

# BioSorb prolonged bacteria control agent

## Minimize reservoir contamination over the long term

### Applications

Oil and gas wells that exhibit high levels of bacteria

### Features and benefits

- Controls broad spectrum of bacteria
  - Minimizes risks of downhole corrosion, formation damage, and reservoir souring
- Based on glutaraldehyde chemistry
  - Maximizes bacteria control, especially for sulfate-reducing and acid-producing bacteria
  - Minimizes environmental risks
- Solid material
  - Simplifies operations and metering because it is added with the proppant
  - Minimizes environmental risks in case of spill
- Desorbs slowly with produced fluids
  - Extends biocidal action over a longer period compared with conventional liquid bacteria control additives
- Qualified member of the SmartCare family of environmentally responsible solutions
  - Minimizes environmental impact without sacrificing performance
  - Increases transparency of chemical composition to stakeholders
  - Improves research and development efforts to proactively expand the Baker Hughes portfolio of environmentally responsible products

The Baker Hughes **BioSorb™ bacteria control agent** is a controlled-release microbactericide that slowly releases from the proppant pack to provide immediate and long-term pack protection. BioSorb material comprises a dry, solid particle onto which a specialty chemical has been adsorbed. The product is nominally within the mesh size of 20/40 proppant. It is placed in the formation via a fracture, frac-pack, gravel-pack, or pre-packed screen system.

The amount of Sorb material added to the proppant is based on crush and conductivity tests done in preparation for the job, and the expected life of the treatment. When the well begins to produce, the biocide slowly desorbs into the water phase of the production, inhibiting bacteria growth in the near-wellbore area and tubing. Because the product is dry and inert, it can be easily cleaned up and will not contribute to chemical runoff if spilled. This is environmentally preferable to conventional liquid additives or batch- and continuous-injection liquid chemical systems.

BioSorb prolonged biocide is a Baker Hughes **StimPlus™** product and is compatible for use with common stimulation fluids. StimPlus products are added to the stimulation fluid and placed deep into the formation, where they can prevent deposition and costly production problems. Our service includes prestimulation system analysis, stimulation fluid compatibility, coordination with pressure pumping

services, and post-frac monitoring services to minimize flow assurance issues and protect wellbore assets.

### Safety and handling

Refer to the material safety data sheets (MSDS) for handling, transport, environmental information, and first aid.

### References

- MSDS
- StimPlus services brochure

### Typical properties

<b>Appearance</b>	Off-white to tan solid granules
<b>Odor</b>	Mild
<b>Typical maximum temperature</b>	275°F (135°C)
<b>Packaging</b>	30-lb bags

Note: Loading rates are based on expected production and desired longevity of treatment. Loadings greater than 2% by weight of proppant should be approved by the technical department based on fracture closure pressure. The BioSorb agent is a member of the Baker Hughes SmartCare™ family of environmentally conscious chemical solutions, which helps ensure that clients' technical performance and environmental priorities are achieved. Evaluated by the Baker Hughes Environmental Services group's chemical assessment review process, this product has been methodically vetted for health, safety, and environmental criteria, performance, consistency, compatibility, and value.