

Oilfield Chemical Additives Supplier for

- Drilling
- Completion
- Production
- Stimulation

Calcium Chloride

CAS No.:10043-52-4



Calcium Chloride

Calcium Chloride inhibits clay and shale hydration, adds needed weight to overcome formation pressure, aids in carrying cuttings to the surface, and is easily diluted from more concentrated solution. CaCl_2 additive decreases thickening time, increases 'early strength, and shortens the time wasted at the wellsite as operators wait for cement properties to take hold.



Technical Index

Appearance	White powder
Assay, %min	94.0
Cl-, %max	3.0
Impurity, %max	1.0
Moisture, %max	0.5
Particle size	40-80 mesh

Product introduction

Its unique characteristics make it a popular choice, Calcium chloride is a commonly used weighting agent used to increase the density of drilling fluids to balance bottom hole pressure and prevent oil and gas from gushing out of the well. Its high solubility allows the required density to be achieved at lower concentrations, thus reducing the amount of calcium chloride that needs to be used. In addition, the addition of calcium chloride can increase the ionic strength of the drilling fluid, which helps to inhibit the stability of the well wall and reduce the risk of well wall collapse. Under some geological conditions, the formation of hydrates may cause problems in drilling operations. The addition of calcium chloride can reduce the tendency of hydrate formation and help maintain the stability of drilling fluids, especially under high pressure and high temperature conditions.

In addition, calcium chloride can improve the thermal stability of drilling fluids so that they remain stable in high-temperature environments, which is particularly important for oil fields that require operations in high-temperature environments.

However, calcium chloride may not be suitable in certain circumstances. For example, in carbonate formations, calcium chloride may cause adverse reactions with formation minerals, affecting formation stability and productivity.

In summary, calcium chloride as a weighting agent has the characteristics of high solubility, inhibiting well wall stability, inhibiting hydrate formation, improving thermal stability and relatively low cost, making it a commonly used weighting agent and is widely used. in oilfield

drilling and completion operations. However, in some specific circumstances, it may be necessary to consider choosing other types of weighting agents or taking other measures to meet specific operating needs to ensure the safety and environmental protection of the operation.

Application

CaCl₂ uses as weighting agents in drilling muds, to establish and maintain oil and gas wells. It helps well fluids gain needed consistency, increases density and stabilizes shale formations.

Calcium Chloride, as a brine, can be used to formulate single salt brines to 11.67 lb/gal (1398 kg/m³) or in combination with other salts to form brines of the required density. The most common combination is with Calcium Bromide brines to densities up to 15.1 lb/gal (1812 kg/m³). In non-aqueous fluids, treatments will depend on the required degree of osmotic activity required. This product is 10-80 mesh white powder solid, with convenient packaging and transportation, easy to dissolve the advantages of use, etc. As a representative product of inorganic weighting agent, this product has been widely used in the oilfield industry.

Recommended Handling

All personnel handling this material must handle it as an industrial chemical, wearing protective equipment and observing the precautions as described in the Material Safety Data Sheet.

Packaging and Storage

Packed in 25kg PP woven bag or 1 MT bulk bags.

Store in dry, well-ventilated area. Keep container closed. Keep away from heat, sparks and flames. Store away from incompatibles. Follow safe warehousing practices regarding palletizing, banding, shrink-wrapping and /or stacking.

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