



CODE COMPLIANT ANCHORING ADHESIVE

DURAL ICC GEL



ULTIMATE ANCHORING PERFORMANCE

DURAL ICC GEL is an international building code compliant hybrid adhesive anchor. Its performance has been verified by extensive testing in both cracked and uncracked concrete in accordance with ACI 355.4 and ICC-ES AC 308, and has sustained creep resistance up to 194°F (90°C). DURAL ICC GEL resists static, wind and seismic loading in both tension and shear.

DURAL ICC GEL FEATURES AND APPROVALS

- ICC-ES ESR-4255 evaluation report for cracked & uncracked concrete
- International Code Compliant, IBC/IRC: 2015, 2012, 2009 & 2006
- NSF/ANSI Standard 61 certified for drinking water system components
- One of the highest performing elevated temperature creep resistant products available
- Fast cure and bolt up times
- Installation in dry, damp and water saturated concrete
- Wide installation temperature range: 5°F to 104°F (-15°C to 40°C)
- Service temperature of 5°F to 302°F (-15°C to 150°C)
- ASTM C881 Type I, II, IV and V, Grade 3, Class A, B & C
- For anchoring in overhead, horizontal and vertical-down applications



ENVIRONMENTAL TOUGHNESS

Extreme work conditions are no challenge for DURAL ICC GEL – it will consistently perform in dry, wet and water filled concrete, even if drilled holes are underwater. DURAL ICC GEL cures quickly in a wide range of temperatures, ensuring fast bolt-up and high productivity year-round.

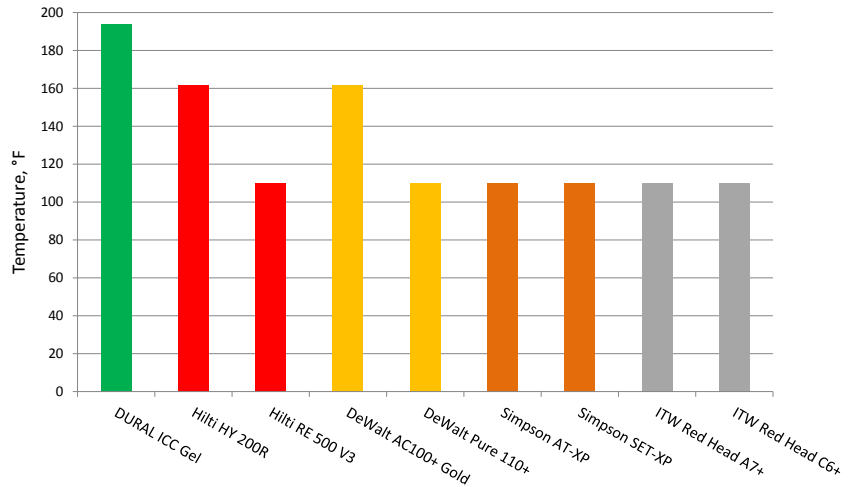
Substrate Temperature	Working Time	Full Cure Time
5°F (-15°C)	60 min	36 hr
14°F (-10°C)	30 min	24 hr
23°F (-5°C)	20 min	8 hr
32°F (0°C)	13 min	4 hr
41°F (5°C)	9 min	2 hr
50°F (10°C)	5 min	1 hr
68°F (20°C)	4 min	45 min
86°F (30°C)	2 min	30 min

DURAL ICC GEL COMPETITIVE ADVANTAGES

CREEP RESISTANCE

Creep is the tendency of a solid material to move slowly or deform permanently under the influence of heat and/or applied load. An adhesive anchor's ability to resist creep at high temperature is critical to its long term performance. DURAL ICC GEL has one of the highest approved long term load temperature ratings on the market.

Maximum Approved Temperature for Long Term Creep Resistance

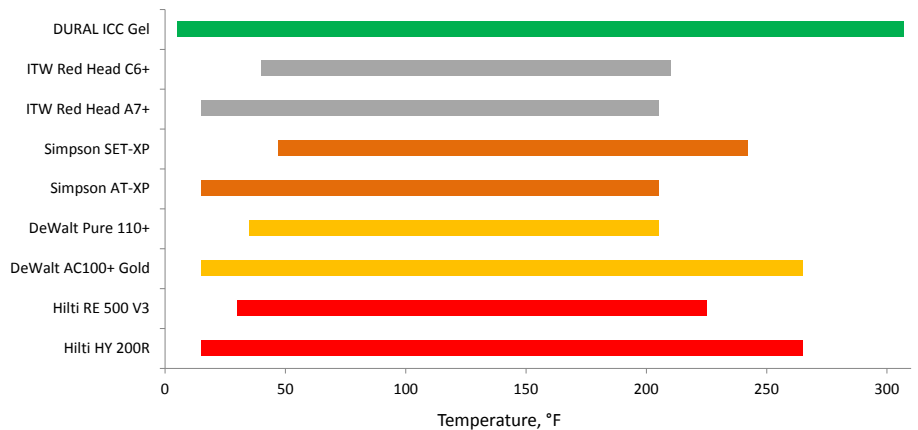


TEMPERATURE RANGE

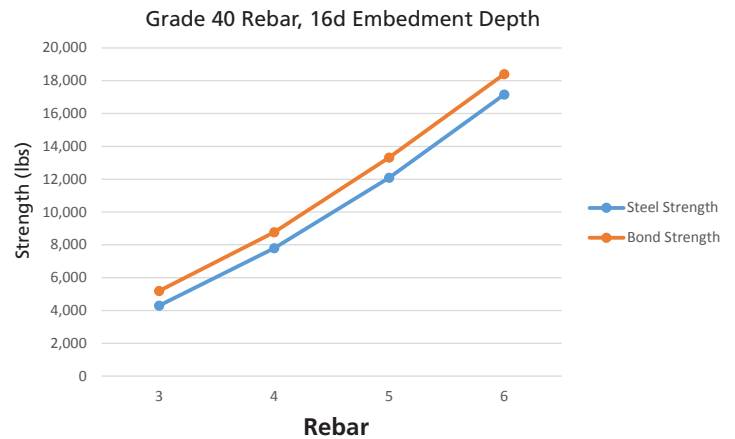
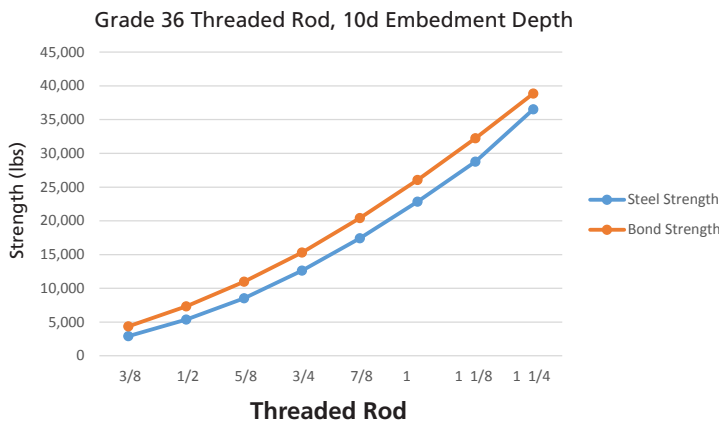
DURAL ICC GEL has the widest approved use temperature range, defined by the minimum installation temperature and the maximum short term loading temperature.

This wide temperature range makes DURAL ICC GEL extremely robust, and provides versatility to the contractor, unmatched by other adhesive anchor products.

Approved Use Temperature Range



BOND vs. STEEL STRENGTH



Bond vs. Steel Strength (Grade 36 Threaded Rod), Uncracked Concrete, Dry Installation, No Seismic Loading, No Edge or Spacing Reductions, Single Anchor, 110°F (43°C) Long Term, 176°F (80°C) Short Term

Bond vs. Steel Strength (Grade 40 Rebar), Uncracked Concrete, Dry Installation, No Seismic Loading, No Edge or Spacing Reductions, Single Anchor, 110°F (43°C) Long Term, 176°F (80°C) Short Term

Data Sources for Charts: ESR-3770, Reissued April 2017 | ESR-3187, Revised November 2016 | ESR-2582, Reissued February 2017 | ESR-3298, Reissued July 2017 | ESR-3814, Corrected May 2017 | ER-263, Revised September 2016 | ESR-2508, Reissued July 2017 | ESR-3903, Revised July 2017 | ESR-3577, Revised August 2016. Hilti is a registered trademark of Hilti Aktiengesellschaft Corporation. Simpson, SET-XP & AT-XP are registered trademarks of Simpson Strong-Tie Company, Inc. | ITW Red Head is a registered trademark, and A7+ is a trademark of Illinois Tool Works, Inc. Powers AC100+ Gold is a registered trademark, Pure110+ is a trademark, and DeWalt is a trademark of Stanley Black & Decker.