Hydraulic Fracturing Fluid Product Component Information Disclosure

4/11/2013
4/17/2013
Texas
Hemphill
42-211-35142-00-00
MEWBOURNE OIL COMPANY
Webb Leslie Et Al `R` 1926H
-100.50753000
35.88108000
NAD27
NO
1,236,396
124,521,375







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	85.83470	
Nitrogen	Baker Hughes	Nitrogen					
			Liquid Nitrogen	7727-37-9	100.00000	10.23131	
Sand, White, 20/40	Baker Hughes	Proppant					
			Crystalline Silica (Quartz)	14808-60-7	100.00000	3.62262	
ClayCare, tote	Baker Hughes	Clay Control					
			Choline Chloride	67-48-1	75.00000	0.07021	SmartCare Product
			Water	7732-18-5	30.00000	0.02808	SmartCare Product
NE-900, tote	Baker Hughes	Non-emulsifier					
			Methanol	67-56-1	30.00000	0.02557	SmartCare Product
			Oxyalkylated Alkylphenol	9016-45-9	10.00000	0.00852	SmartCare Product
Clay Master-5C	Baker Hughes	Clay Control					
			Oxyakylated Amine Quat	138879-94-4	60.00000	0.02919	
MaxPerm-20A, bulk	Baker Hughes	Friction Reducer					
			Aliphatic Hydrocarbon	Trade Secret	30.00000	0.02188	SmartCare Product
			Oxyalkylated Alcohol	Trade Secret	5.00000	0.00365	SmartCare Product
GBW-5	Baker Hughes	Breaker					
			Ammonium Phosphate	7727-54-0	100.00000	0.00916	SmartCare Product
Alpha 1427	Baker Hughes	Biocide					

			Glutaraldehyde	111-30-8	30.00000	0.00350	SmartCare Product		
			Didecyl Dimethyl Ammonium Chloride	7173-51-5	10.00000	0.00117	SmartCare Product		
			Quaternary Ammonium Compound	68424-85-1	5.00000	0.00058	SmartCare Product		
			Ethanol	64-17-5	5.00000	0.00058	SmartCare Product		
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 Chemicals							
			Water	7732-18-5		0.07518			
			Copolymer	Trade Secret		0.03409			

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)

^{*} 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%