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

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| Last Fracture Date | 09/20/2012 |
| State: | California |
| County: | Kern |
| API Number: | 04-030-47964 |
| Operator Name: | Aera Energy Llc |
| Well Name and Number: | 927S-28 |
| Longitude: | -119.7216414 |
| Latitude: | 35.4575152 |
| Long/Lat Projection: | NAD83 |
| Production Type: | Oil |
| True Vertical Depth (TVD): | 1,660 |
| Total Chemical Mass (lbs)*: | 580,585 |
| Total Max. Ingredient Mass (lbs)*: | 580,812 |
| Total Product Volume (gal)*: | 58,365 |
| Total Water Volume (gal)*: | 51,240 |

**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% | 427,229 | |
| X-Cide 207 | Baker Hughes | Biocide | 2-Methyl-4-Isothiazolin-3-One | 2682-20-4 | 5.00% | 1.500000 | |
| | | | 5-Chloro-2-Methyl-4-Isothiazolin-3-One | 26172-55-4 | 10.00% | 3.000000 | |
| | | | Crystalline Silica: Cristobalite | 14464-46-1 | 1.00% | 0.300000 | |
| | | | Crystalline Silica: Quartz (SiO2) | 14808-60-7 | 1.00% | 0.300000 | |
| | | | Diatomaceous Earth, Calcined | 91053-39-3 | 60.00% | 18.000000 | |
| | | | Magnesium Chloride | 7786-30-3 | 5.00% | 1.500000 | |

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| | | | Magnesium Nitrate | 10377-60-3 | 10.00% | 3.000000 | |
| Enzyme G-I | Baker Hughes | Breaker | Hemicellulase Enzyme Concentrate | 9025-56-3 | 3.00% | 8.004288 | SmartCare Product |
| | | | Water | 7732-18-5 | 97.00% | 258.805312 | |
| Clay Master-5C (Tote) | Baker Hughes | Clay Control | Oxyakylated Amine Quat | 138879-94-4 | 60.00% | 365.951280 | |
| XLW-10A | Baker Hughes | Crosslinker | Ethylene Glycol | 107-21-1 | 30.00% | 226.800000 | SmartCare Product |
| | | | Sodium Hydroxide | 1310-73-2 | 10.00% | 75.600000 | |
| | | | Sodium Tetraborate | 1330-43-4 | 30.00% | 226.800000 | |
| GW-3LDF | Baker Hughes | Gelling Agent | 1-Butoxy-2-Propanol | 5131-66-8 | 5.00% | 73.689000 | SmartCare Product |
| | | | Cyrstalline Silica, Quartz (SiO2) | 14808-60-7 | 5.00% | 73.689000 | |
| | | | Guar Gum | 9000-30-0 | 60.00% | 884.268000 | |
| | | | Isotridecanol, ethoxylated | 9043-30-5 | 5.00% | 73.689000 | |
| | | | Paraffinic Petroleum Distillate | 64742-55-8 | 30.00% | 442.134000 | |
| | | | Petroleum Distillates | 64742-47-8 | 30.00% | 442.134000 | |
| Sand, White, 20/40 | Baker Hughes | Proppant | Crystalline Silica (Quartz) | 14808-60-7 | 100.00% | 150,120.000000 | |
| ScaleSorb 3, (25# pail) | Baker Hughes | Scale Inhibitor | Amino Alkyl Phosphonic Acid | Trade Secret | 30.00% | 30.000000 | SmartCare Product |
| | | | Crystalline Silica: Quartz (SiO2) | 14808-60-7 | 1.00% | 1.000000 | |
| | | | Diatomaceous Earth, Calcined | 91053-39-3 | 100.00% | 100.000000 | |
| | | | Phosphonic Acid | 13598-36-2 | 1.00% | 1.000000 | |
| **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.** | | | | | | | |
| | | | 2-Butoxy-1-Propanol | 15821-83-7 | | 1.179024 | |
| | | | Water | 7732-18-5 | | 151.200000 | |

* 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)