

COMPLETION FLUIDS & ADDITIVES

PRODUCT

GALATEA

Crystallization Suppression Additive

OVERVIEW

Galatea is a unique, easy-to-handle solid additive for increasing the density of both divalent and monovalent completion fluids while lowering their true crystallization temperatures (TCT). The additive allows year-round blending and application of high-density calcium chloride, calcium bromide, and sodium bromide brines with substantially reduced TCT.

APPLICATIONS

The functional properties of Galatea make it ideal for blending both divalent and monovalent brines of high-density for use in winter conditions and cold environments. The additive blends with high-density divalent (HDD) CaCl₂ and CaBr₂ fluids as well as high-density monovalent (HDM) NaBr fluids.

In divalent CaCl₂ brines, the additive yields densities ranging from 11.6 to 12.1 lb/gal and TCT at or below 35°F (1.7°C). In divalent CaBr₂ brines, it yields densities ranging from 14.3 to 15.4 lb/gal and TCT at or below 25°F (-3.9°C). And in monovalent NaBr brines, it yields densities ranging from 12.5 to 13.1 and TCT at or below 31°F (-0.5°C). For example, 5% Galatea in an 11.6 lb/gal CaCl₂ brine reduces TCT 20%. A blend of 5% Galatea in a 12.5 lb/gal NaBr brine yields a TCT of 29°F (-1.7°C) instead of the 37°F (2.8°C) without the additive.

FEATURES AND BENEFITS

- ▶ Stable, water-soluble, powdered solid.
- ▶ Blends with CaCl₂, CaBr₂, and NaBr brines.
- ▶ Increases density of completion fluids.
- ▶ Lowers true crystallization temperature of fluids used in cold conditions.
- ▶ Effective in both monovalent and divalent completion fluids.

SAFETY AND HANDLING

- ▶ Please refer to the product's Safety Data Sheet.

PHYSICAL PROPERTIES

Appearance

White powder

Odor

Sweet

Specific Gravity

94 lb/ft³ (1.5 g/cm³)

pH

7-9

Water Solubility

70% at 68°F (20°C)

RECOMMENDED TREATMENT

Galatea is blended percentage by weight (wt%) based on the desired density and TCT of the brine.

Fluid	Density Range	TCT Range
CaCl ₂	11.6-12.1 lb/gal	0-35°F
CaBr ₂	14.3-15.4 lb/gal	0-25°F
NaBr	12.5-13.1 lb/gal	29-31°F



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