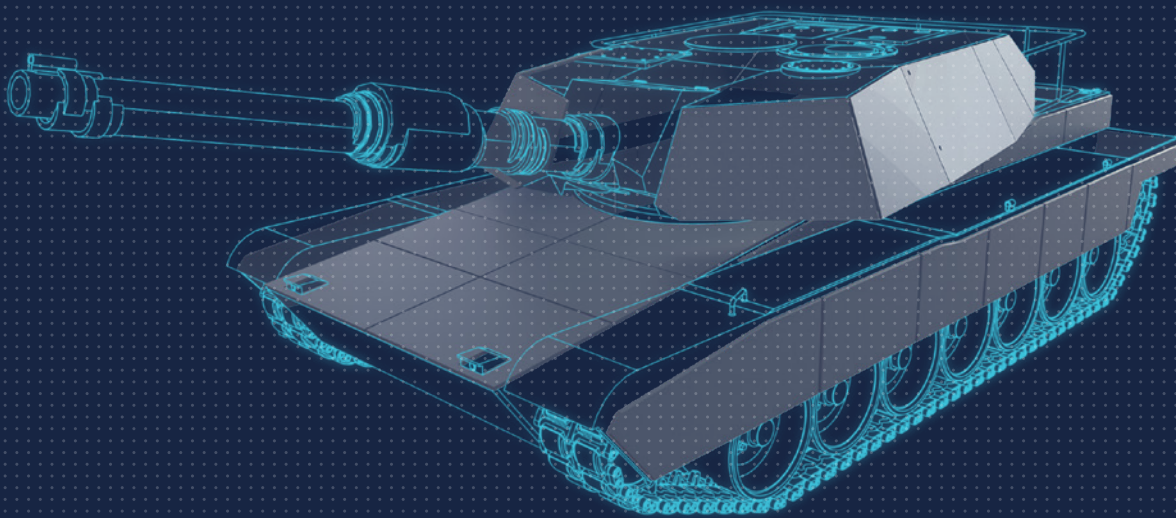


APPLIQUÉ ARMOUR

Lightweight add-on armour for enhanced ballistic protection

Permali's appliqué armour is designed to be fitted to light or heavy military vehicles to enhance protection from ballistic threats up to STANAG Level 4. In many cases it is used on AFVs where the existing vehicle hull does not offer sufficient protection.

Permali's appliqué armour systems can be retrofitted to existing vehicles or supplied for new build vehicles at the design stage.



Features and benefits

CLASS-LEADING BALLISTIC PROTECTION

- Up to STANAG 4569 Level 4 - small arms up to 14.5mm (AP), artillery and IED fragments.
- Exceptional multi-hit protection.

OPTIMISED LIGHTWEIGHTING

- STANAG 4569 Level 3 7.62mm (AP) areal density as low as 54.5kg/m²
- Wide range of materials available to optimise cost, weight and ballistic performance:
 - Polyethylenes (UHMWPE)
 - Glasses
 - Ceramics
 - Aramids
 - Metallics
 - Coatings

IMPROVED ENVIRONMENTAL PROTECTION

- Thermal and acoustic insulation
- Fire retardancy
- Corrosion resistance
- Chemical resistance

FULLY VEHICLE INTEGRATED

- Designed in response to platform analysis to maximise protection against the prevalent threat of recent war fighting and peacekeeping operations.
- Designed for easy installation and manufactured to precise tolerances.



Permali combines its ballistic grade Permaglass® laminate products with either ceramic or hardened metallic materials to form high performance appliqué armour solutions. Ballistic protection levels range from small arms to heavy machine guns as required. Permali's appliqué armour also offers proven resistance to shock and vibration as well as excellent ballistic performance at extreme temperatures.

Specialty prepreg fibre reinforcement and thermoplastic materials used by Permali for Permaglass® composite armour include:

- Ballistic grade UHMWPE fibres, including [DSM Dyneema®](#) and [Honeywell Spectra Shield®](#)
- [Kevlar®](#) and [Twaron®](#) aramid fibres
- Woven and non-woven S2 and E glass fibre fabrics
- Alumina, Silicon carbide and Boron carbide ballistic grade ceramic plates
- Chemical resistant [Tufshield®](#) elastomeric PU coating

The company has a long-established global reputation as an innovative designer and manufacturer of lightweight anti-ballistic and blast resistant advanced composite fibre reinforced (FRP) materials and fabricated appliqué armour systems.

To find out more about our Appliqué Armour solutions, scan the QR code. To speak to one of our experts call us on [+44 \(0\)1452 528282](tel:+44201452528282) or email sales@permali.co.uk



Providing defence solutions since 1937

Permali specialises in the design and manufacture of ballistic armour and blast protection advanced composite materials, fabricated panels and complete armour systems which meet EU, US, MOD and NATO ballistic, safety and environmental standards.

Products supplied by Permali to the land defence sector includes: appliqué armour panels, underfloor blast resistant armour, fuel tank liners, dust skirts and internal spall liner panels.