



We Develop Latex-free Elastic Nonwovens & Create Soft-Stretch Protective Hoods

The lack of proper PPE for primary head protection has been a problem in many industries. Workers constantly expose their heads and faces to harmful substances in their daily jobs or to sunlight over extended periods of time.

VitaFlex LLC provides a practical and economical solution by creating soft-stretch protective hoods from revolutionary latex-free elastic nonwoven fabrics. The FDA guiding principles for surgical masks were followed throughout the development process.

Spunmelt nonwoven fabrics are a “breathable barrier” made by fiber spinning technologies. Their dense fiber-web structures have ultrafine intertexture openings for air to flow through while maintaining particle filtration quality. They are irreplaceable materials for making face masks and surgical gowns. Our patented technology transforms a wide range of spunmelt nonwovens into soft and cross-stretch elastic fabrics, without adding latex or other elastomers. This enables finished products to be form-fitting while maintaining their cool, breathable barrier quality.

The latex-free elastic nonwoven technologies and the materials have been globally co-patented by DuPont® and Dr. De-Sheng Tsai. The precursor nonwovens are sourced from the most advanced lines in the southeastern states. The conversion and manufacturing processes are done in Burlington, North Carolina.

By combining fiber engineering and converting technologies, we developed latex-free elastic nonwovens. To achieve the functionalities, our hoods are constructed with a multi-layer structure, with elastic fabrics each having distinct characteristics. Our hoods provide innovative advantages of effective protection, comfortable form-fit and easy breathability for extended wear.

	General Safety Hood	UV-Shield Hood UPF40
Structure	3-layer 55 gsm	3-layer 60 gsm
Intended Use	Primary Head Protection	Outdoor Work Metal Welding
Thickness	0.30 mm	0.35 mm
ΔP (mm H ₂ O/cm ²) <small>MIL-M-36954C</small>	< 2.5	< 3
Breathability/Perception	Normal/ Very Cool	Normal/ Cool
Hydrostatic (cm H ₂ O) <small>AATCC Test Method 127</small>	20	22-28
Particle Filtration Efficiency @ 1 μm <small>ASTM F2299</small>	80	80
UVA/UVB Block % <small>AATCC TM 183</small>	-	> 98.1/98.5
Particle Shed Analysis Helmke Drum Particle Counts	2,240 of ≥0.3 μm	-

Keep Heads Cool. The differential pressure measurement (ΔP) across the web structure is used as an indicator of Breathability. A surgical mask is generally preferred to have a ΔP of less than 5.0. VitaFlex triple-layer structure has a ΔP of only <3 which allows perspiration vapor to escape through it. There will be no unbearable heat or humidity build up inside the hood.

The triple-layer structures were engineered to filter particulates of 1 μm and larger at a flow rate of 1 cubic foot per minute (CFM) or 28.3 liters per minute (LPM). Since it fits tightly against the wearer’s hair and skin, no air flows through the hood, so airborne particles rarely penetrate through to the wearer.

The physical properties mentioned above represent typical values of the fabric structure of soft-stretch hoods. These values should not be considered as specification or certificate of material and or specification values.

Caution: VitaFlex’s Hoods are NOT for replacing respirator in OSHA requirements.



Soft-stretch Hoods Innovative Primary Head Protection

- **Securely cover the entire head, face and neck**
- **Soft form-fit provides an isolation layer next to the skin**
- **Dense, multi-layer fiber-composite structures effectively block micron-sized particles and liquid splashes**

When inhaling, the intake air pushes its soft structure against the nose to achieve effective filtration.

When exhaling, the air from the nose pushes the soft structure outward and creates a space between the hood and the skin allowing for air dissipation which makes breathing comfortable and reduces goggle fogging.

- **Worn comfortably all day to keep continuous protection**

Ultra-fine intertexture gaps between fibers allow body heat and perspiration to escape which keeps heads cool for extended wear.

While working, any particles or chemicals falling on the worker's head often cause irritation and distraction. Further, there is a risk that work and environmental debris often contain harmful substances (lead, asbestos, chemicals, germs, biohazard waste, and foul liquids).

Whenever a mask is required, a protective hood is needed as well. Our Soft-stretch Hoods improve workers safety and job efficiency. They also give workers a sense of dignity when dealing with disgusting waste and foul liquids.

General Safety Hoods

- **Dust Hoods block micron-sized particles** (asbestos, silica dust, glass fibers, powder), and shield against some liquid splashes.
- **Spray Hoods block paint or PU foam overspray.** They are a newly added version with enhanced hydrostatic pressure resistance of 26 cm H₂O. **Please note**, in intensive spraying operations or when the overspray solvent cannot evaporate quickly, double layering the spray hood is recommended or use our Biosafety Hoods.

There are three colors: aqua-blue, white, and camo-gray. While adult hat sizes S and XXL fit 21.25" and 25" head circumferences respectively, our soft-stretch hood is expandable up to 27" circumference.

For small head, a head band can be worn under the hood to give a tighter fit.

Replace Facemasks In Many Work Environments

The structures of our hoods have high filtration efficiency, blocking 80% of 1-micron particles (tested with ASTM F2299). When worn properly under goggles to seal around the wearer's nose, our hoods provide excellent respiratory protection.

The correct sequence is to put on our soft-stretch hood first, followed by safety goggles to protect the eyes. This completes full coverage of the head, face and neck (as shown in the photo to the right). **Selecting goggles** that fit the wearer's face curve is essential for sealing around the wearer's nose by allowing it to press firmly on the wearer's nose bridge.

In high dust areas or when spray painting, a mask or a full-face respirator can be worn over the hood. The hood provides an additional layer of barrier and a soft cushion of comfort and reduces gapping.

Fit test your respirator as always with our hood to confirm its safety. If the full-cover hood interferes with the fit, try wearing our hood over the mask or use the open-face style that allows the respirator direct contact with the skin.



Two Styles: Full-cover and Open-face



Full-cover Hood forms a tight fit around the wearer's eyes. **To reduce fogging**, first pull the hood down all the way until it touches the top of the head. Then, adjust the eye-opening. Lastly, hold the nose bridge line and pull the hood collar tip (as shown in photo to the left) to straighten the hood's center line and create an air-pocket around the nose and mouth. This will allow for dissipation of exhaled air.



Otherwise, the nose-tip can be clipped off to become an open-face hood.



Open-face Hood gives the convenience of accommodating a full-face respirator. Its face opening can be pulled down (photo to the right) to cover just the mouth and chin, allowing the respirator direct contact with the skin.

UV-Shield Hoods

Many farmers and outdoor workers suffer skin cancer from over exposure to sunlight during their daily jobs. The UV-Shield Hoods are the innovative product that provides a practical and economical solution to reducing sun exposure while blocking work and environmental debris.

Black and CamoGray Hoods: The pigments and dense fiber-web structure of the black fabrics block UV-rays and reduce sunburn, in addition to the barrier functionality of blocking micron-sized particles, sparks, liquid splashes, and paint overspray. **Sliver hoods** are constructed with an outer layer with shiny fibers to reflect sunlight and reduce heat absorption while the backing layers of black provide UV shielding. **Silver-OR hood** is a newly added version with oil repellency for oil drilling and oil/chemical spill cleanup.

- **Block UV-rays for workers** who are exposed to sunlight for extended periods of time (farming, roofing, civil constructions, bridge/tank/tower painting, oil rig & pipeline maintenance, high-rise window washing, and ship deck duties).
- **Practical protective (survival) head cover** for desert hiking, saltwater fishing or boating (reducing sunburn and blocking sand or salt particles).



AATCC TM 183	% Block UVA	% Block UVB	% Block UVC at	UPF
Black Hood	98.61	98.80	-	40
Silver Hood	98.18	98.53	98.96	40

The material of our hoods is recognized as a **Class 1 flammability** by having a burn time of less than 3.5 seconds when subjected to a flame test. In our internal testing, the sparks from a stick-welding melted or burned the surface of the structure but did not cause catching fire.

Blocks welding sparks and UV rays: It is believable that our hood will provide assurance in shielding the sparks when it is worn underneath a face shield on the wearer's head in a vertical position and farther than 18" away from a welding spot.

Hundreds of positive reviews on Amazon.com and our E-store site



Soft-stretch Hood Superior to Spray Socks and Disposable Hoods for Spraying

★★★★★ I use these for when I sand popcorn ceilings. ...

By Mr. DeMarco on Jun 12, 2017

I use these for when I sand popcorn ceilings. It keeps all the debris out of my hair and neck, and eventually down my back.

I even washed them and they held up.

Best Hood ANYWHERE! ★★★★★ Posted by Megan

My boys have been using spray socks FOREVER! Since we first tried a vita flex hood, we've never gone back! They offer superior protection (from overspray) yet are still lightweight and very breathable! **Great to use even on the hottest of summer days.**

My employees LOVE these hoods! ★★★★★ Denise (Monsanto Company)

I work on a farm, and my employees are exposed to plant dust as well as dust from the soil on a regular basis. These hoods are perfect for when they are cleaning equipment with compressed air. They are light enough to be **comfortable in a tropical climate**, yet **sturdy enough to hold up in an industrial setting**. Thanks for making a great product!

Best Hoodie Ever ★★★★★ Thomas Perez

I use the Vita Flex blue hood when I go into substructure crawlspace areas to do an inspection. I **use it under a particle respirator and it gives me double protection**. I no longer have to spend the rest of the day pulling strange stuff out of my hair and no more spider web tangles in my hair also. Great product I highly recommend it!

BEST SPRAY SOCK ON THE MARKET! ★★★★★ Maggie

We work in a powder coating shop...lots of dust/powder and super warm all year round. These hoods are awesome! They protect the guys from all the dust/powder/paint but are still light enough that the guys DON'T sweat (because of the hood). **We tried a sample that came in the mail 3 years ago and (literally) ordered a box and threw away all the cotton spray socks we had in stock!** Great product! Glad we found it!

Nice hoods, hard to find - but they had them! ★★★★★ Rowiebowie

Couldn't find a good disposable hood anywhere else. At this price, I was skeptical these might be the thin fabric like the cheap disposable hair covers. However, was **very pleased at the quality, fit, and comfort** of these hoods. They are **fairly thick (relative to most disposable items)** and have a nice feel to them. As pictured, they easily cover full face or you can pull down to chin if you don't want your nose & mouth covered. I highly recommend!

BEST HOODS FOR SPRAYFOAM ★★★★★ Buckeye Rich

Nice little units for the work I do. Will **keep the insulation out of my hair and from going down my back**. They **don't interfere with eye protection or use of a respirator and is disposable**. Can get a little warm on sunny days in the attic space but does the job. Boss says I look like a thug when I have this on, but for the money I will invest in this product in the future.

Protects Well ★★★★★ Coconut

I am **using this head cover along with eye goggles** for protection from blowing debris, dust, and sun, while mowing. It works great!!!! There is room to breathe, and the fit works very **well to tuck beneath eye goggles** for a complete barrier. **I am a female**, but there is plenty of room, so it would work great for males too. **I am sooo glad to have these hoods**, I have machine washed them, and they held up just fine. These have completely **changed my outlook about having to mow!!!**