

# Technical Bulletin

## Plurafac® CS-10



Plurafac® CS-10 is a multifunctional polycarboxylated anionic surfactant which is both low foaming and alkaline-soluble. Polycarboxylates impart an anionic characteristic to the molecule, increase water and caustic solubility, emulsify oils and sequester hardness ions. Sequestration is an ability rarely found among surfactants.

Plurafac® CS-10 is stable at high temperatures and has good compatibility in the presence of high electrolyte or high alkaline concentrations. It is soluble in 50% KOH and 35%NaOH.

Plurafac® CS-10 is supplied as a 50% aqueous solution ready for immediate use.

Plurafac® CS-10 is a multifunctional anionic surfactant with potential that far exceeds that of ordinary anionics.

Plurafac® CS-10 is a surfactant which:

- is low foaming
- emulsifies oil
- sequesters calcium and magnesium ions
- is soluble in higher levels of KOH and NaOH
- tolerates silicates and phosphates

These and other properties suggest that Plurafac® CS-10 could be advantageously used in bottle washing and metal cleaning, scale removers and boilers cleaners, tub or tile cleaners and barnacle and bilge cleaners. Plurafac® CS-10 surfactant was developed specifically to deal with difficult soils. If your formulation has trouble handling calcium or silicate soil, Plurafac® CS-10 should be considered.

Typical properties	
Active Ingredient, (%)	50
pH, 5% aqueous solution	9.7
Specific gravity @25, 25°C	1.18

Specifications	
Water,wt.%	47 - 53
Color, Gardner	12 max.
pH, 5% aqueous	9.0 – 10.3
Appearance, 35°C	Clear, brown liquid

Surface Tension @25°,conc. wt %	
0.10	34.8
0.50	32.0
Interfacial Tension @ 25°, conc. wt%	
0.10	9.8
0.50	5.4

The most common hardness ion found in water is calcium. To sequester calcium, condensed phosphates, such as STPP or TKPP, are often added to cleaning formulations. In areas where phosphates are banned, sodium citrates or zeolites are substituted. However, these builders are often difficult to formulate into liquid products. Plurafac® CS-10 demonstrates sequestering properties that under some conditions are comparable to sodium citrate or sodium tripolyphosphate. The sequestering ability for each varies with pH. Plurafac® CS-10 and sodium citrate show increased sequestering with higher pH, while the sequestering ability of STPP decreased as pH increases.

### Shelf Life:

BASF will endorse the results on the certificate of analysis for a period of up to one year from the date of manufacture for material in original, unopened, properly stored containers. Beyond one year, we recommend the quality of the material be confirmed prior to use, by retesting the certificate of analysis parameters.

Plurafac® is a registered trademark for BASF in many countries.

**For More Information:**

*Order Placement*

To place orders for delivery in the United States or Canada, please call our toll free number (800) 443-6460.

**For Other Information**

Including product literature and Material Safety Data Sheets please call (734) 324-6101.

**Or Visit Our Website At:**

[www.performance.basf-corp.com](http://www.performance.basf-corp.com)

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