

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/9/2016
Job End Date:	7/1/2016
State:	Texas
County:	Crockett
API Number:	42-105-42310-00-00
Operator Name:	EP Energy
Well Name and Number:	UL 41-10 NH
Latitude:	31.02509000
Longitude:	-101.15610000
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,266
Total Base Water Volume (gal):	14,492,478
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	0.83185	
100 Mesh Sand	FTSI	proppant					
			Silica, Quartz	14808-60-7	100.00000	0.10218	
40/70 White	FTSI	proppant					
			Silica, Quartz	14808-60-7	100.00000	0.03407	
Hydrochloric Acid (HCl)	FTSI	Acid					
			Water	7732-18-5	63.00000	0.01902	
			Hydrogen Chloride	7647-01-0	37.00000	0.01117	
FRW-200	FTSI	Friction reducer					
			Water	7732-18-5	60.00000	0.00029	
			Copolymer of acrylamide and sodium acrylate	25987-30-8	33.00000	0.00016	
			Petroleum distillate hydrotreated light	64742-47-8	30.00000	0.00014	
			Acrylamide P/W acrylic acid, ammonium salt	26100-47-0	25.00000	0.00012	
			Ammonium Chloride	12125-02-9	12.00000	0.00006	
			Surfactant	Proprietary	7.00000	0.00003	

			Hydrotreated heavy paraffinic	64742-54-7	5.00000	0.00002	
			Sorbitan, monooctadecanoate, poly(oxy-1,2-ethanediyl)	9005-67-8	5.00000	0.00002	
			Sorbitan, monooctadecanoate, poly(oxy-1,2-ethanediyl) derivs.				
			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	
			Polyethylene glycol monooleate	9004-96-0	3.00000	0.00001	
			Sorbitan Monooleate	1338-43-8	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-100	FTSI	Non-emulsifier					
			Water	7732-18-5	90.00000	0.00038	
			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 1000	FTSI	Surfactant					
			Water	7732-18-5	85.00000	0.00033	
			Ethoxylated alcohol	Proprietary	13.00000	0.00005	
			Poly-(oxy-1,2-ethanediyl)-alpha-undecyl-omega	34398-01-1	11.00000	0.00004	
			2-Propanol	67-63-0	5.00000	0.00002	
			2-Butoxyethanol	111-76-2	5.00000	0.00002	
			Methanol	67-56-1	5.00000	0.00002	
			Cyclohexene	5989-27-5	1.00000	0.00000	
FRW-1050	FTSI	Friction Reduction Agent					
			Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propen-1-yl)oxy]-, chloride (1:1), polymer with 2-propenamide	69418-26-4	35.00000	0.00009	
			Water	7732-18-5	27.00000	0.00007	
			Isoparaffinic Solvent	64742-47-8	25.00000	0.00006	
			Ethoxylated Sorbitan Monooleate	9005-65-6	6.00000	0.00002	
			Tridecyl Alcohol Ethoxylate	78330-21-9	3.00000	0.00001	
			Ammonium Chloride	12125-02-9	1.00000	0.00000	
			2-Propenamide	79-06-1	0.10000	0.00000	
FE-100L	FTSI	Scale Inhibitor					
			Water	7732-18-5	75.00000	0.00007	
			Citric Acid	77-92-9	50.00000	0.00005	
			Ethylene glycol	107-21-1	10.00000	0.00001	

CI-150	FTSI	Acid Corrosion Inhibitor					
			Isopropanol	67-63-0	30.00000	0.00002	
			Organic amine resin salt	Proprietary	30.00000	0.00002	
			Ethylene Glycol	107-21-1	30.00000	0.00002	
			Alkylene Oxide Block Polymer	Proprietary	10.00000	0.00001	
			Quaternary ammonium compound	Proprietary	10.00000	0.00001	
			Aromatic aldehyde	Proprietary	10.00000	0.00001	
			Dimethylformamide	68-12-2	10.00000	0.00001	
			Water	7732-18-5	5.00000	0.00000	
			Diethylene glycol	111-46-6	1.00000	0.00000	
			Aliphatic alcohol	Proprietary	0.10000	0.00000	
			Fatty Acid	Proprietary	0.10000	0.00000	
			Fatty Acid Salt	Proprietary	0.10000	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)