

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/29/2021
Job End Date:	7/18/2021
State:	Texas
County:	Reagan
API Number:	42-383-40906-00-00
Operator Name:	Pioneer Natural Resources
Well Name and Number:	University W2 34D 4H
Latitude:	31.29367200
Longitude:	-101.71774900
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8,826
Total Base Water Volume (gal):	20,752,904
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/Base Fluid					
			Water	7732-18-5	100.00000	89.79917	None
100 Mesh Sand	Sanrol	Proppant					
			Silica	14808-60-7	99.90000	8.08670	None
40/70 Brown Sand	Sanrol	Proppant					
			Silica	14808-60-7	99.50000	2.01894	None
Swiftwater Sodium Hypochlorite 12.5% (Registered)	Swiftwater	ClO2 Precursor					
			Water	7732-18-5	90.00000	0.01691	None
			Sodium hypochlorite	7681-52-9	15.00000	0.00282	None
			Sodium Hydroxide	1310-73-2	2.00000	0.00038	None
Flojet 22430	SNF Inc	Friction Reducer					
			Distillates (petroleum), hydrotreated light	64742-47-8	30.00000	0.01367	None
			Alcohols, C12-15-branched and linear, ethoxylated propoxylated	120313-48-6	5.00000	0.00228	None
			Poly(oxy-1,2-ethanediyl), a-(4-nonylphenyl)-w-hydroxy-, branched	127087-87-0	3.00000	0.00137	None

HA04-10-15% HCL	Reagent Chemical	Acidizing					
			Water	7732-18-5	85.00000	0.00977	None
			Hydrogen Chloride	7647-01-0	15.00000	0.00172	None
Hi-Flow 5	Downhole Chemical Solutions	High Viscosity Friction Reducer					
			Distillates, petroleum, hydrotreated light	64742-47-8	18.00000	0.00018	None
			Ammonium chloride	12125-02-9	1.50000	0.00002	None
			Acrylamide	79-06-1	1.00000	0.00001	None
IC5-Iron Control	Solnexus	Iron Control					
			Acetic Acid	64-19-7	60.00000	0.00003	None
			Water	7732-18-5	60.00000	0.00003	None
			Citric Acid	77-92-9	30.00000	0.00002	None
NE116-Plexbreak 116	Chemplex	N/E Surfactant					
			Methanol	67-56-1	50.00000	0.00001	None
			Alkyl Quarternary Ammonium Chlorides	7173-51-5	25.00000	0.00000	None
			Isopropanol	67-63-0	5.00000	0.00000	None
			Diethanolamide	111-42-2	2.00000	0.00000	None
CI200-Corrosion Inhibitor	Economy Polymers	Corrosion Inhibitor					
			Methanol	67-56-1	60.00000	0.00001	None
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.							
Other Chemical(s)	Listed Above	See Trade Name(s) List					
			Water	7732-18-5	90.00000	0.01691	
			Water	7732-18-5	85.00000	0.00977	
			Sodium hypochlorite	7681-52-9	15.00000	0.00282	
			Alcohols, C12-15-branched and linear, ethoxylated propoxylated	120313-48-6	5.00000	0.00228	
			Poly(oxy-1,2-ethanediyl), a-(4-nonylphenyl)-w-hydroxy-, branched	127087-87-0	3.00000	0.00137	
			Water	7732-18-5	60.00000	0.00003	
			Citric Acid	77-92-9	30.00000	0.00002	
			Ammonium chloride	12125-02-9	1.50000	0.00002	
			Acrylamide	79-06-1	1.00000	0.00001	
			Alkyl Quarternary Ammonium Chlorides	7173-51-5	25.00000	0.00000	
			Isopropanol	67-63-0	5.00000	0.00000	
			Diethanolamide	111-42-2	2.00000	0.00000	
			Crystalline Silica	14808-60-7	99.50000		
			Iron oxide	1309-37-1	2.00000		
			Polyacrylamide	9003-05-8	40.00000		
			Surfactant	Proprietary	10.00000		
			Hydrogen Chloride	7647-01-0	15.00000		
			Sodium chloride	7647-14-5	10.00000		
			Silica, Crystalline-Quartz	14808-60-7	15.00000		
			Sodium hydroxide	1310-73-2	1.00000		

		Sodium hypochlorite	7681-52-9	15.60000		
		Sodium hypochlorite	7681-52-9	8.00000		
		Water	7732-18-5	85.00000		
		Sodium Chloride	7647-14-5	10.50000		
		Cured Acrylic Resin	Proprietary	25.00000		
		Hydrogen Peroxide	7722-84-1	8.00000		
		Styrene-ethylene/propylene-(Styrene)(SEP(S))	68648-89-5	5.00000		
		Calcium oxide	1305-78-8	1.10000		
		Styrene-ethylene/propylene-(styrene)(SEP(S))	68648-89-5	5.00000		
		Potassium Borate	1332-77-0	5.00000		
		Water	7732-18-5	60.00000		
		Polyacrylamide	9003-05-8	40.00000		
		Sodium chlorite	7758-19-2	35.00000		
		Alcohol ethoxylate	68154-97-2	5.00000		
		Potassium Metaborate	16481-66-6	25.00000		
		Glycerol	56-81-5	10.00000		
		Clay	Proprietary	10.00000		
		Chlorine Dioxide	10049-04-4	0.40000		
		Water	7732-18-5	5.00000		
		Glycerol	56-81-5	5.00000		
		Titanium Oxide	13463-67-7	0.70000		
		Ethylene Glycol	107-21-1	25.00000		
		Sodium hydroxide	1310-73-2	2.00000		
		Petroleum distillates, hydrotreated light	64742-47-8	55.00000		
		Hydrogen Peroxide	7722-84-1	8.00000		
		Sodium hypochlorite	7681-52-9	15.00000		
		Fresh water for Oxidant Generation	7732-18-5	8.00000		
		Sodium Hydroxide	1310-73-2	2.50000		
		Tributyltetradecyl Phosphonium Chloride	81741-28-8	2.80000		
		Ethylene Glycol	107-21-1	5.00000		
		Potassium oxide	12136-45-7	12.00000		
		Sodium Borate-NALCO	13840-56-7	5.00000		
		Poly(oxy-1,2-ethanediyl), a tridecyl-w-hydroxy-, branched	69011-36-5	3.00000		
		Sodium hypochlorite	7681-52-9	12.50000		
		Water	7732-18-5	90.00000		
		Fatty acid ester	Proprietary	5.00000		
		Trade Secret	Trade Secret	50.00000		
		Sodium hydroxide	1310-73-2	2.00000		
		Petroleum Distillate	64742-47-8	60.00000		

* 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)