

Shear Thickening Fluids

STF SG - Standard

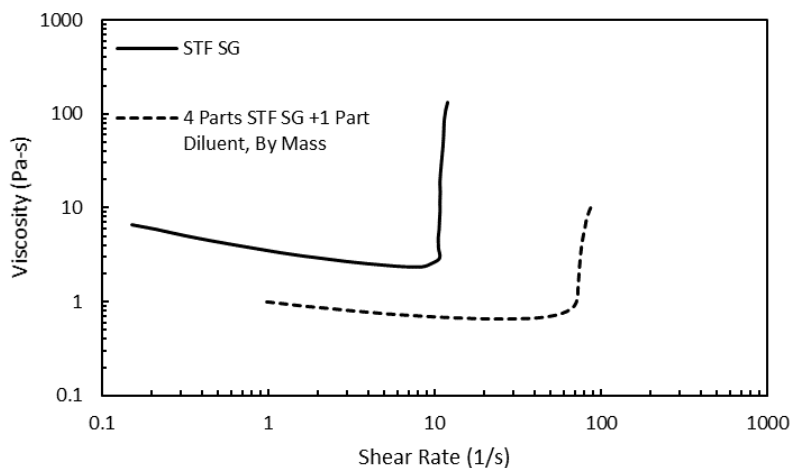
Concentrated suspension of inorganic particles in a glycol medium

STF SG is a hydrophilic shear thickening fluid formulation that is optimal for exploring the potential 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, motion-control, and educational demonstrations.

Benefits

- Exhibits strong shear thickening at rates relevant to human motion and protective applications
- Enhances puncture-resistance of many types of protective textiles
- Capable of absorbing significant impact energy
- 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

Packaging Information

STF SG is available in 1 kg packaging. Optional diluent is supplied in 200 g bottles. Please contact us for bulk packaging options.

Environmental

Customer is responsible for ensuring that Customer's workplace and waste disposal practices are in compliance with applicable laws and other government enactments. STF Technologies will provide SDS and information to assist our customers 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. The materials described in this document are intended as research and development materials only. STF Technologies disclaims any express or implied warranty regarding merchantability or suitability for use in any particular product or application.