

FREQUENTLY ASKED QUESTION ABOUT THE HOT SHIELD PRODUCTS

Q: WHAT IS THE HOT SHIELD? IS THERE MORE THAN ONE?

A: When people say “Hot Shield”, they usually mean the HS-2 model, the most popular and best selling model. However, we make several different models of facial protection. The most popular is The HS-2 is the worlds first patented (U.S. Patents # 5,628,308 & 5,823,188) dual function, multiple layer face protector mask designed by firefighters specifically for wildland firefighting operations. The HS-2 Wildland Firefighter Face mask is the only device we know of that has been proven to protect major portions of the face & neck from burning embers, sparks and even the direct flames of a 1000 degree Fahrenheit blowtorch. Its second most important function is to provide a measure of protection to the respiratory tract of the firefighter by use of a combination of physical barriers. The UB-V2 Ultimate Bandanna has no accommodation for a N-95 filter or other and was designed specifically for those firefighters who simply want burn protection but no fine particulate protection. The Ultra Shroud Extreme is an extremely thermally resistant shroud that can be attached to nearly any helmet with the included packet of accessory straps. It is the only shroud we know of that allows the firefighter to breathe directly through the shroud’s mesh overlap, offering some measure of particulate protection while still offering high heat protection. The HS-4 model is designed specifically to protect one’s face and the Sundstrom SR-100 half face canister style respirator in a similar fashion to the HS-2 design. The HS-5 does the same around the Draeger Xplore 3500 half face respirator.

Q: WHY DO FIREFIGHTERS NEED THIS KIND OF PROTECTION?

A: Other devices, masks and standard issue helmet shrouds have proven to be inadequate against the flame, heat and smoke of wildland fires. The choice of poor PPE often results in inadequate air exchange, burned noses from shrouds that creep down and expose the nose, bandannas catching on fire, coughing up black phlegm for days after the fire, inflamed & irritated respiratory tracts due to the inhalation of smoke & ash particulate common to ALL outdoor fires. Many firefighters have been overrun by fast moving fires and have sustained severe burns to the face, neck and ears.

Q: HOW DOES THE HOT SHIELD FACE MASKS & HOUSINGS PROTECT ME?

A: In general, our products radically reduce the risk of burns to your face through the use of highly thermally resistant materials and our patented design that utilizes the proven science of insulating air space. The outer shell of every Hot Shield mask, shroud

or respirator housing is made of super tough & extreme fire resistant CarbonX fabric which does not burn, ignite, char, shrink or decompose at temperatures reaching and exceeding 2000 degrees Fahrenheit, even for extended periods of time. CarbonX accomplishes this with less weight than traditional PPE materials. The HS-2 has saved the lives of at least 4 firefighters (documented) and has become a popular and standard part of PPE for many departments and firefighters.

Q: WHY NOT BUY THE “OTHER GUYS” CHEAPER MASK?

A: The old adage “You get what you pay for” remains true. The major components of the “other guys” gooey wet style filter & mask combo is made of polyester fabric (petroleum based) and a filter made of polyester fabric filled with polystyrene foam beads soaked in aloe vera gel! Do a little research of your own...perhaps ask your crew the following questions:

- ★ When was the last time you or the Chief “spec’ed out” polyester fabric as a liner for PPE?
- ★ Ask any reputable PPE manufacturer if they use polyester or styrene foam beads as a vapor barrier or liner in their firefighter clothing line?
- ★ What is the melting point of polystyrene foam beads (what you find in a bean bag chair)? What is the melting point of polyester or Indura fabric?
- ★ What happens to your lungs & throat when you inhale burning vapors of melting polyester and polystyrene foam?
- ★ Would you like to breathe through a gooey, sticky, wet, “bean bag” style filter mashed up onto your mouth & nose?
- ★ Do you have time to remove & re-install filters several times in a fire?

Q: HAS THE HOT SHIELD LINE UP BEEN INDEPENDENTLY TESTED?

A: Yes, several different tests were conducted on the original versions of the HS-2. Those versions used a less protective, although still very good combination of Nomex and Kevlar fabrics. Test #1 was performed by Biotherm Labs in Dayton Ohio. The test was the RPP (Radiant Protective Performance) Test per NFPA Standard #1977 (Wildland Clothing Standard). Test #2 was the application of a 1000 degree F blowtorch with thermocouples (thermometers) placed outside and inside the mask. After 60 seconds of flame applied to the outside of the HS-2, the inside temperature had only reached 114 degrees F!. Storm King Mountain, makers of the most protective shelter tent & fire apparatus curtain in the world performed a open field burn test that proved the HS-2 could withstand severe temperatures outside and yet inside, the world of the

firefighter was indeed very survivable. Now, with the use of CarbonX (since 2001), the Hot Shield lineup of facial protection masks, housings and helmet shrouds are even more protective and lighter as well. The RPP or Radiant Protective Performance test, Standard ASTM F1939 has a NFPA requirement of 7 cal/cm² or greater. Our fabric combination exceeded that to 11.1 cal/cm². The TPP or Thermal Protective Performance test, Standard ISO 17492 has a NFPA #1977 - 2112 requirement of 3.0 cal / cm²; our combination of fabrics achieved a 9.7 cal/cm² rating. Flame resistance, Heat Shrink Resistance, Cleaning/Shrinkage Resistance all exceeded the NFPA#1977 minimums.

Q: ARE ANY OF THE HOT SHIELD PRODUCTS RESPIRATORS?

A: No, they are not. Respiratory relief is achieved differently for every model. The HS-2 has an integral filter pocket that accomodates any low-level N-95 dry or wet particulate filter mask. Filters are sold separately and are steam activated carbon sandwiched by cotton media These filters do not become useless after being exposed to air, unlike the gooey wet filters the “other guys” sell. The UB-V2 Ultimate Bandanna uses a double layer of CarbonX knit mesh to block large airborne ash particles. The UNI-V2 Ultra Shroud Extreme uses the same concept but in a helmet shroud. The HS-4 and HS-5 are masks/housings that fit onto & around two popular well known brands of half face cartridge style respirators (Sundstrom SR-100 & Draeger Xplore 3500), protecting both the face & the respirator itself.

Q: DO THE HOT SHIELD MASKS, SHROUDS & HOUSINGS PROTECT ME FROM SUPERHEATED AIR?

A: No. Only a positive pressure breathing apparatus can do that! However, in an environment like wildland firefighting operations, where a SCBA is impossible or impractical, the only remaining option is a negative pressure filtration device combined with extreme heat protection....which is exactly what our products do.....and do very well.

Q: ARE HOT SHIELD MASKS & SHROUDS COMPATIBLE WITH ALL FIRE HELMETS? CAN I USE MY CURRENT SHROUD?

A: Models HS-2 and UB-V2 are “stand-alone” masks that do not interfere with any helmet. Of course, the HS-4 & HS-5 models, combined with their respective half face respirators are completely compatible with any helmet as they are “stand-alone’ (not attached to the helmet). The basic standard shroud made of Nomex based fabric typically will not wrap completely over these four models, but usually will wrap and

fasten below the air exchange opening of the HS-2 and UB-V2. We highly recommend the use of our Ultra Shroud Extreme Helmet Shroud made of CarbonX, which will completely wrap around both the HS-2 and the UB-V2, still allowing air exchange due to the two layers of CarbonX knit mesh at the mouth/nose area overlap of the Ultra Shroud. Our Extreme shroud is compatible with nearly every wildland helmet made in the world and we package it with a set of fasteners to accomplish this.

Q: ARE THE HOT SHIELDS COMPATIBLE WITH GOGGLES?

A: Low profile goggles with some type of foam work best. Remember, nearly every goggle wants to occupy the real estate spanning the bridge of your nose up to your forehead. Any type of face mask will need to share this area (the bridge of your nose) as an “anchor point”. We did invent a novel replacement goggle strap that helps out with this. Our Blazer QuikConnect Goggle Strap replaces your existing continuous elastic band goggle strap with one that has a fastek buckle (like the buckle on any backpack), so that you can put your goggles on without removing your helmet or mask. You can keep your goggles in a separate pouch or in your Web Case (we make it!) so that they stay clean and are ready for use at a moments notice.

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