Zinc Bromide/Calcium Bromide (Liquid)

Zinc Bromide/Calcium Bromide is used for clear-brine workover and completion operations.

Zinc Bromide/Calcium Bromide (ZnBr₂/CaBr₂) Brine requires high-density fluids and can be blended with lower density brines for specific density and crystallization point applications. Zinc Bromide/Calcium Bromide Brine, often referred to as zinc bromide, is available weighing 19.2 lb/gal (2,301 kg/m³) and is 54.5% zinc bromide and 19.5% calcium bromide.

Typical Physical Properties
Physical appearance............................................................................................................................................................................ Clear-to-amber liquid
pH (Neat) .................................................................................................................................................................................................................................... 1-2
Density @ 70°F (21°C) .................................................................................................................................................................................. 19.2 lb/gal (2,301 kg/m³)
Crystallization point (TCT) ........................................................................................................................................................................ 10 °F (-12 °C)

Applications
Zinc Bromide/Calcium Bromide brine is used as a clear-fluid brine during workover and completion operations which require densities to 19.2 lb/gal (2,301 kg/m³). It is blended with calcium chloride/calcium bromide brines to formulate and control the density of various fluid blends. This brine provides inhibition preventing the hydration and migration of swelling clays and can be used for packer fluids. Fluids can be formulated with various crystallization points and are available for special applications and winter use. Use gentle agitation when mixing for thorough dispersion. Note: Use the Blending Tables to obtain the desired density and crystallization temperature.

Toxicity and Handling
Bioassay information is available upon request. Handle as an industrial chemical, wearing protective equipment and observing the precautions as described on the Material Safety Data Sheet (MSDS). Also observe the health hazard information and emergency and first aid procedures described on the MSDS. Contact of zinc bromide solutions with the eyes may cause some permanent vision loss. These effects may include damage to the cornea or internal injury. In case of eye contact, flush with large quantities of clean water and immediately seek medical attention. A single, short skin exposure to these brines can cause considerable irritation. Prolonged exposure can result in a burn. If skin contact occurs, immediately wash the affected area with soap and water. Remove contaminated clothing and wash thoroughly before reuse. Do not continue to wear contaminated clothing. Avoid inhalation or ingestion. CAUTION! Zinc bromide solutions have a low pH and must be handled in a manner which prevents all direct contact. Zinc bromide is a CERCLA Hazardous Substance with a Reportable Quantity of 1,000 pounds zinc.

Packaging and Storage
Zinc Bromide/Calcium Bromide brine is packaged in bulk liquid quantities. Store in appropriate corrosion-resistant brine containers and keep closed and firmly sealed. It is a concentrated hygroscopic salt solution which will absorb water from the air, reducing density if not properly stored.