

# TRAMFLOC, INC.

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## Technical Information Bulletin

### TRAMFLOC® 1169 DEFOAMER for PHOSPHATE PRODUCTION

#### *General Product Specifications*

Tramfloc® 1169 is both a defoamer and wetting agent for aqueous solutions, especially at low pH conditions.

Composition:	Anionic
Appearance:	Liquid
Color:	Colorless
Typical Properties:	Activity level, >80 %
Consistency:	Medium viscosity
Density at 20°C:	~1.06 g/cm <sup>3</sup>
Solubility in water:	Easily emulsifiable, results in a stable emulsion
Surface tension, (1% in water)	Approx. 28 mN/m

#### *Properties and Applications*

Due to its specific composition Tramfloc® 1169 can be either used as wetting agent or as defoamer. In acidic environments Tramfloc® 1169 is used as a defoamer particularly in various mining and mineral acid production applications. In aqueous alkaline systems Tramfloc® 1169 is used as wetting agent. The formulation also improves substrate wetting and penetration of various coatings into wood. Tramfloc® 1169 is oil free and is blended with linear and branched alcohols, esters, sulfonates and various amides.

#### *Common applications*

Wetting agent for alkaline systems  
Substrate wetting agent  
Manufacturing of phosphoric acid (wet process)  
Defoaming of quaternary ammonium compounds  
Defoaming of extremely acidic systems

#### *Phosphate, NPK Fertilizer, Quaternary and Phosphoric Acid Production*

Tramfloc® 1169 is applied for H<sub>3</sub>PO<sub>4</sub> and related production around the world. In the phosphate processing CO<sub>2</sub> gas is liberated from the CO<sub>3</sub> in the ore along with lesser volumes of HF, SiF<sub>4</sub> and SO<sub>2</sub>. In addition the presence of TSS helps stabilize the foam column making it more difficult to control foam. Production of phosphoric acid by the wet process: Tramfloc® 1169 is added to the reaction mix at a ratio of 0.02 - 0.05 % on solids' weight or in other terms 1.1 kgs/MT of ore. The addition of defoamer makes filtration more effective and gives a higher yield in phosphoric acid and secondary products like gypsum. In contrast to defoaming agents based on tall oil, Tramfloc® 1169 doesn't cause troublesome storage vessel deposits.

Quaternary ammonium compounds are used primarily in the manufacturing of cleaning products and these formulations are aggressive foamers by their nature. This phenomenon makes the quaternaries effective as surface cleaners. Tramfloc® 1169 is a uniquely effective defoamer for quaternaries and can be fed either neat or diluted in dosages ranging from 3 to 5% by weight which provide acceptable foam control. Experiments have revealed that Tramfloc® 1169 has a positive impact upon microbiological behavior of cleaners. Tramfloc® 1169 can also be used to eliminate wetting defects caused by high levels of defoamer.

### ***Storage and Handling***

Tramfloc® 1169 is not sensitive to freezing. For better handling it is recommended to store the product between 15 and 25 °C. The minimum shelf life in closed containers is 24 months from the date of manufacture.

### ***Packaging***

Rail car, tank wagon, IBC's containing 1000 kg net, drums holding 150 kg net and pails holding 30 kg net are available.

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