

# PTS-200

PTS-200\* temperature stabilizer effectively reduces the degradation of polymers at higher thermal conditions, thereby allowing polymer fluids to be used effectively in wellbores with higher bottomhole temperature gradients.

In addition, PTS-200 temperature stabilizer reduces the need for polymer maintenance. PTS-200 temperature stabilizer is a blend of polymeric alkaline materials.

## Typical Physical Properties

|                           |                  |
|---------------------------|------------------|
| Physical appearance ..... | Colorless liquid |
| Odor .....                | Slight ammonia   |
| Specific gravity .....    | 1.0 – 1.02       |
| Flash point .....         | >205°F (96°C)    |
| Boiling point .....       | 340°F (171°C)    |

## Applications

PTS-200 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. It is particularly suited for use in completion, workover and packer fluids.

Chemical breakdown of polysaccharides and PACs occurs mainly through the mechanisms of oxidation and hydrolysis.

PTS-200 temperature stabilizer buffers the pH in the region of 10 to 11, reducing hydrolysis to a minimum.

PTS-200 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) in laboratory tests.

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

Treatment immediately before tripping is suggested, since maximum temperatures are reached downhole during the trip.

## Advantages

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

## Limitations

- Will not improve temperature extension of fluids containing lignite and lignosulfonates

## Toxicity and Handling

Bioassay information is available upon request.

Handle as an industrial chemical, wearing protective equipment and observing the precautions as described in the Material Safety Data Sheet (MSDS).

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**Packaging and Storage**

PTS-200 temperature stabilizer is packaged in 5-gal (18.9-L) cans and 55-gal (208-L) drums.

Store in a dry location away from sources of heat or ignition.



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