

# FlexSand proppant flowback additive

## Improve stimulation performance and longevity

### Applications

- Hydraulic fracturing operations in reservoirs with high closure stress
- Hydraulic fracturing operations in wells expected to undergo considerable cyclic stress

### Features and Benefits

- Reduces proppant crushing and fines generation
  - Minimizes production declines due to fines migration and cyclic stress on the proppant pack
  - Maintains proppant pack conductivity
- Increases resistance to proppant flowback
  - Maintains fracture width over time
  - Maintains proppant pack conductivity
- Comparable with common mix water and stimulation additives
  - Facilitates logistics and testing requirements and reduces associated costs

### FlexSand™ proppant flowback

**additive** from Baker Hughes controls proppant flowback and reduces crushing effects, resulting in improved fracture conductivity and long-term stimulation performance.

These additives are deformable particles, which are combined with proppants and fluids during fracture stimulation operations. As the formation closes, the proppants press into the deformable particles, cushioning them from damaging stresses and locking them into place. This minimizes the risk of proppant flowback and fines generation.

### Materials compatibility

Compatibility testing is recommended prior to the job.

### Safety and handling

Before handling, storage, or use, review the Safety Data Sheet (SDS) for guidance.

### Typical properties

|                                | FlexSand LS                                          | FlexSand MSE                                           |
|--------------------------------|------------------------------------------------------|--------------------------------------------------------|
| <b>Sizes available</b>         | 8/12 and 12/20 mesh                                  | 12/20, 20/40, 14/30 mesh                               |
| <b>Bottomhole temperatures</b> | Up to 200°F (93°C)                                   | Up to 275°F (135°C)                                    |
| <b>Bulk density</b>            | 41 lbm/ft <sup>3</sup><br>(656.8 kg/m <sup>3</sup> ) | 49.9 lbm/ft <sup>3</sup><br>(799.4 kg/m <sup>3</sup> ) |
| <b>Specific gravity</b>        | 1.30 +/- 0.05                                        | 1.30 +/- 0.05                                          |
| <b>Closure stress range</b>    | 250 to 1,750 psi<br>(1.72 to 12.06 MPa)              | 1,500 to 7,000 psi<br>(10.34 to 48.26 MPa)             |