

## **DATA SHEETHOT SHIELD FACE MASK / FR RESPIRATOR HOUSING MODEL HS-4 FOR THE SUNDSTROM BRAND SR-100 HALF FACE RESPIRATOR**

### **SUMMARY DESCRIPTION**

Hot Shield Fire Resistant Respirator Housing Model HS-4 is thermally resistant face mask and respirator housing designed specifically for the Sundstrom model SR-100 Half Face Respirator. The HS-4 has been designed by firefighters for firefighters and other workers that are subject to direct flame, radiant heat, smoke and airborne particulate hazards in an outdoor environment, where use of a self-contained breathing apparatus is either impractical or impossible, but where the protections offered by a half face respirator are either desired or required. The HS-4 protects both the users face & neck *and* the respirator.

Thermal protection is accomplished by layers of CarbonX, an extremely durable & heat resistant proprietary fabric manufactured by Tex Tech Industries. CarbonX fabrics used in the HS-4 are individually tested to exceed the R.P.P (Radiant Protective Performance) requirements of NFPA #1977-2022. The respiratory protection aspect is solely accomplished via the Sundstrom SR-100 half face respirator.

The combination of the HS-4 FR Mask Housing with the Sundstrom SR-100 translates to easier breathing and greater comfort to the user, even for when used for prolonged periods of time. This special combo allows for “fit testing” of individuals as the HS-4 does not interfere with the fit, form or function of the Sundstrom SR-100 respirator, as the sealing surfaces are not impeded by the HS-4. The CarbonX materials also absorb perspiration, adding to overall user comfort. The HS-4 secured to the Sundstrom SR-100 can hang loosely around the neck/chest area until ready for use. The user secures the mask housing & the respirator via Sundstroms head strap and the HS-4 hook and loop fasteners (Velcro) of the HS-4. This can be done quickly and easily without removal of gloves. 3M Scotchlite® reflective trim is sewn to either side of the HS-4 for nighttime visibility.

### **HS-4 SPECIFICATIONS**

<b>Name:</b>	Hot Shield FR Housing HS-4
<b>Model Number:</b>	HS-4
<b>Weight:</b>	3.8 oz. / 106.4 grams
<b>Wt of HS-4 &amp; SR-100:</b>	15.9 oz / 450.8 grams
<b>Sizing:</b>	One size fits small, medium, large & extra large Sundstrom SR-100
<b>Limitations:</b>	Not a respirator itself; must be used with the Sundstrom SR-100
<b>Coverage:</b>	Most areas of the face and neck. Leaves ears exposed.
<b>Product Testing:</b>	Mask itself subjectively tested only. CarbonX fabrics have been independently tested. Tests include RPP (Radiant Protective Performance) ASTM F1939, the TPP(Thermal Protective Performance) ISO 17492, the Flame Resistance(Vertical Flame Test) ASTM D6413, the Cleaning/ Shrinkage Resistance Test AA135, & the Seam Breaking Test ASTM 1683.
<b>Care:</b>	Hand wash only
<b>Warranty:</b>	One year materials and workmanship.

**ADDITIONAL PERTINENT INFORMATION**

**Q: WHY IS THE SUNDSTROM SR-100 HALF FACE RESPIRATOR A GOOD CHOICE?**

A: #1- The SR-100 features the least amount of inhalation restriction of any half face respirator available in the world. The SR-100 utilizes nearly the entire portion of the single large cartridge filter, not just a small 2” area like most respirator designs. #2- The total square inches of filter media is greater than any other half face respirator canister. #3- Exhalation is vastly easier & more efficient than other types, as Sundstrom incorporates two (2) valves, not just one (1). #4- SR-100 made of high grade silicone which offers less irritation, is more pliable and comfortable to the wearer. This allows it to mold more easily to individual faces and reduces hard, uncomfortable pinch points. #5- The user adjustable “set it and forget it” neck hang strap is very user-friendly and requires only one initial adjustment.

**Q: WHAT ELSE DO I NEED TO KNOW ABOUT THE HS-4?**

A: Hot Shield USA has put together a combination of 3 products, known as the HS-4 Combo. The first product is the “HS-4”, a face protective mask and respirator cover specifically designed to “mate” with the Sundstrom brand half face respirator model SR-100. The 2nd product in the HS-4 Combo is the Sundstrom WFR Kit. This kits contains not only the SR-100 for which the HS-4 is specifically designed for, but also all the components necessary for respiratory protection in a wildland firefighting environment, including HEPA particulate cartridge (SR-510) and a chemical cartridge (SR-232). The 3rd product in the HS-4 Combo is Hot Shields Web Case, a bright yellow nylon cordura bag/pouch designed to accommodate any Hot Shield mask or the HS-4 w/ the SR-100. The Web Case is easily secured onto ones wildland pack, webbing harness or similar, with straps & snaps, and can be quickly removed to store away or move to another pack or “go bag”.

**TESTING DATA FOR CARBON X FABRICS**

<b>CARBONX TESTING DATA</b>				
<b>Test Name</b>	<b>Standard</b>	<b>NFPA 1977 (2011) Requirement</b>	<b>Fabric: CarbonX RST-75</b>	<b>Fabric: CarbonX C-59</b>
Radiant Protective Performance (RPP)	ASTM F1939	7 cal/cm <sup>2</sup> or greater	Combination: 11.1 cal/cm <sup>2</sup>	Combination: 11.1 cal/cm <sup>2</sup>
Thermal Protective Performance (TPP)	ISO 17492	NFPA 2112: 3.0 cal/cm <sup>2</sup> (spaced TPP of 6.0 cal/cm <sup>2</sup> )	Single layer: 9.7 cal/cm <sup>2</sup>	Single layer: 10.2 cal/cm <sup>2</sup>
Flame Resistance (Vertical Flame Test)	ASTM D6413	4” or less of char length; 2.0 seconds or less of after flame; no melt no drip	Pass (0, 0, 0)	Pass (1”, 0, 0)
Heat Shrink Resistance	None referenced	Less than 10% in any direction	Pass (-4.3%, -1.5%)	Pass (-3.4%, -1.6%)
Cleaning/Shrinkage Resistance	AATC 135, Machine Cycle I, Wash Temp IV, Drying Aiii	Shrinkage less than 5%	Pass (-3.8%, -2.9%)	Pass (-3.1%, -1.5%)
Seam Breaking Test	ASTM 1683	No minimum	51.5 / 47.3 lbf	66.18 / 53.8 lbf

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