

PRODUCT INFORMATION – KN95 / FFP2

Graphene Enhanced Protective Face Mask



The antibacterial and anti-viral mask leverages world-class graphene technology

Key product advantages

The mask offers enhanced antibacterial and antiviral protection for its wearer

Use of an advanced graphene materials provides robust strength whilst providing thermal cooling properties

The 4-ply layer design ensures breathability and reusability

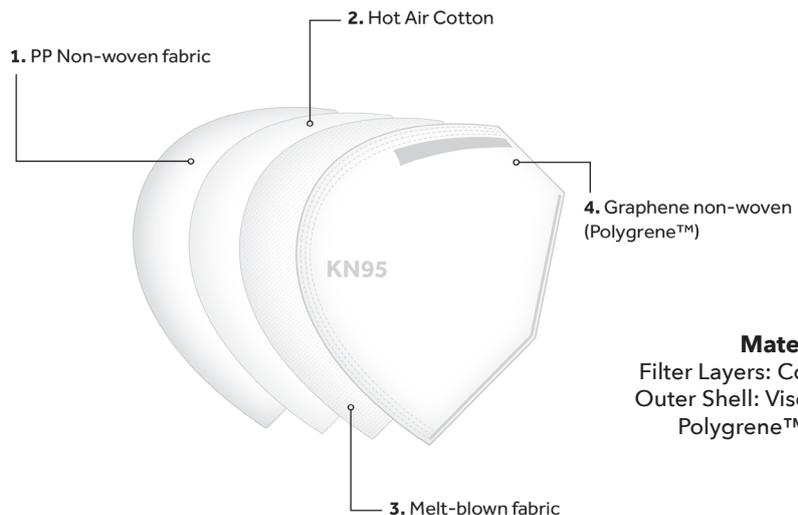
The mask is comfortable to wear, with adjustable ear loop straps

What does KN95 mean?

KN95 indicates that this mask will prevent at least 95% of particles larger than 0.3 microns in size from entering it when worn correctly with a proper fit. The different names and abbreviations of N95, KN95 or FFP2 face masks all similarly provide 95% protection or more, the only difference is the origin of manufacture.

Enhanced protection, improved comfort

To help provide enhanced protection against airborne bacteria and to minimise the spread of viral infection, the mask has a robust four-ply design which uniquely boosts filtration.



Materials

Filter Layers: Cotton
Outer Shell: Viscose,
Polygrene™ mix

The four-ply arrangement offers users a beneficial level of protection against airborne allergens, pathogens, pollen, and dust particles that are larger than 0.3 microns in size – providing a minimum level of filtration of 95%.

The mask provides improved breathability, and offers significant comfort when worn. The 'one-size-fits-all' solution is enabled via adjustable ear loop straps to supply extra comfort.

Made with Polygrene™ featuring Nanene™ – the world's only Verified Graphene Product

The mask is enhanced with a coated layer utilising Polygrene.™ Polygrene is an advanced graphene-based material featuring Nanene™ – the world's only independently Verified Graphene Product certified by The Graphene Council.

The addition of graphene to polymers provides many benefits including allowing innovative products to be developed utilising existing production processes. The Polygrene™ is blended with a sustainably sourced cellulose (viscose) material mix.



PRODUCT INFORMATION



The mask is certified to meet standards EN 149:2001+A1:2009 and BS EN 14683-2019

What is graphene?

Graphene, first isolated in 2004 by two researchers at The University of Manchester, has been hailed as the wonder material that will revolutionise materials. At just a one-atom-thick fabric of carbon which has been theoretically shown to have remarkable physical properties including exceptional strength-to-weight, effective electrical and thermal conductors as well as be highly flexible.

What is Nanene™?

Nanene is a high quality few-layer graphene produced using a patented manufacturing method. Developed on the University of Manchester campus and then scaled up in a dedicated production facility, Nanene is a product that offers independently verified, real world application, performance benefits.

What is Polygrene™?

Polygrene is a new graphene polymer range. It delivers a wide range of improvements including in tensile strength properties, among other high performance characteristics.

Certification

This Maximum Protection Graphene Face Mask (KN95) meets the requirements of EN149:2001+A1:2009 and BS EN 14683-2019 are CE-marked in accordance with the requirements of European Directive EU 2016-425. The mask's antibacterial performance is certified according to GB/T 20944.2.2007. The anti-viral performance is certified according to ISO18184:2014(E). The mask is enhanced with a coated layer utilising Polygrene™ an advanced graphene-based material featuring Nanene™ from Versarien. It produces few-layer graphene powder according to ISO/TS 80004-13:2017(en). It is also registered based on Article 20(2) of Regulation (EC) No 1907/2006 ('REACH') to manufacture/import the substance, or produce or import an article containing graphene between 1 and 10 tonnes/year (Reg. no: 01-2120768618-38-0005).

Technical Index Analysis		Content Analysis of Material		
Purpose	Facial Mask	Raw Materials	Content (%)	Weight (g) (with packaging)
Specification	15.2 x 10.5cm	Outer layer - Graphene (Polygrene™)	28.6	3,146
British Standard	BS EN 14683-2019	PP non-woven fabric	14.2	1,562
European Union	EN 149:2001+A1:2009	Melt-blown fabric	28.6	3,146
Performance	PFE ≥95%, Reached N95			



Disclaimer

As with all Protective Face Masks and Personal Protective Equipment (PPE) in general, use of this product does not guarantee that the user will not become exposed to any airborne bacteria and/or viral infections. However, the risk of such exposure will be significantly reduced by the use of this product in accordance with the Instructions for Use below.

Instructions for Use

- Users should be trained and instructed in how to wear a mask.
- The oxygen concentration of the ambient atmosphere should be at least 19.5 % volume.
- The mask is not intended to protect against toxic gases and vapours.
- Tampering, altering or modifying the mask will decrease, and in some cases eliminate the mask's effectiveness.
- The useful life of the mask will depend upon the environment in which the mask is stored, exposed and worn, together with the particles that the mask is exposed to, both when in use and when not.
- Masks should be disposed of and replaced if damaged, or when the user has cause to believe that exposure and use of the mask may have caused the filter to become ineffective ('congested').
- The user is advised to stop wearing the mask should any allergic skin reaction occur and seek medical advice if necessary.

Reusable for longer use

When handled with care, the mask can be reused. Keep the mask within its resealable pouch packaging for longer lasting use. If the mask is not carefully handled, protective properties in the mask may deteriorate. At such times, the mask is still effective as a face covering.

General handling information

Storage and transport: Store in cool, dry, well-ventilated area away from strong oxidising agents. No special transport requirements.

Waste and disposal: Safely place in a sealed container for disposal in accordance with local waste regulations. Can be incinerated in an approved facility.

Fire: Use appropriate extinguishing media, according to the surrounding area.

Reactivity: Avoid naked flames and ignition sources, particularly where loose, discarded masks are left. Avoid contact with strong oxidizing agents.

Environmental Issues

No environmental issues are expected for the mask. The pouch packaging is recyclable.

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