Armovis EHS-W

Armovis EHS-W is based on the Armovis EHS viscoelastic surfactant but modified to have a much lower pour-point to facilitate the use of the material in cold climate regions. Providing unsurpassed viscosification of sand, gravel or depleted acid to temperatures up to 350°F (180°C), this product can be used as an effective viscosifying or diverting agent in oilfield stimulation applications.

Characteristics

Activity	39.5 - 43.5 %
Appearance	Yellow liquid
pH	9 (1 % in IPA/water)
Pour point	-15 °C

Specifications

Amine HCl	0.3 - 1.0 (MW =460) %
Appearance	Amber to yellow liquid at 25°C
Color	≤ 10 Gardner
Activity	39.5 - 43.5 (MW =562) meq/g
Free Amine	0.8 - 1.5 (MW =424) meq/g
Moisture	18.0 - 21.0 %

Additional information

Armovis EHS-W is a patented viscoleastic surfactant (VES) that offers a range of unique benefits when used in stimulation of hydrocarbon-bearing reservoirs. This product is related to Armovis EHS but uses a different solvent package to winterize and reduce the pour-point to between 5°F and 0°F (-15°C and -18°C), enabling the user to handle the material more easily in polar regions and those temperate zones that experience harsh winters. Armovis EHS-W is designed to address some of the technical limitations of VES solutions used in the field today. In particular, the ability of this product to viscosify to high temperatures for different stimulation purposes is highly differentiating. The product has been shown to develop excellent wormhole architecture with minimal face dissolution, maintaining reservoir integrity while stimulating the well to the maximum extent. Produced largely from renewable raw materials, Armovis EHS-W is a sustainable product with relatively low environmental impact. Features -The ability to carry sand and proppants in fracturing and during acid stimulation operations. divert acid at temperatures up to 350°F (180°C). -The ability to treat lower temperature reservoirs at a lower dose of VES than other solutions available. -A product that performs equally as well in limestone and dolomite reservoirs. -Easy field formulation of a single component viscosifier that readily blends into acid without viscosifying until neutralized in the reservoir. -Cold-climate stable, remaining a pumpable solution to temperatures of 5°F (-15°C) or lower. -Better iron tolerance than other VES-based systems for acidizing -Easy clean-up of well post-acidizing using either a mutual solvent overflush, an internal breaker, or environmental breakers such as crude oil emulsification or dissolution in reservoir brines. -The ability to viscosify many organic acids that can also be used for acidizing operations. -Significantly enhanced environmental profile, readily biodegradable and a generally low level of ecotoxicity. -A more sustainable solution for the environment.

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