

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



**BAKER
HUGHES**

| | |
|------------------------------------|-----------------|
| | 07/09/2012 |
| Last Fracture Date | |
| State: | California |
| County: | Kern |
| API Number: | 04-030-47653 |
| Operator Name: | Aera Energy Llc |
| Well Name and Number: | 521N2-1 |
| Longitude: | -119.7752425 |
| Latitude: | 35.5271148 |
| Long/Lat Projection: | NAD83 |
| Production Type: | Oil |
| True Vertical Depth (TVD): | 1,500 |
| Total Chemical Mass (lbs)*: | 775,986 |
| Total Max. Ingredient Mass (lbs)*: | 776,503 |
| Total Product Volume (gal)*: | 73,901 |
| Total Water Volume (gal)*: | 61,866 |

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% | 515,826 | |
| X-Cide 207 | Baker Hughes | Biocide | 2-Methyl-4-Isothiazolin-3-One | 2682-20-4 | 5.00% | 1.200000 | |
| | | | 5-Chloro-2-Methyl-4-Isothiazolin-3-One | 26172-55-4 | 10.00% | 2.400000 | |
| | | | Crystalline Silica: Cristobalite | 14464-46-1 | 1.00% | 0.240000 | |
| | | | Crystalline Silica: Quartz (SiO2) | 14808-60-7 | 1.00% | 0.240000 | |
| | | | Diatomaceous Earth, Calcined | 91053-39-3 | 60.00% | 14.400000 | |
| | | | Magnesium Chloride | 7786-30-3 | 5.00% | 1.200000 | |

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* 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)