Hydraulic Fracturing Fluid Product Component Information Disclosure

07/06/2012
California
Kern
04-030-47679
Vintage Prod Of Cal
Goodshow 14H
-119.34129
35.63039
NAD27
Oil
8,144
238,980

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	100.00%	69.58893%	
Alpha 125	Baker Hughes	Biocide	Glutaraldehyde	111-30-8	30.00%	0.00341%	SmartCare Product
Enzyme G-I	Baker Hughes	Breaker	Hemicellulase Enzyme Concentrate	9025-56-3	3.00%	0.00439%	SmartCare Product
			Water	7732-18-5	97.00%	0.14179%	
BC-3	Baker Hughes	Breaker Catalyst	No Hazardous Ingredients	Trade Secret	100.00%	0.03333%	
BF-7L, Tote	Baker Hughes	Buffer	Potassium Carbonate	584-08-7	60.00%	0.15587%	SmartCare Product
			Potassium Hydroxide	1310-58-3	1.00%	0.00260%	
			Water	7732-18-5	60.00%	0.15587%	
BF-7L	Baker Hughes	Buffer	Potassium Carbonate	584-08-7	60.00%	0.12480%	SmartCare Product
			Potassium Hydroxide	1310-58-3	1.00%	0.00208%	
			Water	7732-18-5	60.00%	0.12480%	
XLW-56, 330 gal tote	Baker Hughes	Crosslinker	D-Glucitol	50-70-4	10.00%	0.01962%	
			Glyoxal	107-22-2	30.00%	0.05886%	
			Sodium Hydroxide	1310-73-2	5.00%	0.00981%	
			Sodium Tetraborate	1330-43-4	10.00%	0.01962%	
GW-4LBF	Baker Hughes	Gelling Agent	Guar Gum	9000-30-0	60.00%	0.42012%	SmartCare Product
			Paraffinic Petroleum Distillate	64742-55-8	60.00%	0.42012%	

			Petroleum Distillate	64742-47-8	60.00%	0.42012%	
Sand, White, 20/40	Baker Hughes	Proppant	Crystalline Silica (Quartz)	14808-60-7	100.00%	19.47935%	
Sand, White, 100 mesh	Baker Hughes	Proppant	Crystalline Silica (Quartz)	14808-60-7	100.00%	0.32829%	
Super LC, 20/40	Baker Hughes	Proppant	Hexamethylenetetramine	1009-7-0	0.01%	0.00080%	
			P/F Resin	9003-35-4	5.00%	0.40020%	
			Silicon Dioxide (Silica Sand)	14808-60-7	97.00%	7.76382%	
GasFlo G, 330 gal tote	Baker Hughes	Surfactant	Methanol	67-56-1	30.00%	0.04489%	SmartCare Product
			Mixture of Surfactants	Trade Secret	60.00%	0.08977%	
			Water	7732-18-5	50.00%	0.07481%	
Ingredients shown a	above are sub	ject to 29 CFR 1910.1200	(i) and appear on Material Safety Data	Sheets (MSDS). Ingredier	nts shown below are	Non-MSDS.	
			Acetyl Triethyl Citrate	77-89-4		0.0333334527%	
			Methanol	67-56-1		0.0000284413%	
			Sodium Bicarbonate	144-55-8		0.0700201575%	
			Water	7732-18-5		0.0085323790%	

^{*} Total Water Volume sources may include fresh water, produced water, and/or recycled water

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

^{**} Information is based on the maximum potential for concentration and thus the total may be over 100%