

Hydraulic Fracturing Fluid Product Component Information Disclosure: Maximum Ingredient Weight in Pounds Format



**BAKER
HUGHES**

	07/10/2012
Last Fracture Date	
State:	California
County:	Kern
API Number:	04-030-46759
Operator Name:	Aera Energy Llc
Well Name and Number:	521C1-1
Longitude:	-119.7755654
Latitude:	35.52757
Long/Lat Projection:	NAD83
Production Type:	Oil
True Vertical Depth (TVD):	1,610
Total Chemical Mass (lbs)*:	507,734
Total Max. Ingredient Mass (lbs)*:	508,054
Total Product Volume (gal)*:	50,056
Total Water Volume (gal)*:	43,218

Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Weight in HF Fluid (lbs mass)	Comments
Water	Operator	Carrier	Water	7732-18-5	100.00%	360,343	
X-Cide 207	Baker Hughes	Biocide	2-Methyl-4-Isothiazolin-3-One	2682-20-4	5.00%	0.900000	
			5-Chloro-2-Methyl-4-Isothiazolin-3-One	26172-55-4	10.00%	1.800000	
			Crystalline Silica: Cristobalite	14464-46-1	1.00%	0.180000	
			Crystalline Silica: Quartz (SiO2)	14808-60-7	1.00%	0.180000	
			Diatomaceous Earth, Calcined	91053-39-3	60.00%	10.800000	
			Magnesium Chloride	7786-30-3	5.00%	0.900000	

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

* Total Chemical Mass is the total amount of Trade Name volume, supplied to the customer, converted to pounds.

* Total Max. Ingredient Mass is the summation of all masses listed in the Maximum Ingredient Weight (pounds) column.

* Total Product Volume is the total amount of Water plus Trade Name volume in gallons supplied to the customer or Baker Hughes.

* Total Water Volume is the total amount of water volume in gallons used on the hydraulic fracture treatment.

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

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