

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	1/16/2016
Job End Date:	1/31/2016
State:	Texas
County:	Reagan
API Number:	42-383-39364-00-00
Operator Name:	EP Energy
Well Name and Number:	University 8-24 FH
Longitude:	-101.66143600
Latitude:	31.16777700
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	7,673
Total Base Water Volume (gal):	12,911,010
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	Operator	Carrier					
			Water	7732-18-5	100.00000	0.82883	
100 Mesh Sand	FTSI	proppant					
			Silica, Quartz	14808-60-7	100.00000	0.10243	
40/70 White	FTSI	proppant					
			Silica, Quartz	14808-60-7	100.00000	0.03519	
Hydrochloric Acid (HCl)	FTSI	Acid					
			Water	7732-18-5	63.00000	0.02026	
			Hydrogen Chloride	7647-01-0	37.00000	0.01190	
FRW-200	FTSI	Friction reducer					
			Water	7732-18-5	60.00000	0.00024	
			Copolymer of acrylamide and sodium acrylate	25987-30-8	33.00000	0.00013	
			Petroleum distillate hydrotreated light	64742-47-8	30.00000	0.00012	
			Acrylamide P/W acrylic acid, ammonium salt	26100-47-0	25.00000	0.00010	
			Ammonium Chloride	12125-02-9	12.00000	0.00005	
			Surfactant	Proprietary	7.00000	0.00003	

			Sorbitan, monoctadecanoate, poly(oxy-1,2-ethanediyl) Sorbitan, monoctadecanoate, poly(oxy-1,2-ethanediyl) derivs.	9005-67-8	5.00000	0.00002	
			Hydrotreated heavy paraffinic	64742-54-7	5.00000	0.00002	
			Alcohols (C12-C14), ethoxylated	68439-50-9	4.00000	0.00002	
			Alcohols (C10-C16), ethoxylated	68002-97-1	4.00000	0.00002	
			Alcohols (C12-C16), ethoxylated	68551-12-2	4.00000	0.00002	
			Sorbitan Monooleate	1338-43-8	3.00000	0.00001	
			Polyethylene glycol monooleate	9004-96-0	3.00000	0.00001	
			Sorbitol Tetraoleate	61723-83-9	2.00000	0.00001	
			Dewaxed heavy paraffinic	64742-65-0	1.50000	0.00001	
			Alkyloxypolyethyleneoxyethanol	84133-50-6	1.00000	0.00000	
			Ammonium Acrylate	10604-69-0	0.50000	0.00000	
			Isopropanol	67-63-0	0.30000	0.00000	
			Acrylamide	79-06-1	0.10000	0.00000	
NE-100W	FTSI	Non-emulsifier					
			Water	7732-18-5	80.00000	0.00032	
			Methanol	67-56-1	15.00000	0.00006	
			2-Propanol	67-63-0	10.00000	0.00004	
			2-Butoxyethanol	111-76-2	10.00000	0.00004	
			Dodecylbenzenesulfonic acid	27176-87-0	5.00000	0.00002	
SHALE SURF 1000W	FTSI	Surfactant					
			Water	7732-18-5	80.00000	0.00030	
			Ethoxylated alcohol	Proprietary	13.00000	0.00005	
			2-Butoxyethanol	111-76-2	5.00000	0.00002	
			Methanol	67-56-1	5.00000	0.00002	
			2-Propanol	67-63-0	5.00000	0.00002	
			d-Limonene	5989-27-5	1.00000	0.00000	
FE-100L	FTSI	Scale Inhibitor					
			Water	7732-18-5	75.00000	0.00008	
			Citric Acid	77-92-9	50.00000	0.00005	
			Ethylene glycol	107-21-1	10.00000	0.00001	
CI-150	FTSI	Acid Corrosion Inhibitor					
			Ethylene Glycol	107-21-1	30.00000	0.00003	
			Organic amine resin salt	Proprietary	30.00000	0.00003	
			Isopropanol	67-63-0	30.00000	0.00003	
			Dimethylformamide	68-12-2	10.00000	0.00001	
			Quaternary ammonium compound	Proprietary	10.00000	0.00001	
			Aromatic aldehyde	Proprietary	10.00000	0.00001	
			Alkylene Oxide Block Polymer	Proprietary	10.00000	0.00001	
			Water	7732-18-5	5.00000	0.00000	
			Diethylene glycol	111-46-6	1.00000	0.00000	
			Fatty Acid Salt	Proprietary	0.10000	0.00000	

			Fatty Acid	Proprietary	0.10000	0.00000	
			Aliphatic alcohol	Proprietary	0.10000	0.00000	
NE-100	FTSI	Non-emulsifier					
			Water	7732-18-5	90.00000	0.00001	
			2-Butoxyethanol	111-76-2	10.00000	0.00000	
			2-Propanol	67-63-0	10.00000	0.00000	
			Dodecylbenzenesulfonic acid	27176-87-0	5.00000	0.00000	
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)