

# SSF

## Technical Data Sheet

### SSF (Environmentally Friendly Mutual Solvent)

Heartland Energy Group, Ltd. is pleased to offer an environmentally friendly and direct replacement for EB (2-butoxyethanol); commonly referred to as "Butyl" or mutual solvent. Heartland's SSF is a colorless and highly pure solvent replacement that is derived from renewable and sustainable sources. SSF is a great alternative to formulations where non petroleum based and "green" ingredients are desired. Benefits of SSF include its purity, lack of irritation and sensitization and environmentally friendly nature.

Due to the nature of SSF's structure, SSF can attack both water soluble dirt and water insoluble oils and greases making it a valuable tool for the oilfield. SSF is compatible with Oil Safe AR®. SSF is non-DOT regulated, non-fuming, OSHA and EPA compliant. SSF qualifies as an EPA approved Designed for the Environment product.

SSF can be used as a key "green" replacement ingredient in the production of cleaners, degreasers, water-based coatings, solvent based coating systems and acid-solvent combination treatment systems for the oilfield.

#### TYPICAL PHYSICAL PROPERTIES:

Appearance and Color	Colorless
Odor	Odorless
Solubility in water	100%
Initial Boiling Point	281° ± 5°F
Flashpoint	Does Not Ignite
Specific Gravity	1.04 ± 0.04

#### DIRECTIONS FOR USE:

Recommended Dilution Rates: Blend 1-10% by volume with Oil Safe AR® based on the severity of the build-up and the reaction rate required for the project.

Blending ratios may vary based on specific applications and recommendations from your consultants at Heartland Energy Group, Ltd.

Note: As with all chemistries, emulsion testing is always recommended prior to field application.

#### FEATURES AND BENEFITS:

- An excellent replacement for mutual solvents
- High solvency characteristics that penetrate hydrocarbon deposits
- Water soluble solvent
- Listed on the EPA's Cleangredient database and Dfe Program
- Increased penetration capabilities for paraffin and sludge removal
- Enhanced removal of fines
- An excellent alternative for the use of Xylene in acid treatments
- Derived from an environmentally sustainable and renewable process
- Water wets formations
- Penetrates hydrocarbon deposits
- An excellent surface tension reducer

#### STORAGE AND HANDLING:

SSF has a storage life of better than one year. Keep container closed when not in use. As with all chemical products and materials, take care as to where you store them. Safety glasses are suggested for use when handling this product. No special gloves or protective equipment are required when handling this product.

#### PACKAGING:

SSF is packaged in 5 gallon to 275 gallon containers. Bulk quantities are available upon request.

*Recommendations given in this data sheet are based on tests believed to be reliable. However, the use of the information is beyond the control of Heartland Energy Group, Ltd., and no guarantee, expressed or implied is made to the results obtained if not used in accordance with directions or established safe practice. The buyer must assume all responsibility, including injury or damage from the misuse of the product as such, or in combination with other materials. This bulletin is not to be taken as a license to operate under or recommendation to infringe any patent.*