

Grande-Seal

Granular, shear-resistant particulates

APPLICATIONS

- Aqueous and nonaqueous fluid systems
- Large apertures in ultrahigh-permeability formations
- Wellbore strengthening applications
- Lost circulation control applications
- Formations with fracture apertures up to 4 mm [0.156 in] (when using extra coarse and coarse grades)

BENEFITS

- Resists size degradation related to mechanical attrition during fluid circulation
- Swells slightly after prolonged exposure to aqueous systems, but does not lose strength like other cellulosic materials

FEATURES

- Excellent primary bridging agents for lost circulation material (LCM) slurries
- Laboratory-validated performance for apertures up to 4 mm [0.156 in], providing up to 3,500-psi [24-MPa] pressure retention capability
- Uniform granular shape with an aspect ratio close to 1.0
- Nonmalleable, resilient material
- Environmentally acceptable chemistry

Grande-Seal* granular, shear-resistant particulates are medium, coarse, and extra coarse particulates for lost circulation control and wellbore strengthening. They are useful when drilling ultrahigh-permeability formations or when fractures up to 4 mm [0.156 in] are encountered. These products can be used in water-, oil-, or synthetic-based fluids.

Grande-Seal particulates comprise medium to extra coarse, granular, cellulosic material, which possesses ideal properties for use in lost circulation control or wellbore strengthening applications.

Different from conventional bridging materials because of their exceptional resistance to fluid shear and mechanical breakdown, Grande-Seal particulates significantly reduce size attrition in the circulating system. All three grades are free flowing, easy to mix into any type of drilling fluid system, and environmentally acceptable additives for virtually all fluid types and applications.

Based on the results of extensive fracture testing, the recommended treatment range for spotted pills is 10 to 20 lbm/bbl [29 to 57 kg/m³]. Coarse and extra coarse grades should always be spotted through a bypass circulation tool or open-ended pipe to avoid potential plugging of downhole tools or bit nozzles. It may also be necessary to remove pump screens and surface filters prior to pumping slurries containing these materials.

Limitations

Always verify tool compatibility before pumping slurries containing these materials through any downhole tools. These material typically are removed from the fluid system by shale shaker screens during fluid circulation, unless the appropriate size screens are installed on the shale shakers.

Toxicity and Handling

Handle as an industrial chemical, wearing protective equipment and observing the precautions as described in the Safety Data Sheet (SDS). Medium, coarse, and extra coarse particle grades may form combustible dust concentrations in air. Keep away from open flames, hot surfaces, or other sources of ignition. Bioassay information is available upon request.

Packaging and Storage

Medium, coarse, and extra coarse particle grades are packaged in 40-lbm [18-kg] multiwall paper sacks. Keep containers tightly closed in a dry, cool, and well-ventilated place. Always follow safe warehousing practices regarding palletizing, banding, shrink-wrapping, and stacking.

Typical Physical Properties

Color	Yellow-tan
Odor	Odorless
Physical state	Opaque granules
Specific gravity	1.3

Particle Grade	Nominal Particle Size Range, um [†]	Recommended Test Method
Medium	800–1,500	Dry sieve
Coarse	1,500–2,280	Dry sieve
Extra coarse	2,050–4,300	Dry sieve

[†] Nominal d10, d50, and d90 values are available upon request.