



# IntegraGuard™ EZ

## CEMENT SPACER SYSTEMS

### APPLICATIONS

- Wells with circulating temperatures up to 275°F (135°C)
- Primary and remedial cementing operations
- Vertical, deviated and horizontal wells

### FEATURES & BENEFITS

- Enhanced operational efficiency and cost effectiveness
- Reduced wellsite equipment footprint
- Easily prepared and pumped with conventional cementing equipment
- Flexibility to adjust volumes and density on short notice
- Viscosity can be varied to optimize rheological hierarchy

### OVERVIEW

IntegraGuard EZ cement spacer system is a versatile and effective dry-blend spacer system that enhances mud displacement and prevents cement slurry contamination. It is effective over a wide range of bottomhole temperatures and can be designed with densities up to 18 ppg.

As a dry-blend spacer, the weighting agent and the spacer viscosifier are premixed at the district location and delivered in bulk to the well location. The spacer is then batch mixed or mixed and pumped on the fly. Either mixing method reduces location preparation time and enhances overall wellsite efficiency. In the case of systems mixed on the fly, additional direct cost savings are realized by eliminating the batch mixer from the operation.

Weighting agents used with this system can be either silica materials, calcium carbonate, barite or hematite, depending on the designed spacer density requirement.

BJ Services' GW-86 is the principal viscosifier for the spacer system. Additional viscosifiers can be added to adjust the fluid rheological profile to optimize fluid displacement for the well-specific mud and cement systems.

BJ's IntegraCare surfactants are added to the system to water-wet the casing and formation, allowing proper cement bonding and to promote mud-spacer and spacer-cement compatibilities.

Other additives can be used to enhance the spacer system for specific applications, including tracers, retarders and biocides. Biocides are recommended in cases that the spacer will remain in the annulus at the end of the cement job.

### TYPICAL PROPERTIES

TYPICAL DENSITY RANGE	8.5 to 18.0 ppg (1019 to 2157 kg/m <sup>3</sup> )
TYPICAL TEMPERATURE RANGE	Up to 275°F (135°C) BHCT