



Product Information Bulletin

HSS-200 Hydrogen Sulfide Scavenger

DESCRIPTION:

HSS-200 is a hydrogen sulfide scavenger for drilling, flow line, and bubble tower applications, which will react rapidly with hydrogen sulfide. The reaction occurs in the water phase to form stable, water-soluble reaction product which can be injected into disposal wells. HSS-200 is unaffected by Carbon Dioxide therefore continuing to scavenge efficiently.

PHYSICAL PROPERTIES:

Density (Lbs./Gal)	8.146
Specific Gravity @ 60°F	0.9815
Flash Point (TCC)	80°F
Pour Point	0°F
pH	9.0 –10.0

Solubility

Isopropanol	Soluble
Methanol	Soluble
Water	Soluble
Heavy Aromatic Solvent	Insoluble

USAGE:

As cited previously, the reaction occurs in the water phase; therefore, a preferred application for HSS-200 should be in a bubble tower, where the tower is filled to half of its volume with HSS-200 and the other with water. This type of application is generally

more efficient due to the extended contact time and improved mass transfer. HSS-200 may also be atomized on a continuous basis at the wellhead, or upstream of a gas separator. Given the reaction characteristics of this product, the scavenging efficiency will be improved as the water content of the gas increases, and as the length of the flow lines increases. As a rule of thumb, the minimum water content of the gas should be 5 Lbs. per million SCF. Injection or atomization of HSS-200 into dry gas streams is not recommended.

The scavenging efficiency of HSS-200 will depend on contact time, pressure, temperature, gas velocities, moisture content, product concentration, mass transfer, and water dilution. Given that each application is unique, further fine-tuning will be required for optimum results. The spent solution is considered non-hazardous. Theoretically, in excess of 3 Lbs. of H₂S may be removed per pound of HSS-200. In practice, however, lower values are observed due to the poor mass transfer of the gas into the aqueous phase. Up to a point, by reducing the bubble size of the gas in a contactor tower, the mass transfer may be improved. Depending on the application, and given the above statement, initial treatment rates should be set at between 0.3 to .05 gallons of HSS-200 per ppm. of H₂S per million SCF per day. Optimization of these rates should be carried out in the system.

DRILLING APPLICATIONS:

In drilling applications, once H₂S has been detected, it is recommended that the suction pit be slugged with one drum of the product to saturate the system, thereafter slugging with 5 gallons every tower. Depending on the concentration of H₂S encountered, this application method may prove insufficient to effectively scavenge the influx of H₂S, in which case continuous injection of the product upstream of the mud pumps may be more appropriate. Once the situation has been brought under control, the rates may be adjusted accordingly.

HANDLING PRECAUTIONS:

For information regarding safety precautions in handling, health hazards, and exposure, please refer to the material safety data sheet for this product. In case of emergency, please call (361) 527-4460.

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