



ARMOR FORGE




Graphene Nano-composite
Armor Systems

Lighter

Thinner

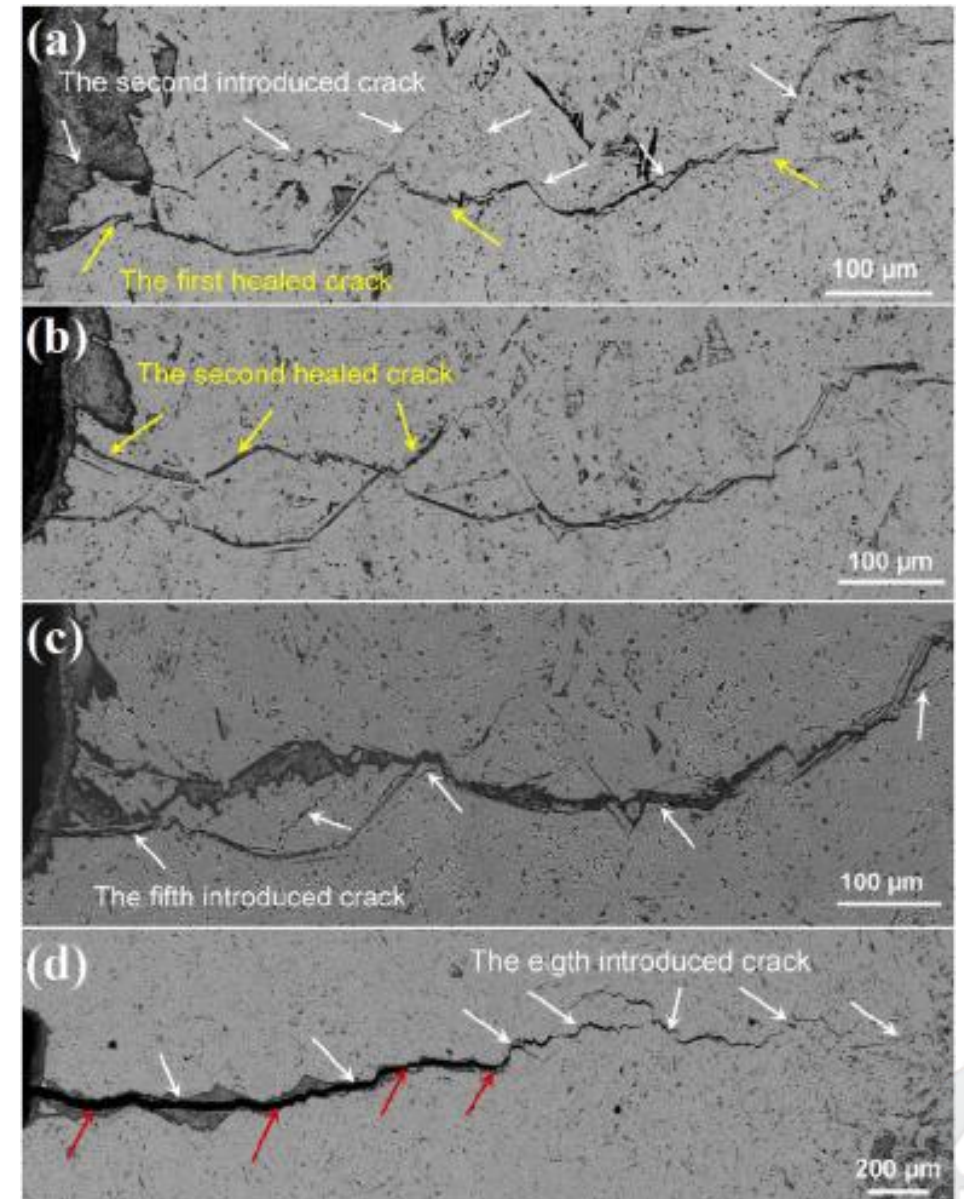
Stronger



- 
- Thermal Signature Reduction
 - Extreme Impact Resistance
 - Hydrophobic
 - Heat Stable
 - No UV Degradation
 - Extreme Durability
 - Rated for 10+ years
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Disadvantages of Current Ceramic-Based Armor Systems

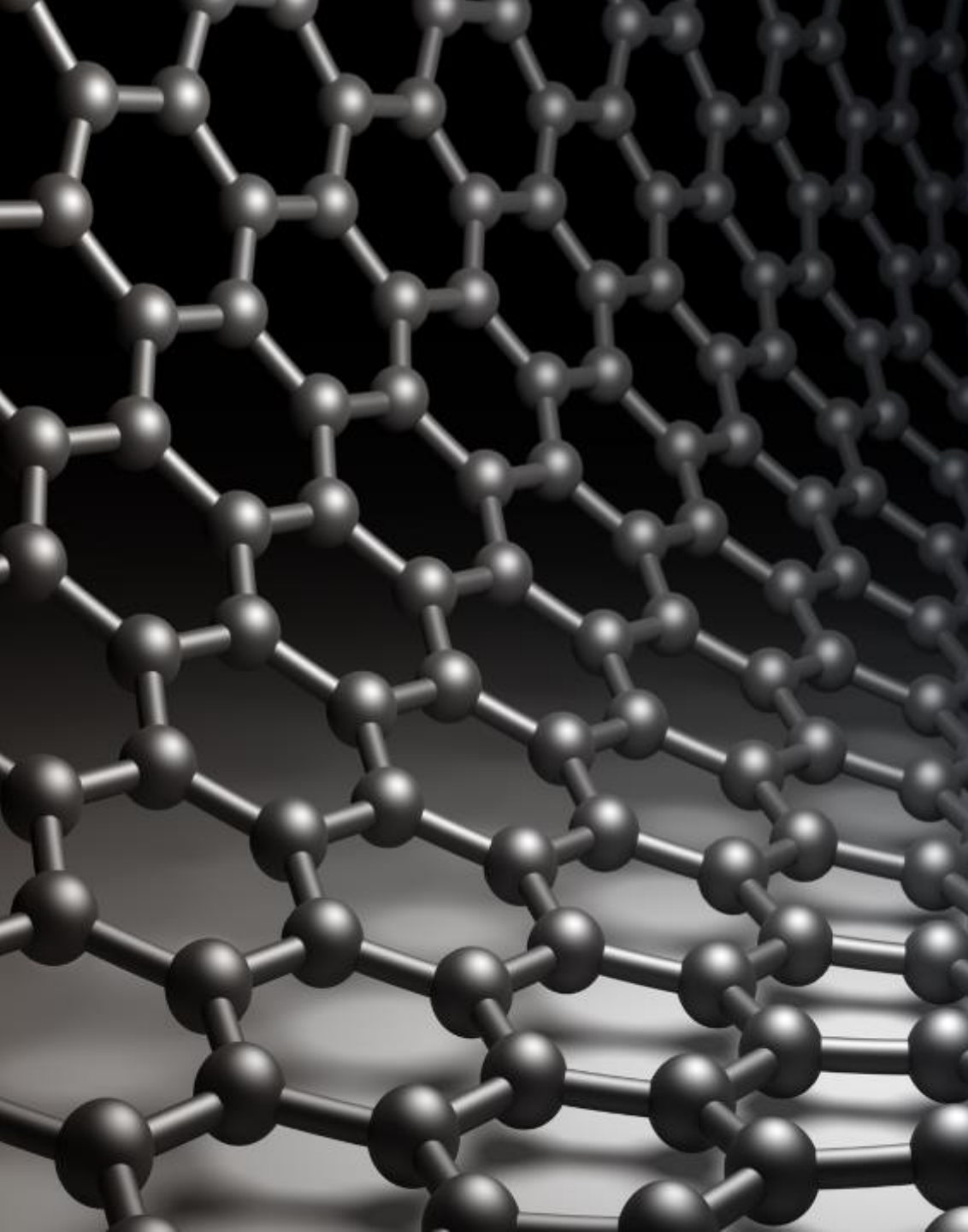
- Susceptible to Fractures and Microcracks
 - Equating to Potential LETHAL failures
- Regular X-ray inspections
 - Required to determine serviceability
 - Adds expense and “out of service” time
- Documented Lethal Fragments
- Increased back face deformation with multiple hits
- Maximum 5 years Shelf Life



The background image shows various pieces of military gear. On the left, there's a rifle with a tan and black camouflage stock. In the center, a black armor plate is visible with yellow markings. On the right, a black helmet with a mounted device is shown. The text box is centered over the armor plate.

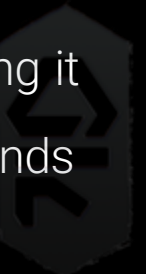
Stagnation of the Body Armor Industry

- The industry is still using materials that were developed over 50 years ago
 - Armor protection standards have seen little change since the 1970s
 - In pursuit of higher protection against modern “Armor Piercing” rounds, the industry has started to sacrifice warfighter dexterity
 - Structural and Performance Issues with current systems



THE SOLUTION: GRAPHENE

- Graphene is made up of a single layer of carbon atoms
- The atoms are arranged in a hexagonal lattice lending to its extreme strength
- Graphene is the strongest material discovered by science.
- 200x stronger than steel.
- Since its discovery in 2004 all other armor manufacturers have been unsuccessful in adapting it into a modern armor system that defeats AP Rounds



ARMOR FORGE GRAPHENE NANOCOMPOSITE ADAPTABLE USE CASES

- First to market patented graphene-based nano-composite rifle plate
- Technology is adaptable to ground based drones, personal ballistic body armor, and up armoring of vehicles, weapons platforms and more
- Extreme Durability
- Special threat rated to modern armor piercing rounds and scalable to user needs
- Minimal back face deformation and increased warfighter combat effectiveness
- Unique capabilities and end user adaptable feature sets



Armor Forge Nano armor adapted Quad-legged Unmanned Ground Vehicles(Q-UGV) vs base platform





Armor Forge 3+ Plate

IIIA soft armor

LTC Federal Contract Plate

Current Generation US Army ESAPI

NIJ Level IV

Standalone Thickness:

4-17.27mm (.15 to .68 inches in thickness)

*depending on threat level requested

Weight:

1.36-2.26kg

3-5.0 lbs.

*Scalable to Threat

Durability of AF next Generation Systems

- Drop and Impact proof from high velocity fragmentation and indirect fire
- No X-ray Schedule to verify integrity
- Shots can be made within .75" or less from plate edge
- Able to stack rounds within 1 inch or less across the entire plate face
- 10+ year lifespan



Special Threat Rated to Stop:

- **M855**
(Armor Piercing 5.56)
3150+ FPS
- **7.62x39 MSC**
(M43(Soviet) (MSC)
2400+ FPS
- **M193**
(5.56 level 3 defeating AP)
3200+ FPS

M80
(.308)
2800+ FPS

Fits in Current Generation carrier systems.

Scalable to additional threats as needed.



M855

Shot 2

Shot 2

M80

Shot 1

Shot 2

M43

Shot 1

Shot 2

M193

Shot 1

Shot 2

Armor Forge

M855

Shot 1

Shot 2

M80

Shot 1

Shot 2

M43

Shot 1

Shot 2

M193

Shot 1

Shot 2

Leading High Performance PE

8 shot Durability Shoot VS Leading High Performance PE

Next Generation Unique Feature Sets

- Hydrophobic
- Drop proof (Will **NOT** be compromised by blunt impact or High Velocity Fragmentation from IED and Indirect fire)
- Thermal Signature Reduction
- IR non-reflective(Available)
- Integrated UID and RFID for inventory management
- Completely customizable for end user needs including additional feature sets, color, patterning, and coatings
- Replaceable Non-Newtonian trauma pad

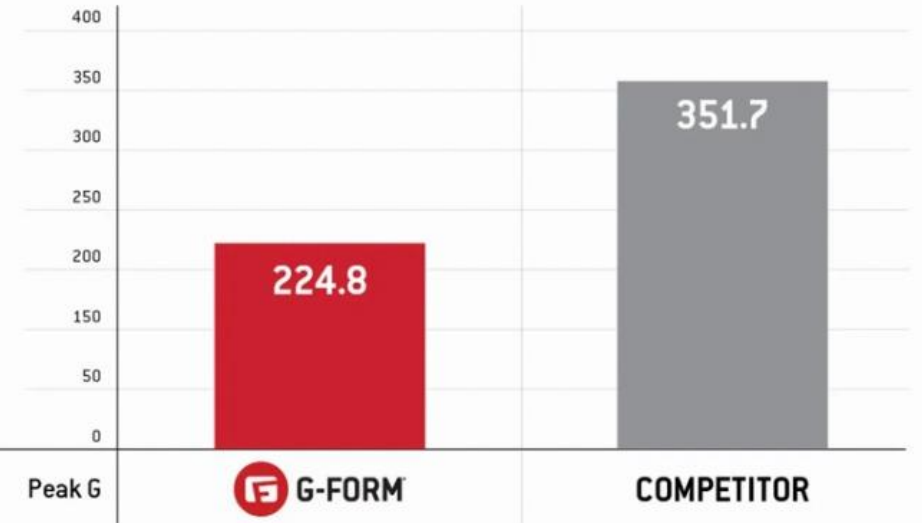
G-Form® Non-Newtonian Trauma Pad

- Removable from plate like current helmet padding systems
- Hydrophobic
- Superior Warfighter comfort
- Machine washable
- Absorbs energy and returns to original shape after impact
- Up to 30% reduction in back face energy transfer to warfighter
- Technology is scalable and will continue to improve plate performance over time

TRANSMITTED FORCE
that is passed through
pad to the wearer

**LOWER NUMBERS
EQUAL BETTER PROTECTION**

Test was performed by external facility on baseball
products from G-Form and a top competitor.



AF Thermal Signature Reduction

VS. current generation ceramics

Both Plates worn 3 hours during training cycle

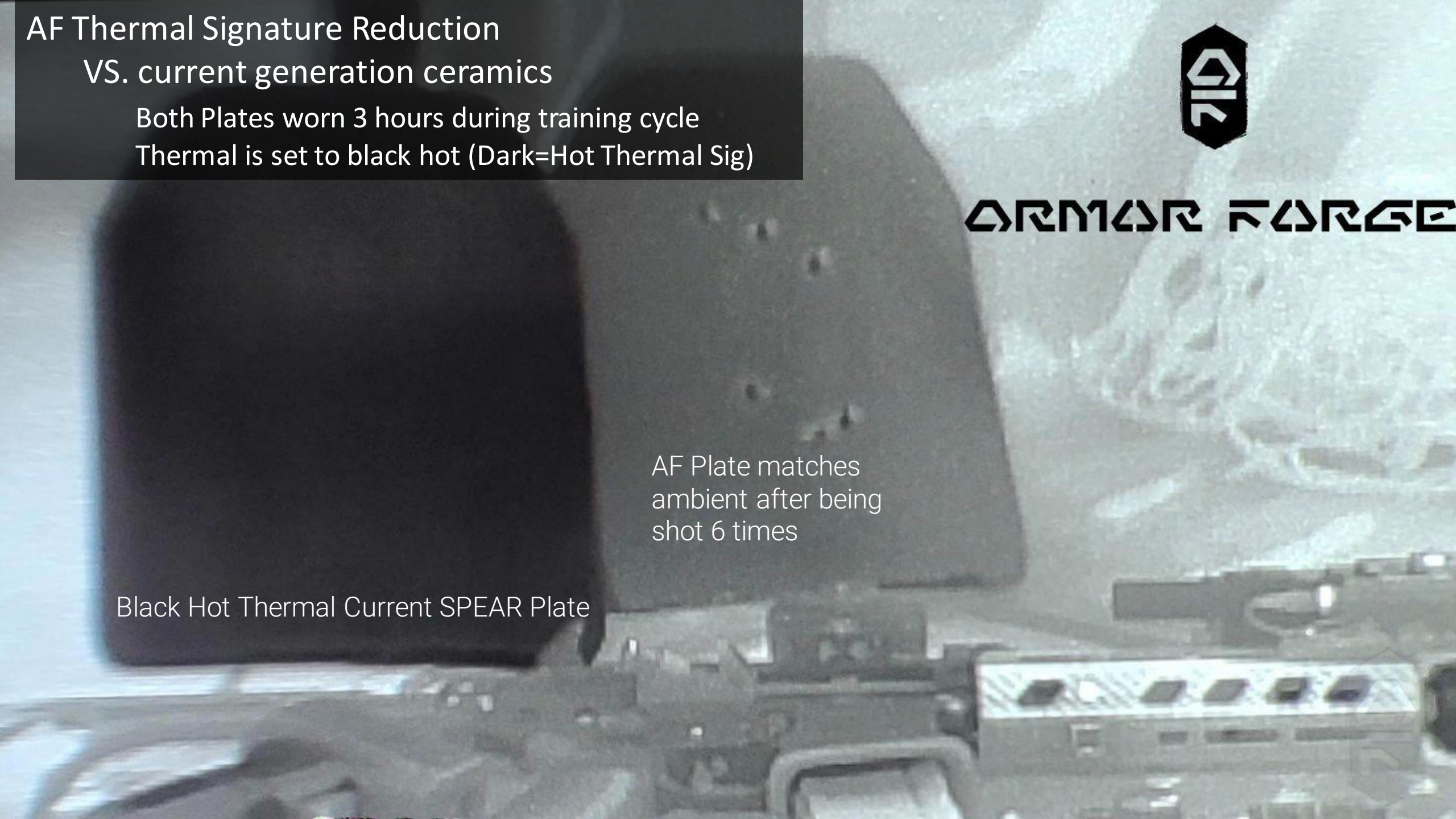
Thermal is set to black hot (Dark=Hot Thermal Sig)



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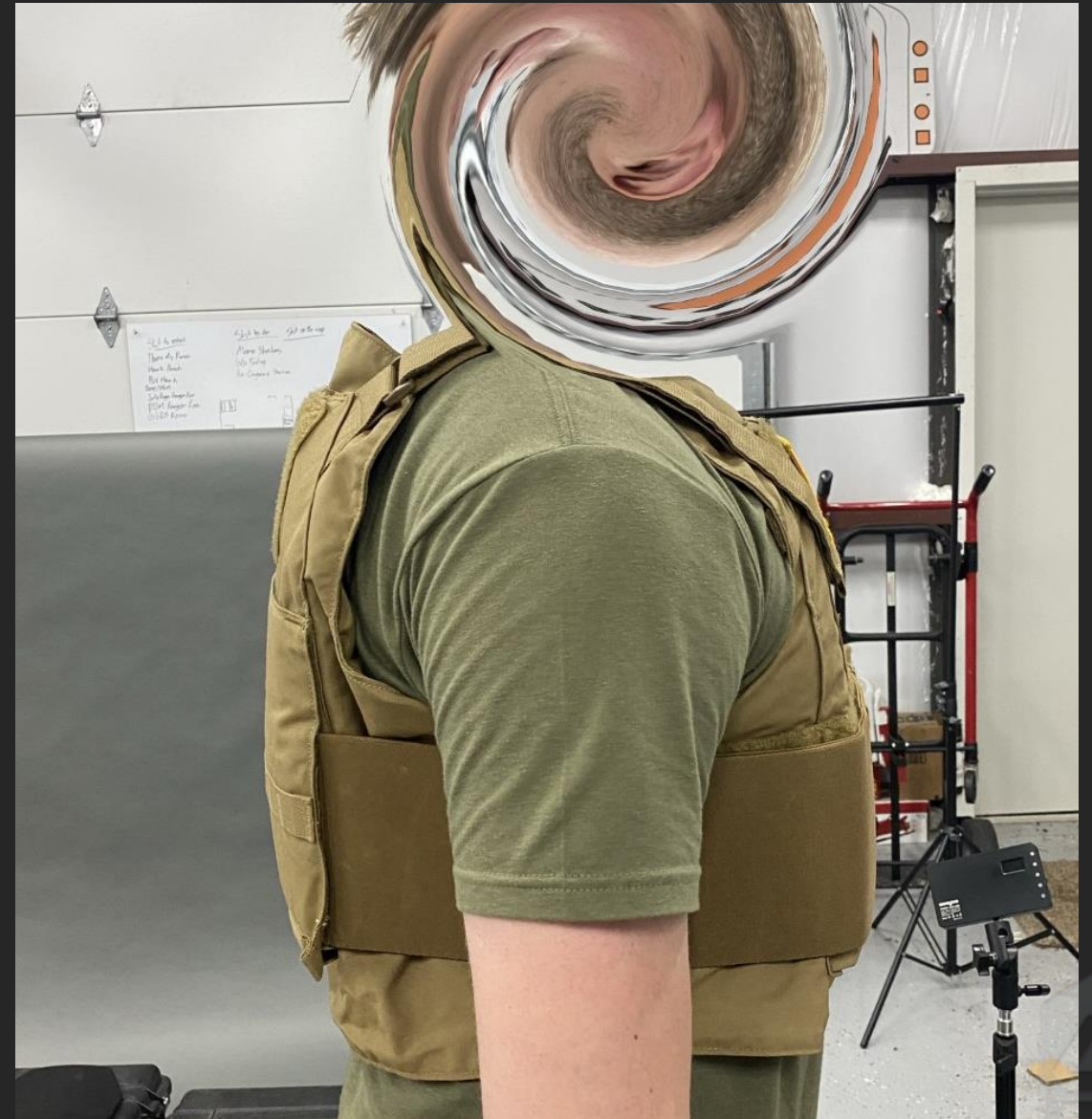
AF Plate matches
ambient after being
shot 6 times

Black Hot Thermal Current SPEAR Plate



IR non-Reflective





Low Visibility for Special Operations and Low Profile Needs





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