

Functional Fashion

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■ Passion ■ Purpose ■ Protection

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N95 and KN95 facial masks: are they the same?

Arif-Uz-Zaman



N95

Facial masks, known as N95 and KN95 respirator, are the common names for the regulatory standards used to test their efficiency at filtering at least 95% of very small particles. The N95 is the standard used in the United States, while the KN95 refers to a standard in China.

Lots of users are most concerned about what percentage of particle capture the mask takes. In this metric, the N95 and KN95 respiratory masks are the same. Both



KN95

masks are rated to capture 95% of tiny particles (0.3-micron particles, to be exact).

Since N95 and KN95 masks are rated for capturing 95% of 0.3-micron particles, people can often assume that masks cannot capture particles less than 0.3 m. If this is true, then it does not make sense that masks really do a good job of preventing viral infections.

In short, N95 masks are the US standards for respirator masks; KN95 masks are the Chinese standards for masks.

For Full Story: <https://ff.textiletoday.com.bd/n95-95-facial-masks-are-they-the-same/>

US online sales booming amid COVID-19

Sayed Abdullah

Global businesses are moving in the direction of online due to many reasons and the COVID-19 pandemic certainly played a big role in it.

A recent report by Statista showed that retail platforms have experienced a 6% global traffic increase between January and March 2020. Overall, retail websites generated 14.34 billion visits in March 2020, up from 12.81 billion global visits in January 2020.

Naturally, this seemingly overnight online transform is giving a boom to online platforms. The upsurge of sales in online platforms shows a certain future getting more customers to online platforms not only in the B2C level but also in the B2B level.

Ecommerce's share of apparel sales has increased nearly 10 percentage points in the

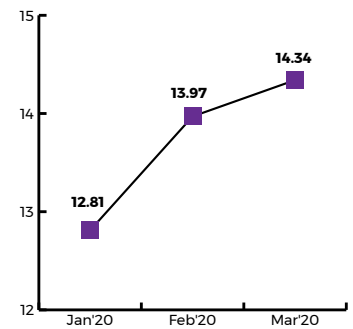


Figure: A Statista data showed that retail platforms have experienced a 6% global traffic increase between January and March 2020.

past 3 years, as online apparel sales accounted for 34.0% of total U.S. apparel sales in 2018 and 29.9% in 2017, according to Digital Commerce 360 estimates. And e-commerce captured an even greater share of apparel sales throughout 2020 due to the coronavirus pandemic.

For example, the USA based fashion tasc Performance is witnessing a boom in its online sales. It is expecting a 36% year over year to reach a few million in annual sales at the end of 2019.

For Full Story: <https://ff.textiletoday.com.bd/us-online-sales-booming-amid-covid-19/>

Things to know before buying hand sanitizer

Desk Report

The global outbreak of COVID-19 has caused widespread fear, forcing people to take practical steps to stay safe. Among these is the relentless use of hand sanitizers, which according to WHO is a suitable way to keep away viruses and maintain personal hygiene.

There are also some pretty worrying stuffs regarding hand sanitizers. Recently, The U.S. Food and Drug Administration (FDA) has warned people not to use methanol-containing hand sanitizers. Ongoing FDA tests found methanol contamination of 1% to 80% in hand sanitizer products.

So, before we buy hand sanitizers, we need to understand a few things.

One of them is that alcohol-based hand sanitizers can quickly reduce the number of germs on the hands, it cannot eliminate all kinds of germs. Look for a formulation of least 60 percent alcohol in these products.

Alcohol-free antiseptics such as antimicrobial agents or benzalkonium chloride serve well to destroy microorganisms and contain specific balsam that soften your skin and give off a great odor.

For Full Story: <https://www.textiletoday.com.bd/things-know-buying-hand-sanitizer/>

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A study on surgical gowns

Mehedi Hasan Chaion

Surgical gowns used by medical personnel are essential protective equipment for securing health from various pathogens such as bacteria, viruses. While the pores of garments are less than the size of the microbes, microorganisms cannot pass through it.

For producing garments, manufacturers may concern about the specification of the products, comfort of the products, and cost of the products. It is difficult to assure all of these criteria together, however, manufacturers always

try to develop their methods concerning global response.

Classifications of fabrics

According to fabrics types, it can be classified into three types:

1. Cotton/cotton-polyester:

These are traditional also contain pore sizes large enough to pass that of the microorganisms providing low barrier effects.

2. Microfilament fabrics:

These are also tightly woven fabrics like cotton/cotton-polyester, it is

made from very fine filaments.

3. Multilayer fabrics: Multiple layers use for achieving desired objectives.

According to usage purposes, it can be divided into two ways:

Disposable surgical gowns:

These types of surgical gowns used for one time purposes made from non-woven techniques.

Reusable surgical gowns:

Reusable gowns made from woven fabrics are used multiple

times.

The first two types are low-temperature methods using for disposable types of surgical gowns and the last two types are related to high-temperature methods using for reusable surgical gowns.



For Full Story: <https://www.textiletoday.com.bd/study-surgical-gowns/>

Now is the time for footwear industry to onboard 3D tech

S.A. Kiron

If ever there was a time for the footwear industry to onboard 3D technology that time is now. Because the increasing reliance on digitization within footwear design and production, especially as design teams work from home, leaves very little room for inefficiency within the product development process.

Nicoline van Enter, Founder of The Footwearists, noted that the introduction of 3D technologies presents many situations



where more employees, from developers to engineers, can be involved in the footwear mockup process and gives factories and brands a better chance to communicate effectively on their needs.

3D printing tech is ready, but logistics have a way to go.

If 3D technology is what the product development process needs to evolve, then 3D printing will continue to play more of a role in the future as well.

For Full Story: <https://www.textiletoday.com.bd/now-time-footwear-industry-onboard-3d-tech/>

FunctionalFashion FACTS

Bangladesh is 2nd in RMG exports with

6.8% share

top 10 garment exporters stood at

\$411.0 bn in 2019: WTO

Alibaba stock gains

16% in July

Li & Fung invests

\$100 mn to develop digital supply chain.

Tracksuits and jumpsuit sales increase around

80%

Which face mask performs best to prevent droplets?

Josh Pisani

A new study shows that not all face masks are equally effective in preventing new coronavirus. So, it is essential to know which mask does the best job to stop droplets coming out from people's mouths.

Recently researchers at Duke University have developed a way to test various types of masks to test the droplets. The researchers relied on a makeshift device consisting of a box, a laser, a lens and a cellphone camera.

Small droplets come out when people talk, so the disease can be spread by talking without coughing or sneezing.

Martin Fischer, a Chemist

and Physicist at the Durham, N.C. campus said, "Some face coverings performed much better than others in blocking expelled particles."

The study shows that N95 masks without valves do the best job, followed by surgical or polypropylene masks. Handmade cotton masks also stop a lot of droplets from normal speech. However, bandanas and neck fleeces like balaclavas did not prevent saliva spray at all.

"This was just a demonstration — more work is required to investigate variations in masks, speakers, and how people wear them," Fischer said in a university

news release.

It demonstrates that businesses and others that are providing masks to employees or patrons could do similar testing, he added.

According to Dr. Eric Westman, an Associate Professor of medicine at Duke, if everyone wore a mask, we could stop up to 99% of these droplets before reaching anyone else.

In the absence of a vaccine or antiviral drug, this is the only proven way to protect yourself and others, Dr. Westman added.

The news has been made based on the report published in the journal 'Science Advances'.

For Full Story: <https://ff.textiletoday.com.bd/face-mask-performs-best-prevent-droplets/>

Japan leading in wearable smart textile

Sayed Abdullah

Wearable smart textile has reached a new height, as various tech companies in Japan are progressed in smart clothing market.

Teijin Frontier Co. Ltd. has developed a virtual-reality jacket that can simulate the sense of touch in virtual reality. Teijin's 'Synesthesia Wear' provides users touch feedback in virtual reality without wires. This virtual-reality jacket that reproduces the sense of touch, a belt that predicts and monitors human health.

This Synesthesia Wear jacket can simulate the sense of touch in virtual reality. It tracks user's

movements, and attached modules vibrate in diverse ways reliant on how the user interacts with the VR space, adding another layer of realism to the experience.

Nisshinbo Textile, a subsidiary of Nisshinbo Holdings, is working on a smart pregnancy belt that can forecast a few days in advance when the wearer is likely to go into labor by checking the baby's heartbeat with a small microphone.

Another company, Toyobo has developed a stretchable conductive film for smart clothing, branded Cocomi, that can be used for humans and animals alike.

Synesthesia Wear jacket simulate sense of touch in VR

Smart pregnancy belt forecast labor for wearer

Stretchable conductive film for smart clothing wearing for pets & people

Hitoe conductive fabric can detect arrhythmia

Another leader in innovative technology, Toray Industries has made smart clothes with its Hitoe conductive fabric approved for medical use. Made from ultrafine threads that stick closely to the skin, allowing it to accurately detect electrical

signals from the heart.

Japan's smart clothing domestic market will grow to approximately 7 billion yen (\$66 million) in 2022, according to Tokyo-based consultancy Fuji Keizai, or 11 times bigger than in 2017.

For Full Story: <https://ff.textiletoday.com.bd/japan-leading-wearable-smart-textile/>

NC State scientists develop self-cooling fabric

Desk Report

Team of researchers at North Carolina (NC) State University is developing new fabric materials that can cool itself and the wearer. A film made of small carbon nanotubes (CNT) - a key material in developing clothing that can heat or cool the wearer on demand.

A team of researchers are studying ways to make 'smart textiles' under professor Tushar Ghosh.

Ghosh's group's project is to



Figure: Kony Chatterjee, a doctoral candidate at N.C. State, works in the SmARTextiles Laboratory on campus. Courtesy: Collected

make a new flexible material with thermoelectric properties that when worn will self-cool the wearer. Thermoelectric materials transform temperature differences into electricity and vice versa.

The researchers were also able to optimize the thermal and electrical properties of the material, allowing the material to retain its desirable properties even when exposed to air for many weeks.

For Full Story: <https://ff.textiletoday.com.bd/nc-state-scientists-develop-self-cooling-fabric/>

Indian textile industry introduces Swiss polymer technology to fight coronavirus

Desk Report

Indian textile industry has introduced an innovative product that promises to render viruses such as coronavirus ineffective. The credit for bringing this technology goes to N9 World Technologies, a subsidiary of Bangalore Resil Chemicals, and United States Consolidated Pathways Inc.

The two companies have signed an agreement to create unique Swiss antiviral and antimicrobial

technologies in a sustainable, affordable custom combination for the Indian textile industry.

N9 World Technologies is at the center of the partnership in which unique organ functional polymer is marketed under the umbrella brand VIROBAN. Sustainable antiviral technology from the N9's home brings hygiene to textile materials, helping to improve the resilience of the fabric against

viruses, including coronavirus.

The VIROBAN N9 XTS-18 creates a high-cationic charge concentration on the textile surface, neutralizing the spread of viruses and bacteria after contact. The technology has been proven 99.99% effective in reducing infectious viruses in ISO 18184 tests.

The technology is designed to quickly prevent viral transmission.



For Full Story: <https://ff.textiletoday.com.bd/indian-textile-industry-introduces-swiss-polymer-technology-fight-coronavirus/>

Ontario providing \$2mn investment in new sanitizing device for PPE

Desk Report

Ontario government – an east-central Canadian province – is giving Clean Works Medical and Pure Life Machinery with \$2 million from the Ontario Together Fund to assist in manufacturing a one-of-a-kind, sanitizing device called the Clean Flow Healthcare Mini.

This Ontario-made device can disinfect up to 800 N95 masks

per hour along with other personal protective equipment.

The declaration was made recently by Doug Ford, Premier of Ontario and Vic Fedeli, Minister of Economic Development, Job Creation and Trade.

The device is a Health Canada-permitted innovation based on

existing technology intended to disinfect fresh produce.

The technology uses UV light, hydrogen peroxide and ozone to disinfect surfaces.

The technology can kill up to 99.99% of pathogens and viruses on surfaces, making them as sterilized as an operating room.

For Full Story: <https://ff.textiletoday.com.bd/ontario-providing-2mn-invest-new-sanitizing-device-ppe/>

FunctionalFashion FACTS

14.34 bn

visits generated in Global retail websites

Japan's smart clothing domestic market will grow to

7 billion

yen (\$66 million) in 2022

Ontario providing

\$2 mn

 investment in new sanitizing device

Fabletics collaborates with Madelaine Petsch for capsule collection focused activewear

Desk Report

US-based activewear brand Fabletics has collaborated with actress Madelaine Petsch for a limited-edition capsule collection focused on activewear. Encouraged by the actress's favorite runway trends, the capsule features fashion-forward details combined with all the support and benefits of Fabletics sports bras and leggings.

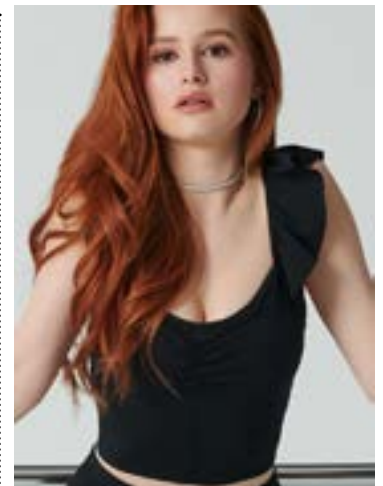
The size range includes leggings, shorts, and joggers

with its top-notch fabrics, like the brand's groundbreaking Motion365 including breathable compression, and advanced SculptKnit which offers plus-sizes for the first time.

The bras include a range of support levels details like asymmetric necklines, appealing cutouts, and feminine ruffles, while Madelaine's multipurpose jackets and tunics are built with

pockets and adjustable features. Grounded in a red color palette, the capsule collection is built on principles of athleisure.

In a post-COVID-19 quarantine world, majority of people are still working from home and preferring athleisure, for brands it still seems to be a popular choice. And the athleisure market is witnessing growth, even after the global apparel market shrinkage from stores being shut down.



For Full Story: <https://www.textiletoday.com.bd/fabletics-collaborates-madelaine-petsch-capsule-collection-focused-activewear/>

Ralph Lauren continues to focus on its global online platform

Desk Report

Luxury clothing retailer Ralph Lauren continues to focus on its global online platform, observing coronavirus epidemics and potential resurgence challenges as an opportunity to deepen and expand its digital capabilities.

In the first quarter, Ralph Lauren accelerated the rollout of connected retail programs and moved to a truly omniChannel model that includes personalized customer engagement, including virtual sales appointments, Livestream sales, shipping from stores, and personalized promotional offers.

On the men's purple label, the company has expanded its digital product creation and rollout of digital showrooms on the horizon.

Almost all stores are now open in Asia, Europe, and North America. Looking ahead, the company continues to realign inventory to meet expected demand and support brand development strategies. As part of its decision to realign inventory, the company rolled out more than 200 wholesale doors in the U.S. this spring to focus on productive locations for more settlements.



Ralph Lauren said it expects financial results for the second quarter and full-year

to be significantly adversely impacted by the pandemic and prolonged demand recovery.

For Full Story: <https://www.textiletoday.com.bd/ralph-lauren-continues-focus-global-online-platform/>