



Properties of Graphene

Graphene's unique and incredibly strong nanostructures offer a range of advanced properties, such as high mechanical strength and durability, high electrical and thermal conductivity, and due to graphene's strong cytotoxicity to bacteria – it also has excellent anti-bacterial effectiveness.

Working in conjunction with our graphene printing partners; we are able to supply a range of knitted and woven technical textiles that are printed with a special water-based graphene solution, **G+®**, delivering some of the unique properties of graphene:



Heat Dissipation

Dissipates body heat across the graphene-print, ultimately helping to stabilise the bodies core temperature. Test results demonstrate up to 60% improvement in heat dissipation.



Conductivity/Anti-Static

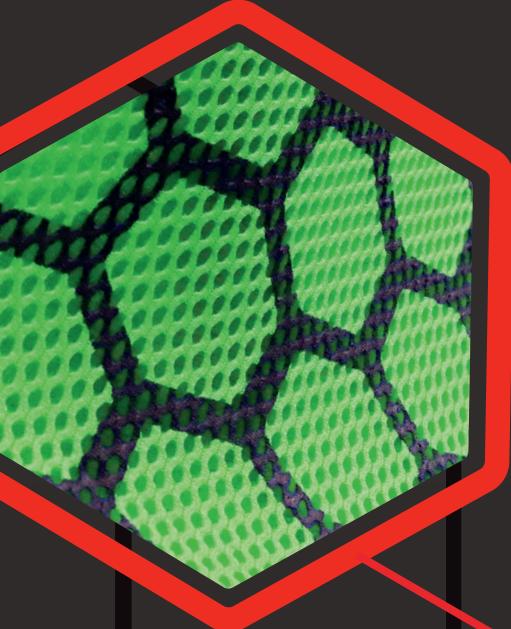
Depending on the print-pattern, differing levels of anti-staticity and conductivity is achievable (based on of ESD STM11.11-2015).



Anti-Bacterial

Helps to reduce bacteria build-up on the surface of the textile (tested to ASTM 2149).

Performance results are 'base product' & 'Graphene-print' design dependent



Heathcoat G+® is available on a range of our technical textiles from 3D spacer to lightweight woven fabrics, as well as being available in a range of standard and customised print patterns tailored to best suit your project and performance requirements.

The graphene print patterns contribute a minimal increase in weight to the finished fabric. The print's colour is a natural dark grey, reflecting the inherent colour of carbon. Additionally, the unique **G+®**, Planar Thermal Circuit® graphene print technology is fully OEKO-TEX® certifiable.

Possible applications for **Heathcoat G+®** include:

Advanced sportwear and activewear which assists with thermal management and anti-bacterial effects

Healthcare and medical applications where anti-static, anti-bacterial and cooling properties are desired

Military and PPE garments to help reduce the thermal burden and fatigue on the wearer



Sportswear and activewear for heat dissipation and anti-bacterial properties



PPE linings for anti-static, heat dissipation and anti-bacterial properties



Used in **bullet proof vests** for thermal dissipation and anti-static properties

Many more applications and end uses are possible.