

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	12/7/2015
Job End Date:	12/7/2015
State:	Colorado
County:	Moffat
API Number:	05-081-07799-00-00
Operator Name:	Carmony Exploration, LLC
Well Name and Number:	Duncan Ranch 902966642
Longitude:	-107.33647530
Latitude:	40.85253570
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	0
Total Base Water Volume (gal):	469,274
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
Fresh Water	Operator	Base Fluid					
			Fresh Water	7732-18-5	100.00000	87.70220	Density = 8.340
HCl > 10%	Halliburton	Base Fluid					
			NA	NA			
BE-7(TM), CAT-3 ACTIVATOR, CL-22 UC, CL-31 CROSSLINKER, Cla-Web(TM), FR-76, MO-67, PROP-PREMIUM-20/40, BULK, SAND-COMMON WHITE-100 MESH, SSA-2, 100 LB SACK (100002158), VICON NF BREAKER, WG-35 GELLING AGENT	Halliburton	Activator, Additive, Biocide, Breaker, Crosslinker, Friction Reducer, Gelling Agent, pH Control Additive, Proppant					
			NA	NA			
LP 65, OilPerm FMM 7	Halliburton	Scale Inhibitor, Surfactant					
			NA	NA			
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.							
		Hazardous and Non-Hazardous Ingredients					

		Sintered bauxite	1318-16-7	100.00000	7.29699	
		NFIDB:HCl > 10%	NFIDB:HCl > 10%	100.00000	3.20535	
		Crystalline silica, quartz	14808-60-7	100.00000	0.89889	
		Aluminum silicate	1302-76-7	10.00000	0.72970	
		Water	7732-18-5	100.00000	0.43110	
		Aluminum oxide	1344-28-1	5.00000	0.36485	
		Crystalline silica, cristobalite	14464-46-1	5.00000	0.36485	
		Guar gum	9000-30-0	100.00000	0.20661	
		Sodium chloride	7647-14-5	30.00000	0.07985	
		Iron oxide	1309-37-1	1.00000	0.07297	
		Titanium dioxide	13463-67-7	1.00000	0.07297	
		Potassium formate	590-29-4	60.00000	0.05545	
		Borate salts	Confidential	60.00000	0.05545	
		Ammonium salt	Confidential	60.00000	0.03079	
		Chlorous acid, sodium salt	7758-19-2	10.00000	0.02421	
		Potassium metaborate	13709-94-9	60.00000	0.02054	
		Poly(oxy-1,2-ethanediyl),.alpha.-isodecyl-.omega.-hydroxy-	61827-42-7	10.00000	0.01295	
		Fatty acids, coco, reaction products with ethanolamine, ethoxylated	61791-08-0	10.00000	0.01295	
		Isopropanol	67-63-0	10.00000	0.01295	
		Citrus, extract	94266-47-4	10.00000	0.01295	
		Sodium hydroxide	1310-73-2	30.00000	0.01119	
		EDTA/Copper chelate	Confidential	30.00000	0.01098	
		Modified bentonite	Confidential	5.00000	0.01033	
		Sodium hypochlorite	7681-52-9	30.00000	0.00941	
		Terpene hydrocarbon by-products	68956-56-9	5.00000	0.00647	
		Acrylamide acrylate polymer	Confidential	30.00000	0.00338	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
		Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.00338	
		Quaternary amine	Confidential	5.00000	0.00313	
		Ammonium Chloride	12125-02-9	10.00000	0.00262	
		Silica, amorphous - fumed	7631-86-9	1.00000	0.00207	
		Ethoxylated nonylphenol	Confidential	1.00000	0.00207	
		Potassium hydroxide	1310-58-3	5.00000	0.00171	
		Sodium glycollate	2836-32-0	1.00000	0.00092	
		Sodium carboxymethyl cellulose	9004-32-4	1.00000	0.00092	
		Acrylate polymer	Confidential	1.00000	0.00092	
		Amine salts	Confidential	0.10000	0.00010	

* 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)

