

DATA SHEET
HOT SHIELD MODEL HS-5 FR RESPIRATOR HOUSING
FOR THE DRAGER XPLORE 3500 HALF FACE RESPIRATOR MODEL HS-5

Hot Shield Fire Resistant Respirator Housing Model HS-5 is designed specifically for the Draeger brand, model Xplore 3500 Half Face Respirator. The HS-5 has been designed by firefighters for wildland firefighting, but has found application in other industries utilizing this particular model respirator. The HS-5 patented design provides for several benefits. Its primary benefit is a high degree of thermal protection to face & neck areas. This is accomplished by use of highly thermally resistant materials and adequate air-spacing, both of which are crucial to meet the goal of protecting the human skin. Hot Shield USA uses CarbonX materials from Tex Tech Industries. CarbonX is a proprietary material tested to withstand extreme temperatures, far exceeding the Radiant Protective Performance requirements of NFPA #1977 Standards for Wildland PPE (see charts on website). The combination of the HS-5 housing with the Draeger Xplore 3500 provides an individual with both high thermal protection and the benefits of half face respiratory protection. Also, since the HS-5 does not interfere with the sealing surfaces nor block the inhalation or exhalation valves of the Draeger Xplore 3500, “fit testing” is possible. The interior materials also absorb perspiration, adding to overall user comfort. The HS-5 protects the user and the respirator. Features 3M Scotchlite Reflective Trim for nighttime visibility. Fastens behind the neck (Velcro). One size fits all, machine washable.

HS-5 DATA

Name:	Hot Shield FR Housing HS-5
Model Number:	HS-5
Weight:	3.8 oz. / 106.4 grams
Sizing:	One size fits all (hook & loop fasteners behind neck)
Main Benefits:	Protection from burns to the face AND to the respirator itself.
Description:	A facial protection safety garment designed exclusively for use with the Draeger Xplore 3500 Half Face Respirators. Mask is designed to completely cover said respirator without interfering in the face-to-respirator seal, thereby allowing for individual fit testing. Mask can hang loosely around neck until ready for immediate use. Mask uses FR hook and loop fasteners to secure around back of neck.
Main Users:	Mask is used by firefighters and other workers in areas where heat, flame and airborne particulate hazards exist and a self-contained breathing apparatus is impractical or impossible.
Limitations:	Not a respirator; must be used with the Draeger Xplore 3500 only
Coverage:	Most areas of the face and neck. Leaves ears exposed.
Care:	Hand, machine or dry clean.
Warranty:	One year materials and workmanship.

- FREQUENTLY ASKED QUESTIONS NEXT PAGE -

**FREQUENTLY ASKED QUESTIONS OF THE HOT SHIELD MODEL HS-5
FR FACE PROTECTOR & RESPIRATOR HOUSING
FOR THE SUNDSTROM SR-100 HALF FACE RESPIRATOR**

Q: WHAT IS THE HOT SHIELD HS-5?

A: The HOT SHIELD HS-5 is an extremely heat and flame resistant housing exclusively designed for the Drager Xplore 3500. The HS-4 has been designed by firefighters specifically for wildland firefighting, but has found application in other industries that utilize the Xplore 3500 Half Face Respirator, and desire protection against burns. Drager does not endorse the use of the HS-5, but does allow the HS-5 to be sold and marketed by Hot Shield USA under strict limitations.

Q. HOW DOES THE HOT SHIELD HS-5 PROTECT YOU?

A: In general, our products greatly reduce the risk of burns to your face by the use of highly thermally resistant materials combined with our patented design. The outer shell of every Hot Shield mask, shroud or respirator housing is made of super tough & extreme fire resistant CarbonX fabric. CarbonX is an inherently non-flammable fabric that will not burn, melt, drip, ignite, shrink, or char when exposed to direct flame or extreme heat; are highly resistant to molten metal splash, flammable liquids, and certain chemicals. The CarbonX thermal protective properties will not wash out or wear away. CarbonX accomplishes this with less weight than traditional PPE materials.

When exposed to intense heat or flame, the CarbonX fiber blend carbonizes and then expands, eliminating any oxygen content within the fabric, tested to achieve an astonishing Limit of Oxygen rating of 55. CarbonX products combine an extreme level of protection with maximum comfort. They are lightweight, soft to the touch, and flexible, wearing much like cotton. They also breathe well, wick away moisture, and dry quickly, enhancing the wearer's comfort and productivity and reducing the potential for fatigue and heat stress.

CarbonX was initially developed by a race car driver after he suffered severe burns and is used extensively in that industry in racing suits & gloves. Hot Shield USA has been using CarbonX exclusively since November 2001.

Specifically, by using the HS-5, in conjunction with the Draeger Xplore 3500, a worker can take advantage of the easy air exchange available in a half face respirator, yet have high thermal protection as well.

Q: IS THE HOT SHIELD HS-5 A RESPIRATOR?

A: No, it is not. The HS-5 is an extremely flame resistant respirator mask housing specifically designed to fit the Drager Xplore 3500 Half Face Respirator.

Q: HAS THE HOT SHIELD HS-5 BEEN INDEPENDENTLY TESTED? WHAT ABOUT NFPA COMPLIANCE?

A: CarbonX component fabrics have been tested to NFPA standards and proven to far exceed the minimum requirements set forth in both NFPA Standard #1977 Wildland Protective Clothing and Equipment, Editions 2011 & 2016, Section 8.2, Radiant Protective Performance

(RPP), Section 8.3 Flame Resistance and 8.4 Heat & Thermal Shrinkage Resistance. Also, CarbonX test data can be found on the website www.Carbonx.com

Q: IS THE HOT SHIELD HS-5 COMPLIANT WITH NFPA STANDARDS?

A: To date, NFPA Standard #1977 Wildland Protective Clothing and Equipment does not contain a category for “face masks”. Until then, it is our understanding and those of everyone else we have consulted on this issue, until this is established, no face mask has a standard to be tested to. Consequently, firefighters, users, workers, employers are free to choose whatever face mask they wish to protect themselves or their employees from the hazards of heat and flame.

However it is important to know all the facets surrounding “wildland face masks”, “wildland respirators” and applicable regulatory standards in order to obtain a true & clear understanding of heretofore very confusing issue. We offer the following logical, linear numbered items in order to help you understand the entire issue. Then you can make an informed decision for yourself, your department and/or your employees.

#1- NFPA Standard #1977 does not contain a specific category for a “face mask”. It does contain a category for a “face/neck shroud”. Face masks and face/neck shrouds are not the same and although can overlap, are not the same piece of equipment nor are they designed to be the same.

#2- Until a “face mask” category is written into NFPA Standard #1977, no product or face mask has a standard or bench mark to follow and/or be tested to. This includes the Hot Shield HS-4 and any other face mask available on the market.

#3- The Hot Shield HS-5 is a face mask housing that does not interfere with the fit, form or function of the half face respirator for which it is specifically designed (the Drager Xplore 3500).

#4- All Hot Shield masks, including the HS-5, far exceed the *thermal protection performance requirement minimums* of any & all categories listed in NFPA Standard #1977 (pants, shirts, etc), as well as NFPA Standard #1971 and #2112.

#5- The thermal protection performance minimums in NFPA Standard #1977 are set low; even FR cotton will “meet or exceed” the Standard.

#6- Human skin will begin to burn at approximately at a mere 116 degrees F. If a chosen piece of protective clothing meets the minimum thermal protective performance, but cannot adequately prevent the inside temperature from rising beyond 116 degree F for more than 1 second of time, your skin will suffer a burn. Logic dictates our skin must be adequately protected from the workplace hazard that may be encountered.

#7- NFPA #1984 “Standard on Respirators for Wildland Fire-Fighting Operations” does have specific and detailed requirements for a “wildland respirator”. However, it is our understanding that no manufacturer has been able to create a wildland respirator that can meet or exceed this Standard. In essence, a Standard was created in absence of an actual device. Fire departments are free to choose whether to adopt Standard #1984 or not.

Q: CAN THE HOT SHIELD HS-5 PROTECT ME FROM SUPER HEATED AIR?

A: No, only a breathing apparatus can do that? Use of a HOT SHIELD HS-5 FR Respirator Housing does not guarantee a firefighter will not suffer a respiratory burn due to inhalation of superheated air, however the risk or hazard of such an event is dramatically reduced by the design and materials we incorporate: CarbonX®.

Q: IS THE HOT SHIELD HS-5 COMPATIBLE WITH BOTH FORESTRY TYPE AND STRUCTURE TYPE HELMETS? WHAT ABOUT MY EXISTING SHROUD?

A: The HS-5 is a 1 of 2 components. The Drager Xplore 3500 would be the other. Together, they comprise a “stand alone” breathing and face protection system. It does not matter which type of helmet you use. Your standard shroud will only close around the bottom of the respirator.

Q: IS THE HOT SHIELD HS-5 COMPATIBLE WITH GOGGLES? PRESCRIPTION GLASSES?

A: Yes. That is one of the advantages.

Q: WHAT IS THE ADVANTAGE/BENEFIT OR FEATURES OF THE DRAGER XPLORE 3500 RESPIRATOR?

A: 1st – It is small and very light; a real plus for wildland firefighters who have to carry so many items these days. 2nd- Air exchange, both inhalation and exhalation is efficient. The fact that the materials of the housing do not come between you and the Drager Xplore 3500 allows fit testing for individuals and companies that require it.

HOT SHIELD is a registered trademark of Hot Shield USA, Inc. CarbonX is a registered trademark & patented product of Tex Tech Industries. Material printed herein subject to change without notice. HOT SHIELD USA, INC reserves all rights. Check our website for latest updates and for a distributor nearest you. V12.04.2019