

Zinc Oxide

Description

Zinc oxide is an inorganic compound and contains zinc and oxygen elements. It is used as a hydrogen sulfide scavenger.

Applications

Zinc oxide is added to drilling fluid systems as sulfide scavenger as it readily reacts with hydrogen sulfide (H₂S) which is extremely hazardous gas. The reaction is rapid due to the very large specific surface area of the compound. Insoluble zinc bisulfide and zinc sulfide are formed through the reaction and thus it provides an effective way to combat H₂S intrusion and in turn protects the equipment from corrosion and hydrogen embrittlement.

There may be local restrictions on use of zinc compounds.

Features and Benefits

- Highly cost-effective
- Highly efficient sulfide scavenger
- Does not affect drilling fluid properties when used.
- Prevent stress corrosion due to sulfide and hydrogen embrittlement of equipment

Typical Properties

Appearance	Powder
Color	White
Solubility	Insoluble in water
Specific Gravity	5.4

Recommended Treatment

It is recommended to add 1.0 – 3.0 lb/bbl (2.8 – 8.5 kg/m³) of zinc oxide to drilling fluid systems for pre-treatments. In addition, it is critical to keep the fluid pH above 10.5 when H₂S is expected.

Safety and Handling

Prior to using this product, refer to the safety data sheet for information on use of personal protective equipment, safe handling, storage, transport, and disposal.

Packaging

Zinc oxide is available in 50 lb (22.7 kg), 55 lb (25 kg) bags.

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