World Oil AWARDS 2020 WINNER Best Oilfield Fluids and Chemicals Award

Baker Hughes

# $CHEMBINE_2$ combination chemical

## Specially designed for high-temperature, pressure, and TDS brine systems

### Applications

- Conventional
- Unconventional
- Onshore
- Offshore

### Features and Benefits

- Designed for high-temperature, high-pressure HT/HP, and high total dissolved solids (TDS) brine systems
- Adsorbs on the surface of crystals during nucleation
  - Can be used against a variety of scales
  - Provides versatility under changing conditions
- Adsorbs onto metal surfaces
- Controls corrosion due to the acid gases of carbon dioxide
- Suitable for capillary injection
  - Passes stringent laboratory capillary testing at 350°F (176°C) for seven days in both SS316 and duplex 2205
  - Passes laboratory stability tests up to 450°F (232°C)

**$CHEMBINE_2$™ WCW3778 combined scale and corrosion inhibitor,** from Baker Hughes, controls corrosion and scale in oilfield systems. It inhibits mineral scale deposition by crystal distortion, adsorbing on the surface of scale crystals during nucleation, blocking active growth sites, and limiting further expansion of the crystal. It also acts as a film-forming corrosion inhibitor, adsorbing onto metal surfaces to provide protection in both brine and hydrocarbon phases.

$CHEMBINE_2$ WCW3778 combined scale and corrosion inhibitor has been designed to be effective in high-temperature (up to 350°F [176°C]) and high-pressure systems. Approximate dosages range from 100 to 200 ppm depending on system conditions.

### Materials compatibility

**Suitable**

| | |
|---|---|
| Metals: | Admiralty brass, aluminum, copper, stainless steel 316, stainless steel 304 |
| Plastics: | HD polyethylene, HD polypropylene, polyethylene linear, Teflon®, PVC |
| Elastomers: | Buna N, neoprene, Viton®, CSM, EPDM |

**Not suitable**

Metals: C1018 mild steel

***Suitability criteria:***

Metals: <1.0 MPY loss
Plastics: <10% weight change
Elastomers: <10% weight change

*Materials suitability is based on analysis of test results obtained under specified laboratory conditions. All materials selection should be based on actual application. Testing results for materials will be made available on request.*

### Safety and handling

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

### Typical properties

| | |
|---|---|
| pH | 2.4 |
| Pour point | <-45°F (≤-45°C) |
| Flash point, closed cup | 64.4°F (18°C) |
| Relative density at 60°F (15.6°C) | 0.934 |
| Viscosity at 40°F (4.4°C ) | 6.4 cP |
| At 0°F (16°C) | 16 to 18 cP |