

JUN 11 2018

Attachment 1
Publicly Available Trade Secret Justification

MONTANA BOARD OF OIL &
GAS CONSERVATION • BILLINGS

To demonstrate that the information for which confidentiality is sought constitutes trade secrets or confidential commercial information, you must respond to the following questions and provide the information specified and any supporting documentation (such as previous confidentiality determinations):

1. To your knowledge, has the identity of the ingredient, its concentration, or both, as appropriate, been publicly disclosed:

Of the ingredients contained within Surf-Flo 420W for which confidentiality protection is sought, two have been identified in hydraulic fracturing Surfactants and a variety of other product ingredients in public documents. To my knowledge the ingredients have not been identified as being a constituent of this particular type of product in the FracFocus database or any other public disclosure forum by IOFS or any other party. I am not able to find any indication that the other ingredients are identified as being components of a hydraulic fracturing surfactant in any public source. There are nonhazardous ingredients within the product that have been disclosed by IOFS and other service companies using the systems approach format, but none of these components have never been associated with surfactant products. The ingredients for which IOFS seeks confidentiality protection and their use collectively in a hydraulic fracturing surfactant product does not appear in any public source. The chemical composition information provided to the BOGC in Attachment 4 is not published or otherwise available to the public. Information about product formulation is only provided to third parties that have confidentiality agreements in place with IOFS that ensure information provided by IOFS will not be improperly disclosed to any other parties and to regulators with jurisdiction over the use of the products.

- a. Pursuant to any federal or state law or regulation?

Other than as previously mentioned, the identity of the ingredients and their use in a surfactant product has not been publicly disclosed by IOFS or, to my knowledge, anyone else, pursuant to any federal, state, local law or regulation. To the best of our knowledge the full chemical composition has not been previously disclosed via the FracFocus database by anyone else.

- b. In professional trade publications?

IOFS has not disclosed the ingredient identity for Surf-Flo 420W in any professional trade publication. IOFS does not publicly disclose any chemical composition for any of its products in any trade publications or any publications.

- c. Through any other media or publications available to the public or your competing oil and gas operators, or service companies?

The identity of the ingredients for which confidentiality protection is sought, and use in at least one different hydraulic fracturing surfactant product, can be found in public documentation. To my knowledge, the ingredients do not appear together and none of the other components appears in public documentation associated with surfactant in hydraulic fracturing treatments. The ingredients have not been publicly disclosed by IOFS or, to my knowledge, anyone else, through any other media or publications available to the public or our competitors.

In order to make the above determinations, I used the CAS numbers of the products to search the FracFocus database, and reviewed multiple entries per page of results. As previously mentioned, I found two CAS numbers in different surfactant products. I then searched additional entries on each page and determined that the other ingredients were not associated with this ingredient. I reviewed composition of other known surfactants, and found that none of the products contain the ingredients in question. I then performed a literature search using the CAS numbers and the terms "stimulation", "surfactant", and "flowback" separately and combined. No documents could be found with the ingredients to surfactant products in oil and gas well stimulation treatments. I was not able to locate any documentation that mentions all ingredients together for any purpose.

2. To what extent is the identity of the ingredient, concentrations, or both, as appropriate, are known within the company? Please describe in detail how this information is housed in your company and what steps your employees, officers, agents, and directors take to prevent disclosure of the information to parties outside of your company.

IOFS maintains the composition information as confidential business information by providing limited internal access thereto and requiring employment of non-disclosure confidentiality agreements for anyone to whom the information is disclosed. Electronic copies of proprietary additive composition information are protected and maintained on a secure internal network, within a file structure to which access is again restricted to only the regulatory group. Information about the chemical composition of our products is maintained in limited-access secure database. Access to this information is granted strictly on a need-to-know basis if access is required for job function such as chemical regulatory compliance. Otherwise, only the product trade names and information included in the SDS sheets and/or listed in the "Available to Public" non-confidential disclosure is available to employees.

3. **Has any other federal or state entity determined that the ingredient, concentrations, or both, as appropriate, is not entitled to protection from public disclosure? If so, provide a copy of the agency's determination, along with any explanation as to why the Board should not make a similar determination. Provide any other information concerning prior requests for confidentiality and/or regulatory body determinations you believe is relevant to the Board's determination.**

No other regulatory body, federal, state, tribal, or local, determined that the ingredient identity is not entitled to protection from public disclosure as trade secret or confidential commercial information. Instances in which the information may be known by outside parties are strictly limited to situations in which disclosure is required by law. These include disclosures in circumstances consistent with the OSHA hazard communication standard (in which case disclosure is required in order to address a medical emergency or other medical situation) or circumstances consistent with EPA reporting regulations (in which case disclosure is required in the event of an environmental release). There have been no regulatory disclosures required by law to date for this product.

4. **How is the identity of the ingredient, concentrations, or both, as appropriate, commercially valuable to the owner, operator, or service company? In answering this question, please describe why the ingredient, concentrations, or both, as appropriate, is not common knowledge in the industry, including any novel or unusual aspects of the ingredient in this application.**

The composition of any specialty, performance, and innovative products are of high value to IOFS and to its competitors. Divulgence of the formulation provides a distinct advantage to competitors who offer similar products and services. Disclosure of the trade secret components of this product would cause loss of our competitive advantage that this product demonstrates and would allow other companies to take advantage of our substantial investment of money, corporate resources in innovation, testing, and product development without allowing or providing a mechanism to recuperate these costs, negatively impacting IOFS's business.

IOFS has invested considerable time, money, and effort in the research and development of subject fracture performance product component. Public disclosure of the composition of Surf-Flo 420W could damage the commercial advantage IOFS realizes from maintaining confidentiality. The composition of the proprietary blend derives economic value from not being generally known and readily ascertainable by competitors who could garner economic value from the disclosure of the blend's chemical composition. The chemical components for which confidentiality protection is sought is designed to reduce interfacial and surface tensions during fracking and production. The chemical composition of the product provides a very functional product at a lower cost.

5. **Describe the ease or difficulty with which the complete composition of the fracturing fluid, including the ingredient identity, concentrations, or both, as appropriate, could be determined from public disclosure. Specifically, explain why use of the "systems approach" format would not adequately protect your proprietary interest.**

Public disclosure of the components for Surf-Flo 420W would provide a clear and direct path for competitors to understand and replicate our product. This composition is new and unique in well stimulation, but including the identity of each component or combination among a large list of chemicals under a "system approach" disclosure would provide our customer with knowledge of the primary active ingredients in the product. The components identified above have never been publically linked to stimulation surfactant products in combination and can provide valuable information. The systems approach is a useful tool in safeguarding proprietary information, but including components in Attachment 4 of this document eliminates the benefit of that style of disclosure by disclosing ingredients in a time when the frac fluids used are leaner and more efficient with less chemicals being used in the frac fluid. With fewer chemicals it is significantly easier to identify chemical compositions. For this reason, the composition merits treatment as a trade secret.

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