

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	3/5/2020
Job End Date:	3/20/2020
State:	Texas
County:	Andrews
API Number:	42-003-48163-00-00
Operator Name:	Pioneer Natural Resources
Well Name and Number:	University 6C 3H
Latitude:	32.42466100
Longitude:	-102.26744600
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	9,014
Total Base Water Volume (gal):	22,916,418
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	92.42575	None
100 Mesh Sand	Santral	Proppant					
			Silica	14808-60-7	99.90000	6.01758	None
40/70 Brown Sand	Santral	Proppant					
			Silica	14808-60-7	99.50000	1.47984	None
Plexslick 959	Chemplex Solvay Group	Nonionic Nonemulsifier					
			Hydrotreated Light Distillate	64742-47-8	20.00000	0.01008	None
HA04-10-15% HCL	Reagent Chemical	Acidizing					
			Water	7732-18-5	85.00000	0.00607	None
			Hydrogen Chloride	7647-01-0	15.00000	0.00107	None
Select Sodium Hypochlorite 12.5%	Select Energy Services	ClO2 Precursor					
			Water	7732-18-5	90.00000	0.00520	None
			Sodium hypochlorite	7681-52-9	15.00000	0.00087	None
			Sodium Hydroxide	1310-73-2	2.00000	0.00012	None
IC5-Iron Control	Solnexus	Iron Control					
			Water	7732-18-5	60.00000	0.00002	None

			Acetic Acid	64-19-7	60.00000	0.00002	None
			Citric Acid	77-92-9	30.00000	0.00001	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	85.00000	0.00607	
			Water	7732-18-5	90.00000	0.00520	
			Sodium hypochlorite	7681-52-9	15.00000	0.00087	
			Water	7732-18-5	60.00000	0.00002	
			Citric Acid	77-92-9	30.00000	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	
			Ethylene Glycol	107-21-1	25.00000		
			Sodium Hydroxide	1310-73-2	11.00000		
			Sodium hydroxyacetate	2836-32-0	3.00000		
			Potassium Metaborate	16481-66-6	25.00000		
			Chlorine Dioxide	10049-04-4	0.40000		
			Laury Alcohol Ethoxylate	68551-12-2	14.60000		
			Petroleum distillate	64742-47-8	55.00000		
			Hydrogen Peroxide	7722-84-1	8.00000		
			Sulfuric Acid	7664-93-9	5.00000		
			Sodium hypochlorite	7681-52-9	15.60000		
			Sodium chloride	7647-14-5	5.00000		
			Alcohols, C12-14-secondary, ethoxylated	84133-50-6	1.00000		
			Sodium chlorite	7758-19-2	35.00000		
			Hydrogen Peroxide	7722-84-1	8.00000		
			Water	7732-18-5	67.00000		
			Alcohols, C10-16, ethoxylated	68002-97-1	1.50000		
			Iron oxide	1309-37-1	2.00000		
			Water	7732-18-5	56.00000		
			Cinnamaldehyde	104-55-2	10.20000		
			Cured Resin	Proprietary	24.00000		
			Sodium Borate-NALCO	13840-56-7	5.00000		
			Ammonium chloride	12125-02-9	11.00000		
			Potassium oxide	12136-45-7	12.00000		

		Cured Acrylic Resin	Proprietary	25.00000		
		Sodium hypochlorite	7681-52-9	8.00000		
		Fresh water for Oxidant Generation	7732-18-5	8.00000		
		Sodium chloride (NaCl)	7647-14-5	5.00000		
		Polyoxyalkylene glycol butyl ether	9004-77-7	50.00000		
		Sodium Hydroxide	1310-73-2	51.50000		
		Silica, Crystalline-Quartz	14808-60-7	15.00000		
		Poly(oxy-1,2-ethanediyl), a tridecyl-w-hydroxy-, branched	69011-36-5	3.00000		
		Crystalline Silica	14808-60-7	99.50000		
		Water	7732-18-5	85.00000		
		Tributyltetradecyl Phosphonium Chloride	81741-28-8	2.80000		
		Sodium Chloride	7647-14-5	10.50000		
		Petroleum Distillate	64742-47-8	60.00000		
		Water	7732-18-5	94.50000		
		Glacial Acidic Acid	64-19-7	12.00000		
		Alcohols, C12-15-branched and linear, ethoxylated propoxylated	120313-48-6	5.00000		
		Sodium Hydroxide	1310-73-2	2.50000		
		Sodium Hydroxide	1310-73-2	1.60000		
		Isopropyl alcohol	67-63-0	1.50000		
		Water	7732-18-5	94.20000		
		Hydrogen Peroxide	7722-84-1	30.00000		
		Alcohols, C12-16, ethoxylated	68551-12-2	1.50000		
		Oxyalkylated alcohol - NALCO	Proprietary	5.00000		
		Clay	Proprietary	10.00000		
		Glycerol	56-81-5	5.00000		
		Glycerol	56-81-5	5.00000		
		Poly(oxy-1,2-ethanediyl), a-(4-nonylphenyl)-w-hydroxy-, branched	127087-87-0	3.00000		
		Surfactant	Proprietary	10.00000		
		Titanium Oxide	13463-67-7	0.70000		
		Glycerol	56-81-5	10.00000		
		Peroxyacetic Acid	79-21-0	20.00000		
		Alcohols, C12-14, ethoxylated	68439-50-9	1.50000		
		Surfactant	Proprietary	10.00000		
		Surfactant -	154518-36-2	1.00000		
		Diethanolamide	111-42-2	70.00000		
		Organic sulfonic acid salt	Proprietary	5.00000		
		Clay	Proprietary	10.00000		
		Calcium oxide	1305-78-8	1.10000		
		tetrasodium ethylenediamine tetraacetate	64-02-8	39.00000		
		Ethylene glycol	107-21-1	10.00000		
		Guar Gum	9000-30-0	50.00000		

		Petroleum Distillate	64742-47-8	60.00000	
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* 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)