

# TRAMFLOC, INC.

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## Technical Information Bulletin

### TRAMFLOC® 1062 Anionic Dry Friction Reducer for Saline Brines

#### *Product Description*

Tramfloc® 1062 is a fast-hydrating, concentrated high-performance dry friction reducer (DFR) for stimulation fluids in both fresh water and brines with low to higher salinity. With a low dosage (1 to 2 pptg), it reduces friction pressure in excess of 70%. As a solid powder product, Tramfloc® 1062 has significant logistic and storage benefits. It also has important economic and environmental advantages versus conventional emulsion-based friction reducers. Compared with emulsion-type (ePAM) products, Tramfloc® 1062 is lower cost per pound of active friction reducer polymer, and also it has no organic solvents or harsh surfactant chemicals. Two pounds of this formulation equal one gallon of the emulsion type friction reducer, helping to reduce drilling costs. Tramfloc® 1062 hydrates rapidly in fresh water and in typical light brine solutions to achieve maximum performance in 2 minutes or less. This is particularly useful for well stimulation where fast product dissolution is required. This dry friction reducer can be fully activated when mixed with fresh water or brines with low to high salinity.

Solid Powder Product – Easily transported and stored solid powdered product

High Efficiency – Fast hydration that is suitable for added “on-the-fly” application. Superior friction reduction performance as compared to other commercial products.

High Compatibility – Compatible with most commonly used non-ionic and anionic chemical additives in stimulation/fracturing fluids and in typical brines.

Environmentally Improved – Contains no organic solvents or surfactant chemicals.

Cost Effective – Low treatment cost and low dosage (1-2 pptg). Two pounds equal one gallon of emulsion.

#### *Applications*

- Effective friction reduce additive to save pumping power in well stimulations
- Applicable to operations that require rapid product hydration
- Cost-effective replacement of conventional liquid-based FR
- Where shipping less chemical product is desired - Tramfloc® 1062 has more than twice the active friction reducer concentration as emulsion ePAM products
- Use in fresh water and up to higher brine conditions
- Ideal for environmentally sensitive areas
- Compatible with common stimulation fluid additives

#### *Properties*

FORM	Solid powder	DENSITY	0.45 - 0.7 g/cm <sup>3</sup>
COLOR	White	WATER SOLUBILITY	Soluble
ODOR	None	FLASH POINT	>100 (>212 °F)
pH	6 - 8 (0.1% solution)	FREEZE POINT	Not determined.

#### *Packaging and Storage*

Available in 2000# sacks. Can be stored for 12 months. Prevent moisture and humidity exposure.

### ***Safety and Health***

Spills of polymer are extremely slippery. Precautions should be taken to prevent them from entering lakes or streams. Tramfloc® Polymer Cleaner 348 can be used to remove residue from equipment and floors. Polymer can be flushed with copious amounts of water and disposed of according to local regulations or treated with an absorbent material, then collected for subsequent legal disposal.

Tramfloc® 1062 has been shown to exhibit a low order of toxicity. Nevertheless, precautions should be taken to prevent inhalation, ingestion or contact with skin or eyes. Observing basic industrial hygiene precautions should prevent any health or safety hazards.

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