

nTherm™ Heckler & Koch 416 Handguards

The Department of Defense has spent countless millions of dollars on marksmanship training programs, improving weapons design, enhancing optics, and creating more reliable ammunition to make the average rifleman a superior marksman capable of sustaining a high rate of fire on the modern day battlefield.

Unfortunately, that is all negated by the simple fact that the rifleman can become combat ineffective after only a couple of mags by the scorching heat produced by their weapon during sustained firing....until now. Meet the most effective radiant heat dissipation ever created: nTherm™ Handguards.



Key Performance Parameters

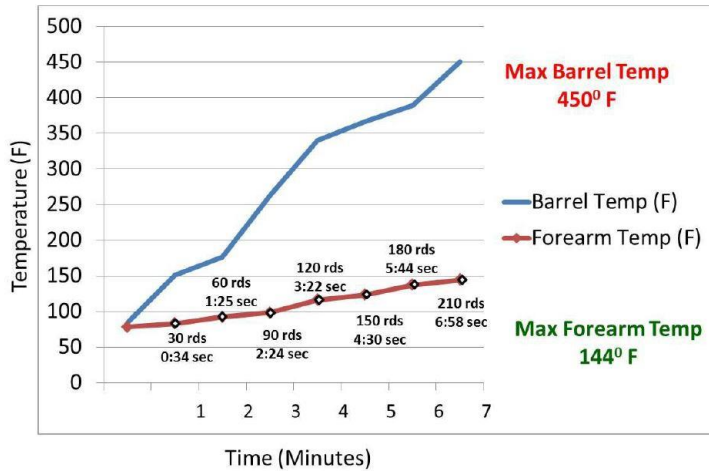
- Unparalleled handguard heat mitigation capable through the use of advanced molecularly bonded composite material
- 22.5% lighter than aluminum counterparts designed specifically for the H&K 416 platform
- Hard-wearing with excellent dimensional stability that is compressive & impact resistant
- Available in 9" & 13" lengths with an available 7" extension sleeve for use with suppressors
- Standard M-LOK attachment points

nTherm™ Heckler & Koch 416 Handguards

Ascendance International has created the next generation of handguards designed specifically for military, law enforcement, and professional shooters. Our patent pending nTherm™ advanced materials technology establishes a platform that no other handguard on the market even comes close to replicating through dramatic heat dissipation which enables shooters to fire the last round exactly like the first round.

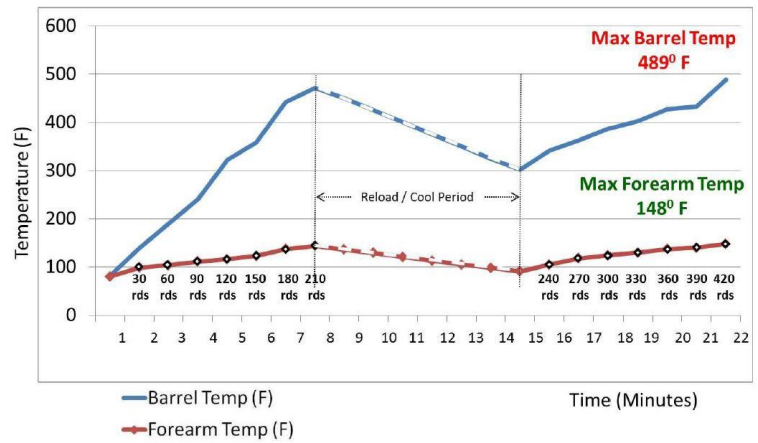
HEAT MITIGATION TESTING

BASIC LOAD TESTING WITH 210 ROUNDS



HEAT MITIGATION TESTING

COMBAT MANEUVER TESTING WITH 420 ROUNDS



Benefits to the Shooter

- Weapon Performance:** The only 300+ round continuous firing handguard in existence that enables active barrel heat dissipation, ventilation and cooling.
- Operator Effectiveness:** Mitigates heat transfer to user even as barrel temperature pushes 600°F enabling first shot like the last shot performance...greater control equals greater accuracy.
- Lighten the Load:** 22.5% weight reduction with strong, rugged composite material that has field performance on par or greater than aluminum.
- No Special Tooling Required:** Available in 9" & 13" lengths compatible with the Heckler & Koch 416 platform, nTherm™ has standard M-LOK mounting points and does not impede normal weapon functions.

| ASTM or UL Test | Test Property | Value |
|-------------------|---|--------------------|
| PHYSICAL | | |
| D792 | Density (lb/in ³) (g/cm ³) | 0.052 / 1.45 |
| D570 | Water Absorption, 24 hrs (%) | 0.4 |
| D570 | Water Absorption, Saturation (%) | 1.5 |
| MECHANICAL | | |
| D638 | Tensile Strength (psi) | 15,000 |
| D638 | Tensile Modulus (psi) | 900,000 |
| D638 | Tensile Elongation at Break (%) | 3.0 |
| D790 | Flexural Strength (psi) | 23,000 |
| D790 | Flexural Modulus (psi) | 800,000 |
| D732 | Shear Strength (psi) | 16,400 |
| D695 | Compressive Strength (psi) | 22,000 |
| D695 | Compressive Modulus (psi) | 950,000 |
| D785 | Hardness, Rockwell | E70 (M106) |
| D256 | IZOD Notched Impact (ft-lb/in) | 0.8 |
| PTM 55007 | Coefficient of Friction (Dry vs Steel) Dynamic | 0.20 |
| PTM 55007 | Limiting PV (4:1 Safety Factor) (ft-lb-in ² -min) | 22,500 |
| PTM 55010 | Wear Factor "k" x 10 ⁻¹⁰ (in ³ -min/ft-lb-hr) | 10 |
| THERMAL | | |
| D696 | Coefficient of Linear Thermal Expansion (x 10 ⁻⁵ in/in/°F) | 1.4 |
| D648 | Heat Deflection Temp (°F / °C) at 264 psi | 534 / 277 |
| D3418 | Glass Transition Temp (°F / °C) | ~535 / 280 |
| - | Max Operating Temp (°F / °C) | ~500 / 260 |
| C177 | Thermal Conductivity (BTU-in/ft ² -hr-°F) (x 10 ⁻⁴ cal/cm-sec-°C) | 3.70 / 12.75 |
| UL94 | UL94 Flammability Rating | V-0 |
| ELECTRICAL | | |
| D149 | Dielectric Strength (V/mil) short time, 1/8" thick | - |
| D150 | Dielectric Constant at 1 MHz | 6.0 |
| D150 | Dissipation Factor at 1 MHz | 0.037 |
| EOS/ESD S11.11 | Surface Resistivity (ohms/square) | > 10 ¹³ |

NOTE: The information contained herein, are typical values for reference and comparison purposes only. All values at 73°F (23°C) unless otherwise noted.



8920 Barron's Blvd, Suite 102, Highlands Ranch, CO 80129 USA • Phone: (303) 284-3615 • www.ascendanceintl.com

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