

Dual-Phase acid system

Improve productivity with better acid stimulation

Applications

- Acid fracturing operations in carbonate formations
- Matrix acidizing in high-permeability or naturally fractured carbonate formations

Features and Benefits

- Maximizes treatment design flexibility with HCl concentrations from 7.5% to 28%
- Increases stimulated reservoir contact through delayed acid reaction
- Enhances fracture conductivity with increased fluid viscosity
- Decreases corrosion inhibitor requirements
- Improves treatment cleanup after acid spending
- Simplifies operations with on-the-fly mixing capability
- Minimizes surface horsepower requirements
- Reduces formation damage risk through compatibility with common sequestrants and iron-chelating agent

The **Dual-Phase acid system** from Baker Hughes is a retarded-reaction acid system designed to stimulate oil-producing carbonate reservoirs at bottomhole temperatures up to and above 300°F (149°C). The oil-external, acid-internal emulsion delays acid reaction with the formation, enabling deeper live-acid placement to create longer, higher-conductivity flow channels and improve reservoir contact. The system also increases fluid viscosity, helping maximize fracture width and conductivity while reducing fluid leakoff and acid requirements. As the acid spends, the emulsion breaks to support efficient cleanup and simplify post-treatment operations. The system can be mixed on the fly and

is compatible with common sequestrants and iron-chelating agents, providing operational flexibility across a wide range of stimulation conditions.

Safety and handling

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

References

- MSDS
- Acid stimulation capabilities brochure

Typical properties

Typical temperature range

Up to at least 350°F (176°C)