

# VerdActant® SHSFH1-1020



## VERDACTANT®

VerdActant® is an advanced proprietary formulation designed to be used as an environmentally safe, non-hazardous additive during fracture stimulation in well completion. Powered by NRGMax®, VerdActant 1020 is a green surfactant that is inherently safe for the environment, while improving fracture effectiveness and overall well performance. By leveraging advanced frac fluid chemistry, NRGMax demonstrates multi-faceted possibilities for improving environmental performance and increasing production. Our formula does not contain marine pollutants, is nontoxic, and is comprised of ingredients from the EPA's Safer Choice ingredients list.

VerdActant covers the formation more efficiently and promotes better fluid recovery and flow. Essential to our one-of-a-kind blend is a non-ionic surfactant package, which shifts the wettability of porous surfaces to more water wetting to displace the adhered oil on reservoir rock and promote spontaneous imbibition. VerdActant can improve results in completions, restims, water floods, and more.

### PRODUCT BENEFITS

- Water-soluble product, which allows for premixing in the frac tank or in-line during pumping of treatment fluid
- Proprietary blend of surfactants and NRGMax® that is compatible with most frac fluid systems
- Excellent non-emulsifier
- Helps remediate potential damage to formation
- Post-stimulation well productivity increases with improved recovery
- IFT at 1GPT – 96k TDS: 1.656 mN/m
- Contact Angle at 1GPT – 96k TDS: 32.3 CA(M) degrees

### ELEVATED PERFORMANCE

- **Increased Tolerance to Salinity and Heat:** When VerdActant is utilized for flowback and waterflood applications, the surfactant is shown to have significantly strengthened wettability alteration capabilities, and in waters of widely varying composition and salinity.
- **Reduced Surface Tension:** VerdActant lowers the surface tension of the liquid, which reduces the energy required to overcome the liquid/gas interface and expand the interfacial area.
- **Reduced Interfacial Tension:** VerdActant decreases the interfacial tension of the oil and treatment fluid by reducing the energy required to overcome the resistance of their interface. Combining this with the ability of the surfactant to alter rock wettability to a more water wet state displaces surface oil deposits more efficiently.
- **Improved matrix and proppant pack clean-up.**



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Powered by  
**NRGMAX**®

## PHYSICAL PROPERTIES

PROPERTY	SHSFH1-1020
Appearance	Clear, Liquid
Color	Colorless to light yellow
Odor	Mild
pH-value	6 to 8
Density @ 15°C (59°F)	8 – 9 lbs./gal
Solubility	Soluble in water

## RECOMMENDED APPLICATION

VerdActant can be applied at approximately 1gpt to 2gpt or 1-2 gallons/1000 gallons (gpt) of frac fluid for best results.

## COMPATABILITY

VerdActant is nonionic and designed to be compatible with cationic, anionic, and amphoteric additives. A compatibility test is suggested before use.

## PACKAGING

330 Gallon One-Way Totes  
Bulk ISO Transport

## SAFETY AND HANDLING

Before handling, storage, and use of this material, please refer to the Safety Data Sheet (SDS) for details.

As with all industrial chemicals, contact with eyes or skin should be avoided (see SDS). Seek medical attention when required. See SDS for first-aid measures and/or accidental release.

