

Firehouse.com WEEKLY DRILL

DRILL # 35: PERSONAL PROTECTIVE EQUIPMENT – PART 1

Introduction

The first thing any firefighter does before leaving the fire station on an emergency is to don their personal protection equipment (PPE). Additionally, this is the last thing they take off when the incident is over.

What do you think about when you hear the words personal protection equipment? PPE can mean just about anything today and is not exclusively dealing with fire-fighting. Our incidents are going to dictate what PPE is to be worn, as structural firefighting PPE would not be the protective clothing of choice at a hazardous material incident where entry into the Hot Zone will be required. Likewise, a fully encapsulated hazardous materials suit would not be needed for an EMS call for a heart attack.

For this lesson we are going to look at the PPE for structural firefighting operations, or sometimes referred to as bunker gear. NFPA states that this equipment would be used for “activities of rescue, fire suppression, and property conservation in buildings, enclosed structures, aircraft interiors, vehicles, vessels, or like properties that are involved in a fire emergency situation.”

The following items are considered to be the basic structural firefighting PPE:

- Helmet
- Hood
- Gloves
- Turnout coat
- Bunker pants
- Boots
- Goggles
- Self-contained breathing apparatus (SCBA)
- Radio
- Flashlight
- PASS alarm
- Some small tools

Both the turnout coat and the bunker pants are assembled in three layers – the outer shell (made of a fire-resistant material), the vapor barrier and the thermal liner. In addition, both are required to have reflective trim. This is to increase the firefighter’s visibility, affording additional protection on the incident scene.



This equipment is only as good as the person wearing it. Each piece is designed to be worn a certain way for maximum protection. Flaps, wristlets and fasteners are used to seal the ensemble. Gloves, hoods, boots and helmets should all fit properly and interface with one another. Suspenders are attached to assist in holding pants in place when they become wet and heavy.

Helmets were first designed to keep water and hot embers from falling down the necks of firefighters. Now they have to meet strict safety features that include impact resistance, thermal insulation and earflaps that have to interface with the hood and coat. They also need a chin strap and eye protection associated with them (goggles are best to meet the needs for eye protection).

Gloves are very important. Every firefighter needs to use their hands at an incident. To meet the NFPA standard, gloves must have a thermal protective layer and the ability to resist punctures, cuts and scrapes.

Boots are another very important feature and need to fit properly. Today, firefighters have more choices as to the type of boots they wear, either rubber or leather. However, they also must meet the NFPA standard.

Hoods are a hot item of discussion. However, when worn correctly, they provide additional protection around the face, ears and neck. Hoods also provide extra protection to firefighters who may have longer hair.

Stay safe and wear this equipment proudly and properly!

–Prepared by Russell Merrick