Below			
J318	Schlumberger	Breaker Aid					

				Listed Below			
B526†	Schlumberger	Non-Emulsifying Agent					
				Listed Below			
S012-3050	Schlumberger	Propping Agent					
				Listed Below			
S012-4070	Schlumberger	Propping Agent					
				Listed Below			
H036	Schlumberger	Acid					
				Listed Below			
J627	Schlumberger	Friction Reducer					
				Listed Below			
J604	Schlumberger	Crosslinker					
				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	96.66718	9.83815	
			Hydrochloric acid	7647-01-0	1.79205	0.18238	
			Ethylene Glycol	107-21-1	0.30554	0.03110	
			Guar gum	9000-30-0	0.22603	0.02300	
			2-hydroxy-N,N,N-trimethylethanaminium chloride	67-48-1	0.16207	0.01649	

			Distillates, petroleum, hydrotreated light	64742-47-8	0.15840	0.01612	
			Acrylamide/ammonium acrylate copolymer	26100-47-0	0.12068	0.01228	
			Sodium salt of Polymaleic Acid Copolymer	111560-38-4	0.07797	0.00794	
			Glutaraldehyde	111-30-8	0.07773	0.00791	
			Ammonium chloride	12125-02-9	0.07542	0.00768	
			Ulexite	1319-33-1	0.05689	0.00579	
			Polyethylene glycol monohexyl ether	31726-34-8	0.04099	0.00417	
			2,2',2"-nitrilotriethanol	102-71-6	0.03608	0.00367	
			Propan-2-ol	67-63-0	0.02943	0.00300	
			Diammonium peroxidisulphate	7727-54-0	0.02901	0.00295	
			Magnesium chloride	7786-30-3	0.02370	0.00241	
			Sodium chloride	7647-14-5	0.01823	0.00186	
			Ethoxylated oleic acid	9004-96-0	0.01509	0.00154	
			Sorbitan monooleate	1338-43-8	0.01509	0.00154	
			Polymer of fatty acid	Proprietary	0.01095	0.00111	TEST - Trade Secret Texas Comment
			Sodium hydroxide	1310-73-2	0.00746	0.00076	
			Alcohols, C12-C16, ethoxylated	68551-12-2	0.00739	0.00075	
			Sodium Tetraborate Decahydrate	1303-96-4	0.00629	0.00064	
			Fatty acid, tall-oil reaction products with acetophenone	68188-40-9	0.00615	0.00063	
			Alcohols, C11-14-iso, C13-rich, ethoxylated	78330-21-9	0.00583	0.00059	
			Sorbitol Tetraoleate	61723-83-9	0.00453	0.00046	
			Sodium sulfocyanate	540-72-7	0.00392	0.00040	
			2-Propenoic acid, ammonium salt	10604-69-0	0.00370	0.00038	
			Calcium chloride	10043-52-4	0.00365	0.00037	

			Dicoco dimethyl quaternary ammonium chloride	61789-77-3	0.00342	0.00035	
			Isodecanol w/6-7 Moles Ethylene Oxide	26183-52-8	0.00345	0.00035	
			Alcohols, C10-C16, ethoxylated	68002-97-1	0.00302	0.00031	
			C14 alpha olefin ethoxylate	84133-50-6	0.00226	0.00023	
			Alcohols, C12-C14, ethoxylated	68439-50-9	0.00226	0.00023	
			Cinnamaldehyde	104-55-2	0.00225	0.00023	
			but-2-enedioic acid	110-17-8	0.00150	0.00015	
			Amines, tallow alkyl, ethoxylated	61791-26-2	0.00066	0.00007	
			2-Propenamid (impurity)	79-06-1	0.00068	0.00007	
			Silicon Dioxide	7631-86-9	0.00062	0.00006	
			Dodecyl poly (oxyethylene) ether	9002-92-0	0.00028	0.00003	
			Amines, dicoco alkylmethyl	61788-62-3	0.00034	0.00003	
			Glycols, polyethylene, monotetradecyl ether	27306-79-2	0.00020	0.00002	
			Diutan gum	125005-87-0	0.00007	0.00001	
			Diutan	595585-15-2	0.00007	0.00001	

* 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)