



FRACBLACK HT®

ULTRA-LIGHTWEIGHT PROPPANT

SUPERIOR PROPPANT PLACEMENT FOR ENHANCED WELL PERFORMANCE

FracBlack HT® Ultra-Lightweight Proppant (ULWP) is designed for stimulation of unconventional wells to provide significantly greater fracture conductivity via unparalleled proppant placement in the far field fracture area and improved reservoir contact. **FracBlack HT®** is SUN's fourth generation advanced thermoset nanocomposite bead, featuring near-neutral buoyancy, high strength and thermal stability for application in most reservoirs with or without conventional proppants. This breakthrough ULWP provides technical resolution to the primary limitations which impair conventional proppant placement and performance. The high strength and near-neutral specific gravity of **FracBlack HT® ULWP** is designed to optimize proppant transport, placement, and conductivity longevity allowing you to **"Prop What You Frac."**

Utilization: FracBlack HT® ULWP is used to provide effective propped fracture conductivity throughout the fracture network due to the material's low specific gravity and near-neutral buoyancy in water-based fluids. The addition of 3%-5% by weight to the overall proppant volume delivers significant production increases over conventional sand proppants alone.

Advantages of FracBlack HT® ULWP Over Conventional Proppants:

- ◆ Near-neutral buoyancy facilitates placement in far-field fractures.
- ◆ Perfect for slick water or low-viscosity fluids; fewer fluid additives needed, minimizing damage risk.
- ◆ Chemically inert, physically smooth and spherical.
- ◆ Deformable - does not crush, chip, break, or generate migrating fines like sand proppants. Resists embedment preserving propped fracture width and residual conductivity
- ◆ No dust during handling for improved HSE compliance.
- ◆ Non-abrasive - will not damage tubing, pumps or surface equipment during application or production.
- ◆ Manifests excellent dissipation of static electricity, facilitating ease in handling.
- ◆ No sticky resin coatings to impact fluid performance, pumping, or production equipment.

Technical Data

API RP 19C/ISO 13503-2:

| | |
|-------------------------------------|--------------------------|
| ◆ <i>Specific Gravity</i> | 1.054 g/cm ³ |
| ◆ <i>Bulk Density</i> | 41.2 lbs/ft ³ |
| ◆ <i>Absolute Density</i> | 65.8 lbs/ft ³ |
| ◆ <i>Sphericity & Roundness</i> | Both > 0.9 |
| ◆ <i>Acid Solubility</i> | < 1% |
| ◆ <i>Turbidity</i> | 26 |
| ◆ <i>U.S. Mesh Sizes</i> | 14/40, 30/80, others |
| ◆ <i>Size Distribution</i> | |
| ○ Meets/Exceeds Standards | |
| ◆ <i>Median Diameter</i> | (mm/in) |
| 14/40 | 0.762 / 0.030 |
| 30/80 | 0.313 / 0.012 |
| ◆ <i>Crush Resistance</i> | > 8 Kpsi |
| ◆ <i>Fines Generation</i> | < 0.5% at 8,000 psi |

API RP 19D/ISO-13503

| | |
|---------------------------------|---|
| ◆ <i>Reference Conductivity</i> | 0.02 lbs/ft ² , 250°F, 6,000 psi, 50 hrs |
| 14/40 – | 121 mD-ft |
| 30/80 – | 482 mD-ft |

*PropTester™ Report 400-16-08-15-02-J

Application Recommendations

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|----------------------------------|--------------------------|
| ◆ <i>BHST Maximum**</i> | 270°F |
| ◆ <i>Closure Stress Maximum*</i> | 8,000 psi |
| ◆ <i>Application Rate</i> | 0.02 lbs/ft ² |

**Well conditions exceeding recommendations should be considered case-by-case.

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