DLA–HA
Enables delayed organic acid generation

Applications
- Invert emulsion drill-in fluid filter cake breaker
  - MICRO–WASH breaker system
- Water-based drill-in fluid filter cake breaker
  - Mudzyme breaker system
- Open-hole applications above 175°F (79.4°C)

Features and benefits
- Enables delayed generation of organic acid for more uniform filter cake removal
- Compatible with a wide range of brine systems and densities
- Mitigates handling and transport restrictions associated with organic acids
- REACH compliant
  - Approved for use in the North Sea

The DLA–HAM organic acid generator from Baker Hughes is designed for use in conjunction with filter cake breakers such as the MICRO–WASH™ breaker system for synthetic- and oil-based drill-in fluids (DIF) and the Mudzyme™ breaker system for water-based DIF.

DLA–HA enables delayed filter cake degradation by slowly generating acetic acid when exposed to an aqueous phase at a given temperature. This extends the contact time between the breaker and the filter cake along the entire open-hole section, resulting in a more uniform filter cake degradation. DLA–HA organic acid generator exhibits optimum reaction rates at temperatures between 175°F (79.4°C) and 212°F (100°C) when used in fresh water or monovalent brines. Above 212°F (100°C), rapid acid generation occurs.

Recommended treatment
DLA–HA organic acid generator concentrations typically range from 10 to 15% by volume. Pilot testing is recommended to ensure brine compatibility and to measure the delay in filter cake removal.

Environmental information
DLA–HA organic acid generator complies with Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulations, and is approved for use in the North Sea.

For information concerning environmental regulations applicable to this product, contact the Health, Safety, and Environmental department of Baker Hughes.

Shipping
Transportation of the DLA–HA acid generator is not restricted by either international or United States regulatory agencies.

Safe handling recommendations
Use normal precautions for employee protection when handling chemical products. See Safety Data Sheet (SDS) prior to use.

Packaging
DLA–HA acid generator is available in 55-gal (208.2-L) polypropylene-lined drums and in 2,425-lb (1,100-kg) intermediate bulk containers (IBCs).

Typical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>Appearance</td>
<td>Colorless liquid</td>
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<tr>
<td>Specific gravity</td>
<td>1.18</td>
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<tr>
<td>Flash point (Closed cup)</td>
<td>230°F (110°C)</td>
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