

D-SPERSE

D-SPERSE surfactant is a mixed surfactant solution with excellent dispersion and surface tension reducing properties. D-SPERSE additive is used in the BREAKFREE* and BREAKDOWN* systems to aid in the cleanup of FLOPRO* NT filtercakes. D-SPERSE surfactant disperses active clays in the filtercake and acts as a fluid recovery aid by lowering the resistance to flow through reduced surface tension.*

Typical Physical Properties

Physical appearance.....	Clear, nearly colorless
Specific gravity	0.94
pH (1% solution)	5
Solubility in water.....	Soluble
Flash point.....	90°F (32°C) (PMCC)
Surfactant type.....	Non-ionic

Applications

D-SPERSE surfactant can be used at relatively low concentrations in BREAKFREE and BREAKDOWN breaker systems to act as a dispersant and reduce the surface tension of water and brine solutions. Surface tension is especially important in tight, low-permeability and low-pressure formations where high capillary forces impede fluid recovery. Unlike many conventional, hydrocarbon-base surfactants, D-SPERSE surfactant in brine has a relatively high interfacial tension with oil, resulting in reduced tendency toward oil emulsification. D-SPERSE additive leaves the surface of sandstone water-wet. By reducing interfacial tension, D-SPERSE surfactant promotes water-wetting and dispersion of residual solids, especially active solids. This promotes flow-back of the residual filtercake as individual particles instead of as a large mass. The typical concentration for use of D-SPERSE surfactant as a dispersant or fluid recovery aid is 0.25 -1.0% volume, or 1 drum per 120 bbl.

D-SPERSE additive will generate foam in aqueous solutions, which may or may not be a desirable property, depending on its application. As a powerful surfactant, D-SPERSE additive will produce stable foams in aqueous media, including brines and mineral acid. To reduce the foaming tendency, minimal agitation and a defoamer is recommended.

Advantages

- Effective in lowering surface tension at relatively low concentrations
- Aids in fluid recovery
- Disperses active clays in FLOPRO NT filtercakes
- Will not alter wettability
- Effective in many different brines
- Does not typically induce oil emulsification

Limitations

- Produces stable foam at high concentrations
- Not recommended to use with non-emulsifiers as higher surface tensions may result

Toxicity and Handling

Bioassay information is available upon request.

Handle as an industrial chemical, wearing protective equipment and observing the precautions as described in the Material Safety Data Sheet (MSDS).

Packaging and Storage

D-SPERSE surfactant is packaged in 55-gal (208-L) drums and is available from all M-I SWACO plant and warehouse locations.

It should be stored at, or near room temperature. If frozen, warming to 25°C (77°F) with mild agitation will result in a clear, homogeneous fluid with no loss in properties.

This document is supplied solely for informational purposes and M-I SWACO makes no guarantees or warranties, either expressed or implied, with respect to the accuracy and use of this data. All product warranties and guarantees shall be governed by the Standard Terms of Sale.

