



Engineered to be permanently antimicrobial and colorfast, while eliminating all fabric water-dyeing, **SOLYESTER® is the textile of our future.**



**WATCH THE VIDEO**  
TO LEARN MORE

## TECHNICAL FEATURES

SOLYESTER is made with COPPTECH's proprietary zinc & copper microparticles, giving fabrics the ability to block microbes while repelling textile odors. This is NOT a topical treatment; our microparticles are LOCKED INSIDE, making SOLYESTER the perfect host yarn for permanent technologies.

### ANTIMICROBIAL

SOLYESTER is an antimicrobial fabric like no other, with a permanent solution embedded in its DNA. By locking COPPTECH's microparticles into the physical makeup of the yarn, we ensure that the antimicrobial properties will remain embedded in the fabric for the entire lifetime of the garment, regardless of exposure to microbes, sun, sweat, and multiple washes.

### SUSTAINABLE

By pre-coloring yarns, SOLYESTER eliminates polluted water and chemical waste associated with fabric water dye processes. This makes the fabric significantly more sustainable than polyester and cotton. Additionally, SOLYESTER does not disrupt local environments by releasing pollutants in the wash; a problem with all fabrics using antimicrobial topical treatments.

### COLORFAST

SOLYESTER'S comprehensive methodology locks permanent, dimensional color into the fabric's DNA, which means that it will not fade with wears or washes. This proprietary process ensures superior color vibrancy and longevity, and reduces the typical shine associated with polyester. Every delivery of SOLYESTER will have consistent color, time after time.

### ANTI-ODOR

SOLYESTER utilizes COPPTECH's proprietary microparticles, harnessing the odor-repelling properties of zinc & copper. This new material eliminates the odor obstacle that is often found in polyester performance wear, making it an ideal candidate for workout gear, team sportswear, and all garments that you plan to wear again and again.



COPPTECH's Proprietary Antimicrobial Particles are EPA CERTIFIED, ensuring product safety



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## WHO WE ARE

### SOLYESTER®

**WINDS GROUP** and **COPPTECH®**, have entered into an exclusive global licensing and manufacturing agreement for the development, manufacture and international distribution of the jointly developed SOLYESTER x COPPTECH materials.



**WINDS GROUP** is a performance textiles & wearables manufacturing company with a yarns & fabrics R&D Laboratory in Shanghai PRC. WINDS GROUP has extensively researched & developed proprietary synthetic textile technologies related to the permanent infusion of foreign particles into fibers & yarns, such as coloring agents and other active ingredients for full permanence in material performance.



**COPPTECH®** operates a biocidal R&D laboratory in Chile and has extensively researched and developed proprietary compositions of zinc & copper for antimicrobial/bacterial/viral applications, providing solutions across a spectrum of commercial products in categories such as aerospace, industrial, cleaning, footwear and others.

## DELIVERY

SOLYESTER is manufactured and supplied in various formats, to best service your needs.

- Staple Fibers
- Spun Yarns
- Filament Yarns
- Knit Fabrics
- Woven Fabrics
- Finished Garments  
*(imported Duty Free from wholly owned manufacturing operations)*

# SOLYESTER FAQ

## WHAT MAKES SOLYESTER MORE SUSTAINABLE THAN MOST FABRICS?

Our dimensional color technology removes the imperfect water-dye process, completely eliminating the massive water consumption and pollution associated with the traditional water-dyeing methodologies. Colorfastness, color consistency, and permanent technical properties also mean longer product life and less wastage at every stage of the product life cycle. Additionally, SOLYESTER does not disrupt local environments by releasing pollutants in the washing machine, like all other products with applied topical treatments.

## WHAT MAKES SOLYESTER MORE COLORFAST AND COLOR-CONSISTENT THAN MOST FABRICS?

It skips the water-dye process, so there's no variance in shades as is usually found in the traditional "dye lot –to– dye lot" method. We replicate the exact color every time with our recipes. This also improves sustainability, because there is no water used to begin with, and no rejected dye lots. Moreover, the fabrics won't fade since our color is not a coating; the color is locked inside—a benefit to all consumers.

## HOW DOES SOLYESTER REPEL ODORS?

COPPTECH's proprietary microparticles harness the odor-repelling properties of zinc & copper. This is not an odor-eliminating finish that will wash off—it is a permanent structural element of the yarn that will control odor for the lifetime of the garment.

## WHAT HEALTH PROTECTION WILL SOLYESTER APPAREL OFFER WEARERS?

SOLYESTER is made from zinc & copper—not as a finish, but as permanent components of the yarns. These proprietary COPPTECH microparticles have biocidal properties that eliminate microbes.

## HOW IS SOLYESTER'S PROTECTION SUPERIOR TO FIRST GENERATION ANTIMICROBIAL FABRICS?

Multiple competing fabrics are created with silver particles, applied in the topical coating process of water-dyed fabrics. Over time, coatings wash out and, as a result, the fabric loses the antimicrobial effectiveness. The wearer is no longer protected but may be unaware of this fact. Additionally, there are proven environmental effects due to topical silver treatments entering ecosystems through washing. With SOLYESTER, COPPTECH's proprietary microparticles are permanently locked inside the yarn. COPPTECH's products comply with international quality standards and have achieved EPA certification.

## HOW MANY DIFFERENT MICROBES ARE THERE?

Microorganisms (microbes) are divided into six major types: bacteria, archaea, fungi, protozoa, algae and viruses. Just 20 years ago, the number of microbial species was thought to be a few million at most. As our microscopes improved, more recent studies estimate about one trillion species on Earth, and 99.9% of them have yet to be discovered. Microorganisms are widespread in nature but some cause serious harm. According to the World Health Organization, by 2050, deaths from infections of multidrug-resistant bacteria to antibiotics will exceed those of cancer.

## WHICH MICROBES DOES SOLYESTER WORK AGAINST?

Zinc & copper are inherently antimicrobial. For example, staph infections, pneumonia and E. coli are microbes of great contemporary concern, with diminishing treatment options once infected. We have rigorously tested one-by-one with our SOLYESTER textiles by qualified 3rd party laboratories. SOLYESTER fabrics achieve 99.9% efficacy against Escherichia coli ("E. coli"), Klebsiella pneumoniae ("K. pneumoniae") and Staphylococcus aureus ("S. aureus") while using test method AATCC-100 2019 at SGS Laboratories. This result was determined after washing the SOLYESTER fabric a minimum of 50 times! COPPTECH has also tested multiple early generation materials against respiratory syncytial virus (RSV), proving a 99.9% efficacy. As a result of our extensive testing, we are confident that COPPTECH's proprietary antimicrobial microparticles, now also being hosted inside SOLYESTER, will deliver the exact same result.

## ARE SOLYESTER FABRICS SUPERIOR FOR PPE?

SOLYESTER'S performance is permanent. Most personal protective equipment (PPE) material under-performs and is discarded after each use, housing microbes while creating a shocking amount of waste. SOLYESTER with COPPTECH performs permanently against microbes while maintaining a garment's color appearance, wash after wash. This fact provides peace of mind for medical staff who are asked to wash their PPE at home, which puts their families at risk of spreading diseases, or carrying household infections back into hospitals.

## WHO COULD BENEFIT FROM SOLYESTER?

Permanent antimicrobial protection is especially critical for medical use, including scrubs, gowns, masks—but this is just one aspect of SOLYESTER's potential. SOLYESTER with COPPTECH represents the future of materials across multiple industries, from sports to the service sector. Further, SOLYESTER's protective appeal extends the general public, and everyday apparel.

## HOW CAN I USE SOLYESTER?

We have extensive options to optimally service your needs! Our pre-colored performance yarns will enable the optimal use of current knitting & weaving equipment in the fabric mills you already work with. Our high-performing components will also give emerging economies in the developing world the opportunity to create technical, already pre-colored products, without having to invest in new equipment, which will empower local economies.

## IS SOLYESTER PROPRIETARY?

Yes, the SOLYESTER fibers, yarns, fabrics and manufacturing processes are proprietary with a number of different patents filed. The material is made from COPPTECH's already patented zinc & copper ingredients.

Ensuring permanent performance for your apparel & textile products, while simultaneously protecting our precious natural environment.

Contact us today at [SOLYESTER@windsgroup.com](mailto:SOLYESTER@windsgroup.com)

