

# PTS

## Polymer Temperature Stabilizer

### Product Description

PTS temperature stabilizer effectively reduces the degradation of polymers at higher thermal conditions, thereby allowing polymer fluids to be used effectively in wellbores with higher bottom-hole temperature gradients. In addition, PTS temperature stabilizer reduces the need for polymer maintenance. PTS temperature stabilizer is a blend of polymeric alkaline materials.

### Typical Physical Properties

Physical appearance	Clear colorless liquid
Odor	Slight ammonia
Specific gravity	1.0 - 1.02
Flash Point	>205°F (96°C)

### Application

PTS temperature stabilizer reduces the rate of breakdown of polysaccharides and cellulose by the prevention of chemical reactions creating thermal degradation of the polymers. This gives a pronounced improvement in temperature stability, enabling polymer fluids to be used in hotter wells.

Chemical breakdown of polysaccharides and PAC occurs mainly through the mechanisms of oxidation and hydrolysis. PTS temperature stabilizer buffers the pH in the region of 10 to 11, reducing hydrolysis to a minimum.

PTS temperature stabilizer combines with residual amounts of oxygen and dissolved metal ions, which can initialize oxidation, thereby preventing them from physically adsorbing onto the polymer chain. Degradation reactions have been inhibited and temperature stability increased by a margin of up to 70°F (39°C).

### Advantages

- Reduces polymer maintenance levels
- Improves thermal stability of polymer fluid systems
- Useful in pilot testing where high-temperature aging cells cannot be voided of oxygen

### Limitations

Will not improve temperature extension of fluids containing lignite and lignosulfonates

### Recommended Treatment

Additions of 2 to 4 lb/bbl (5.7 to 11.4 kg/m<sup>3</sup>) are recommended using correct handling precautions.

### Packaging and Storage

PTS temperature stabilizer is packaged in 5-gal (18.9-L) cans and 55-gal (208-L) drums. Store in dry, well-ventilated area. Keep container closed. Store away from sources of heat or ignition. Follow safe warehousing practices regarding palletizing, banding, shrink-wrapping and/or stacking.

Important Note: These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and method of use of our product are beyond our control. We recommend that the prospective user determine the suitability of our material and suggestions before adopting them on a commercial scale.