



# **Properties of Graphene-Plus**

Graphene-Plus has unique and incredibly strong nanostructures that 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+**<sup>®</sup>, 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+<sup>®</sup> 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+**<sup>®</sup>, Planar Thermal Circuit<sup>®</sup> graphene print technology is fully OEKO-TEX<sup>®</sup> certifiable.

## Possible applications for Heathcoat G+<sup>®</sup> include:

Advanced sportwear and activewear which assists with thermal management and antibacterial effects

### Healthcare and medical

applications where anti-staticity, 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.

Heathcoat Fabrics Limited Westexe, Tiverton EX16 5LL United Kingdom +44 (0) 1884 254949 graphene.plus@heathcoat.co.uk heathcoat.co.uk

