

STF SG – Standard Shear Thickening Fluid

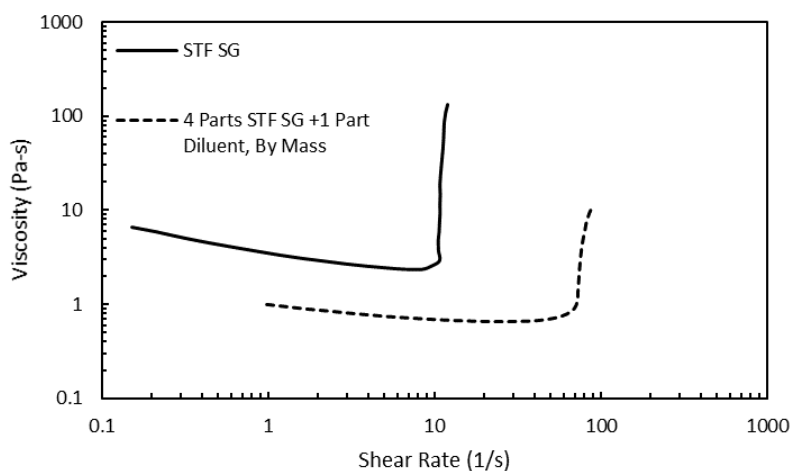
Concentrated suspension of inorganic particles in a glycol medium

STF SG is a hydrophilic shear thickening fluid formulation that is optimal for leveraging the benefits of STFs in multiple applications. STF-SG has flow properties that typically offer good all-around performance in a variety of applications, including enhancement of textiles for improved puncture resistance, impact protection, advanced non-powered motion-control devices, and more. STF-SG is safe and is an excellent material for educational demonstrations dealing with the properties of non-Newtonian fluids.

Benefits

- Exhibits strong shear thickening at rates relevant to human motion and protective applications
- Enhances puncture-resistance of many types of protective textiles
- Absorbs substantial impact energy with fast recovery, multi-impact performance
- Non-toxic, non-volatile formulation
- Hydrophilic chemistry is compatible with many textiles
- Easy to mix and dilute with alcohols for textile treatment

An optional diluent is available which allows the user to easily experiment with shear thickening fluids having different critical rates. The figure below illustrates how the diluent allows for adjustment of the strength of shear thickening and the critical shear rate to facilitate optimization in the desired application.



Example flow curves for STF SG measured at 25°C illustrating the ability to control the critical rate at which shear thickening occurs

STF Technologies has extensive formulation expertise and can create custom shear thickening fluids that are optimized for the user's application - including hydrophobic or hydrophilic, targeting of the low-shear viscosity, strength of thickening, critical shear rate, volatility, thermal range, etc.

Packaging Information

STF SG is available in 20 kg pails or 1 kg packaging. Optional diluent is available for R&D testing. Please contact us for other sizes or bulk packaging options.

Ordering

For technical or sales assistance please contact us via electronic mail at: rddombrowski@stf-technologies.com or by phone at 716-799-5935

Safety & Environmental

Customer is responsible for ensuring that Customer's workplace and waste disposal practices are in compliance with applicable laws and other government enactments related to occupational safety and environmental matters. STF Technologies will provide SDS and available information to assist Customer in complying with safety, regulatory, and waste disposal considerations.

Disclaimer of Warranty

The information provided in this document is believed to be accurate and is offered in good faith. Customer is responsible for conducting all tests to confirm that the STF meets all of the required regulations and performance specifications, and is safe when used in Customer's intended application or product. Sale of STF does not constitute the granting of a license to use STF materials in a product that is covered by patents owned by STF Technologies. The materials described in this document are sold as research and development materials only, unless superseded by additional purchasing agreement(s) between Customer and STF Technologies. STF Technologies disclaims any express or implied warranty regarding merchantability or suitability for use in any particular product or application, including whether the intended product or application would infringe on one or more third party patents.