

Firefighter Personal Protective Equipment Module 1

Chapter 6



LEARNING OBJECTIVES

Describe the purpose of personal protective equipment.

Summarize guidelines for the care of personal protective clothing.

Describe characteristics of each type of personal protective equipment.

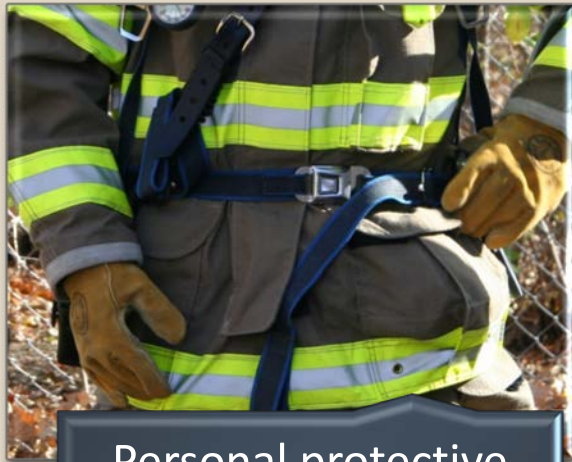
Explain the safety considerations for personal protective equipment.



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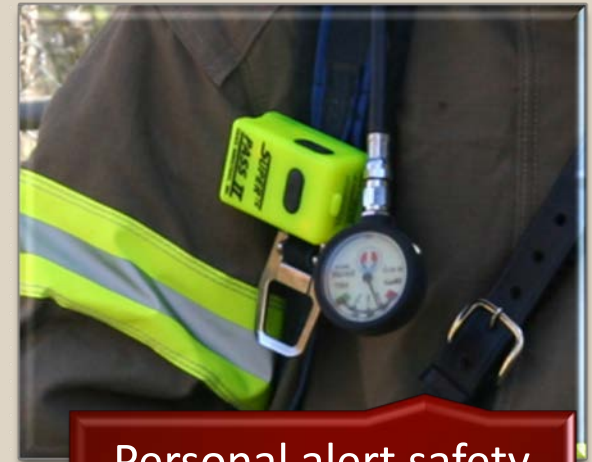
PERSONAL PROTECTIVE EQUIPMENT (PPE) INCLUDES THREE BASIC COMPONENTS.



Personal protective
clothing (PPC)



Respiratory protection
equipment



Personal alert safety
system (PASS)



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PERSONAL PROTECTIVE EQUIPMENT IS DESIGNED TO MEET TWO PURPOSES.



Protect from
hazards

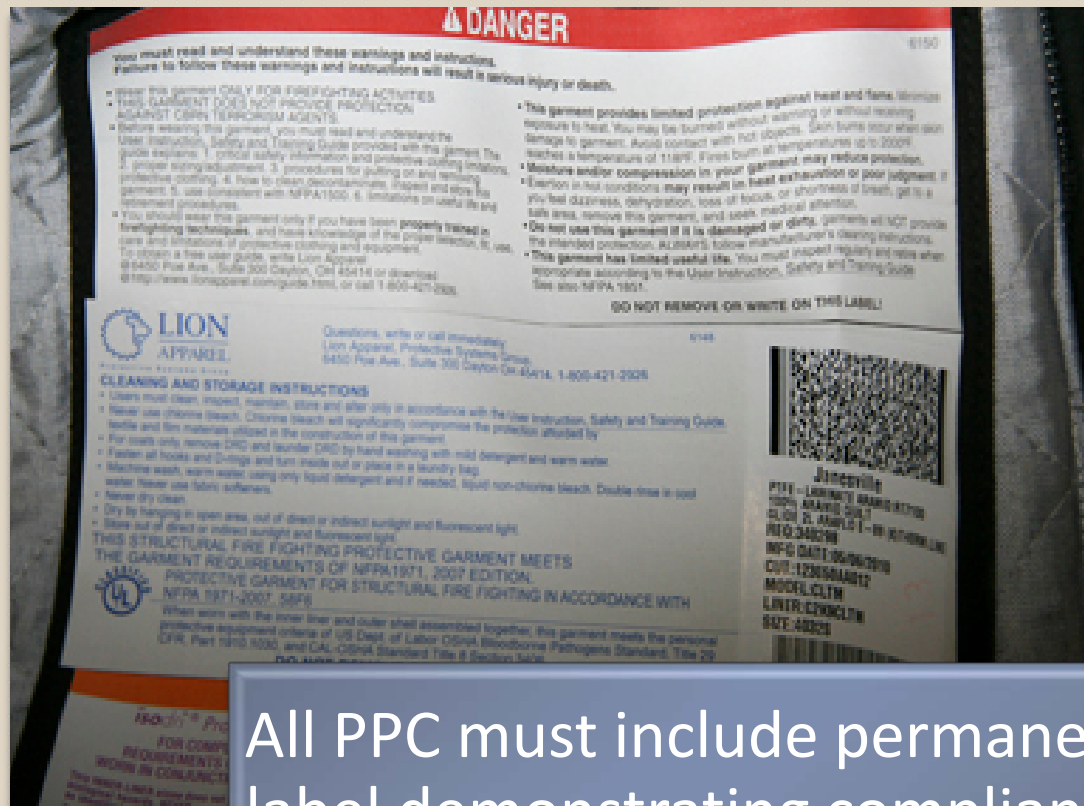


Minimize risk
of injury or
fatality



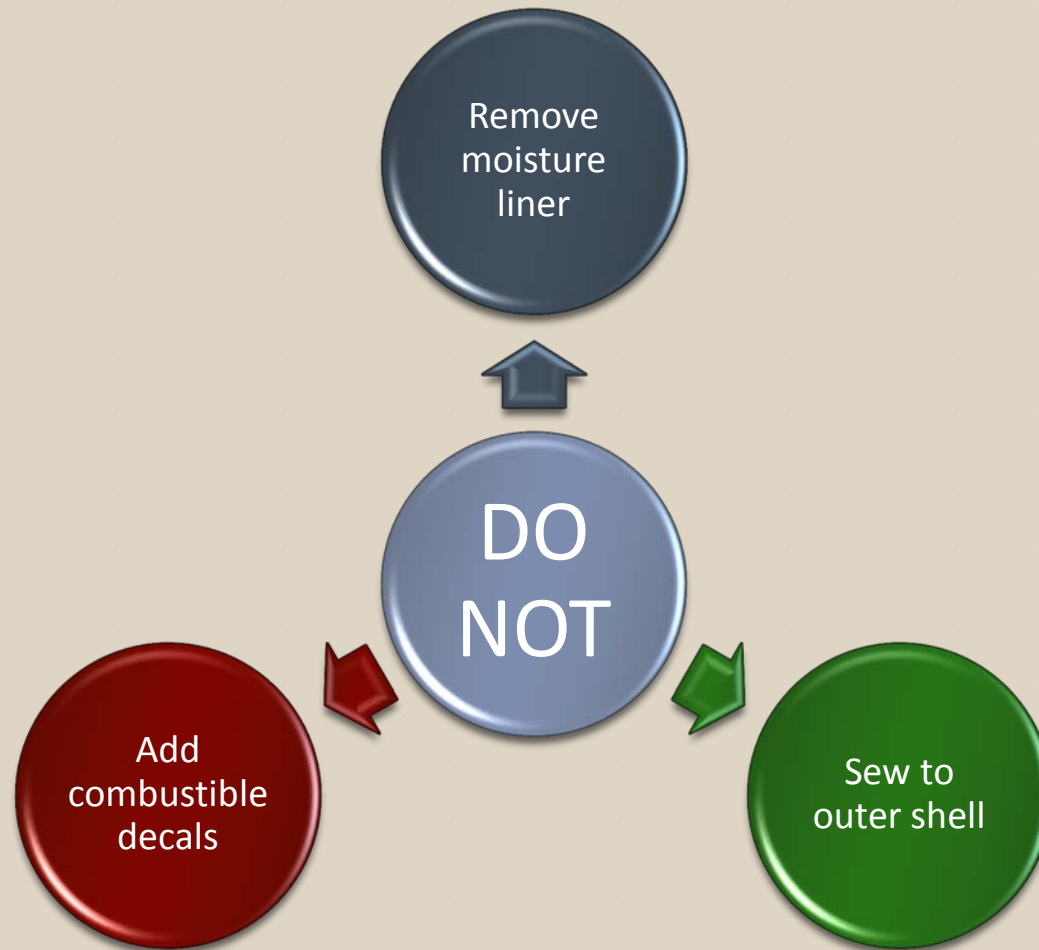
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STRUCTURAL FIRE FIGHTING PROTECTIVE CLOTHING MUST MEET NFPA® 1971.

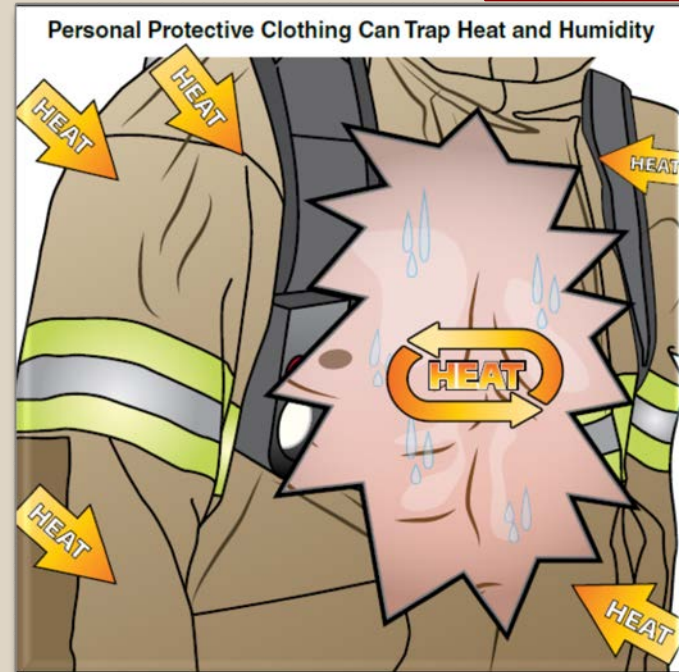


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ALTERING PROTECTIVE CLOTHING MAY ENDANGER LIVES AND HAVE OTHER EFFECTS.



PERSONAL PROTECTIVE EQUIPMENT HAS SEVERAL DESIGN BENEFITS AND LIMITATIONS.



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HELMETS MUST BE WORN CORRECTLY TO PROPERLY PROTECT AND IDENTIFY FIREFIGHTERS.



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EYE PROTECTION DEVICES ARE REQUIRED BY NFPA® 1500
AND COME IN MANY VARIETIES.



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PROTECTIVE HOODS PROVIDE A CONTINUOUS LAYER OF PROTECTION BETWEEN COAT AND HELMET.



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PROTECTIVE COATS ARE REQUIRED BY NFPA® 1971 TO
HAVE THREE LAYERS,
WHICH PROVIDE LIMITED PROTECTION.



a. Outer shell

b. Moisture barrier

c. Thermal barrier



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WARNING

All layers of the protective coat must be in place during any fire fighting operation. Failure to wear the entire coat and liner system during a fire may expose you to severe heat resulting in serious injury or death.



NFPA® 1971 REQUIRES SEVERAL DESIGN FEATURES FOR PROTECTIVE COATS.

Reflective trim



Wristlets



Collars



Drag Rescue Device (DRD)



Closure system



ADDITIONAL PPC PROTECTS FIREFIGHTERS FROM A VARIETY OF HAZARDS.



Protective trousers



Protective gloves



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ADDITIONAL PPC PROTECTS FIREFIGHTERS FROM A VARIETY OF HAZARDS.



Protective footwear



Hearing protection
devices



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PERSONAL ALERT SAFETY SYSTEMS (PASS) AID IN RESCUING FIREFIGHTERS.



Courtesy of James Nilo



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WILDLAND PPC FOLLOWS SPECIFICATIONS FOUND IN NFPA® 1977.



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WILDLAND PPC ALLOWS MORE MOVEMENT BUT LESS PROTECTION THAN STRUCTURAL PPC.



Fire shelter



Load-carrying equipment



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WILDLAND PPC ALLOWS MORE MOVEMENT BUT LESS PROTECTION THAN STRUCTURAL PPC.



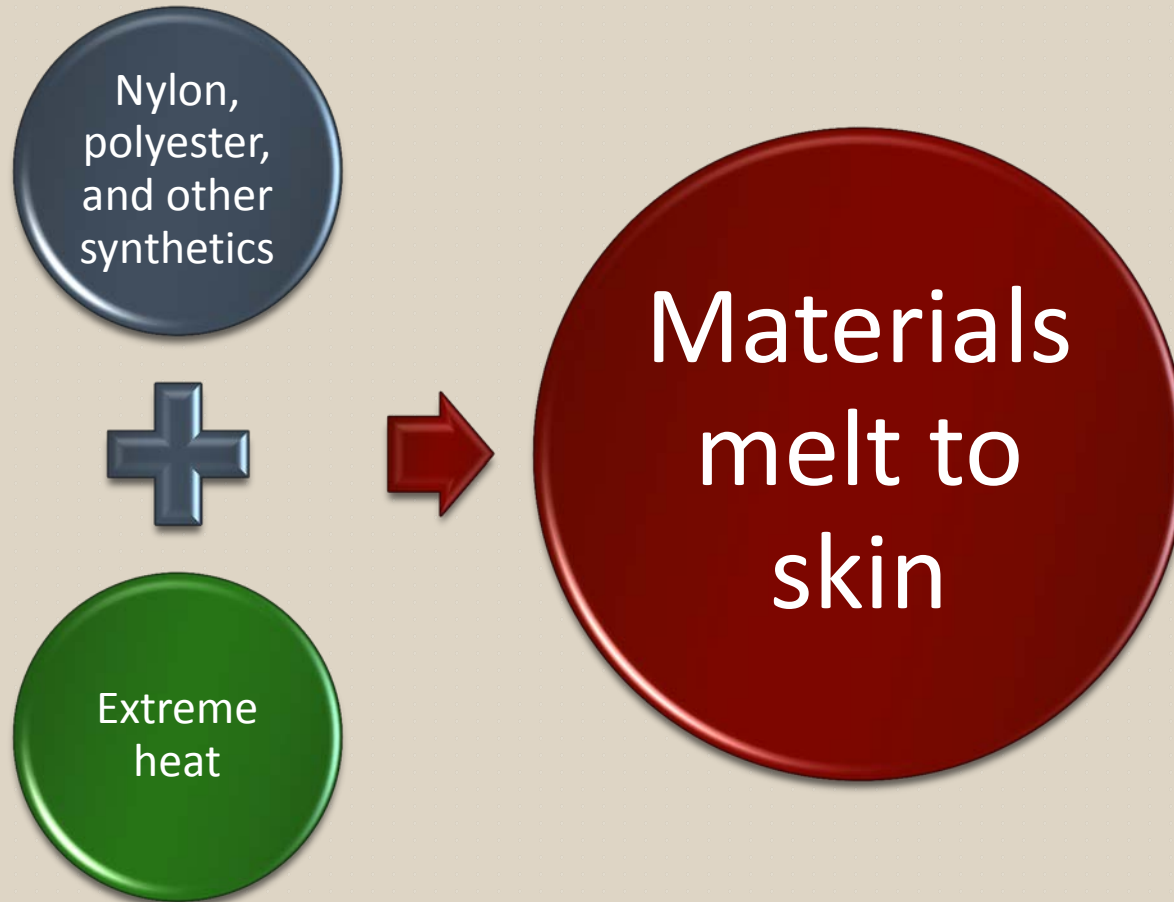
Air-purifying
respirators



Chain saw
protection



DO NOT WEAR UNDERCLOTHING MADE OF SYNTHETIC MATERIALS.



WARNING

Wildland personal
protective clothing
is not designed,
certified, or
intended for
interior structural
fire fighting.



ROADWAY OPERATIONS CLOTHING IS DESIGNED TO INCREASE FIREFIGHTER VISIBILITY.



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EMERGENCY MEDICAL PROTECTIVE CLOTHING HELPS PREVENT TRANSMISSION OF DISEASES.



Wear to protect against infectious
bodily fluids and airborne
pathogens



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SPECIAL PROTECTIVE CLOTHING CAN BE USED FOR OTHER EMERGENCY INCIDENTS.



Technical rescue



Standing/swift water rescue



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SPECIAL PROTECTIVE CLOTHING CAN BE USED FOR OTHER EMERGENCY INCIDENTS.



Courtesy of Iowa Fire Service Training Bureau

Ice rescue



Hazardous material



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SPECIAL PROTECTIVE CLOTHING CAN BE USED FOR OTHER EMERGENCY INCIDENTS.



Chemical, biological,
radiological, and nuclear




Proximity fire fighting
protective clothing



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STATION/WORK UNIFORMS SERVE TWO FUNCTIONS FOR FIREFIGHTERS.



Identifies
wearer with
organization



Protects
against direct
flame contact



STATION/WORK UNIFORMS MUST MEET REQUIREMENTS OF NFPA® 1975.

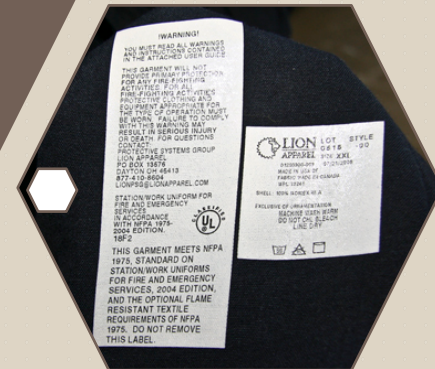


Will not
contribute
to injury

Safety
shoes or
boots

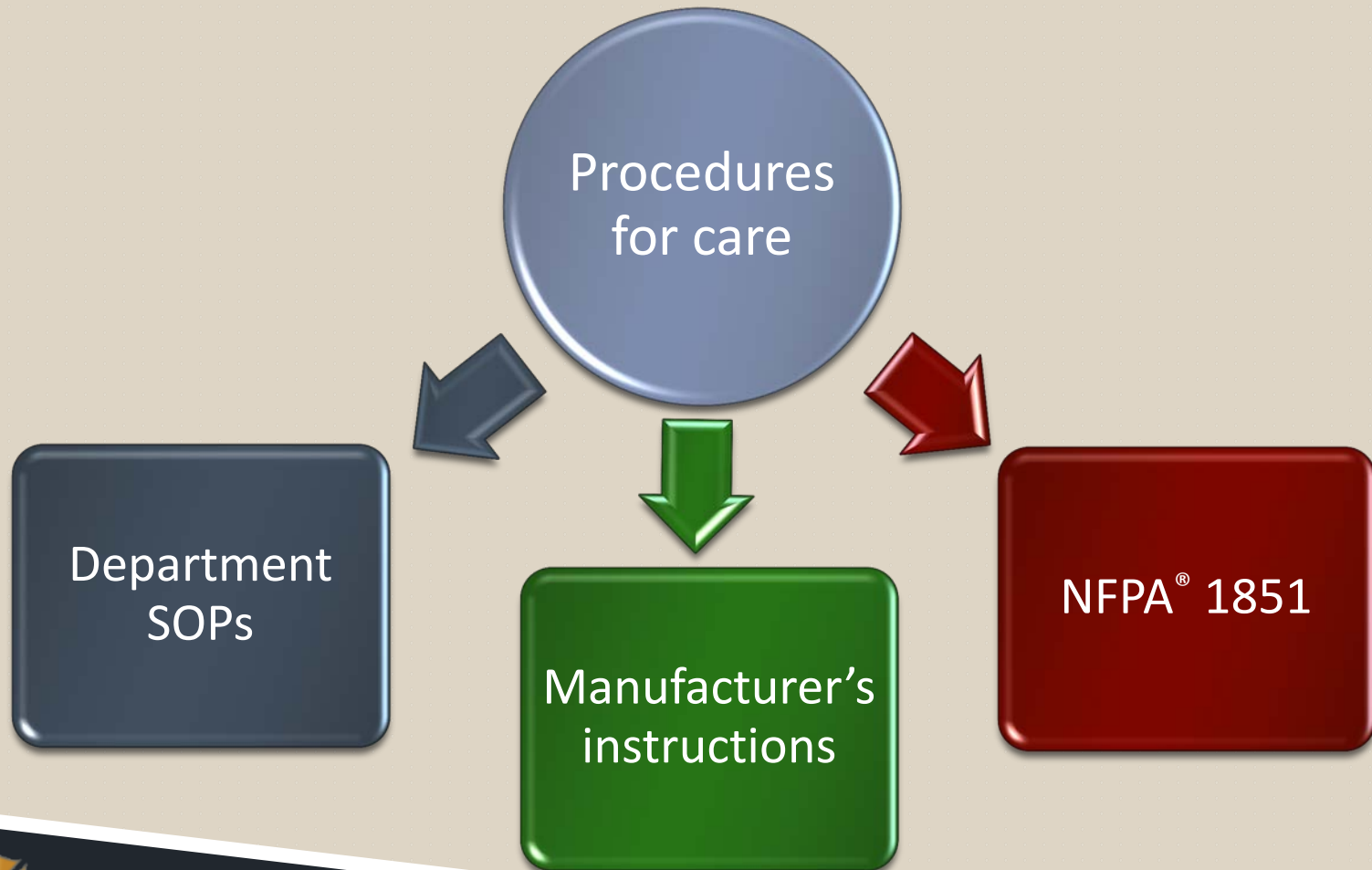
Permanent
label

Fire
resistant



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CARE OF PERSONAL PROTECTIVE EQUIPMENT IS A MATTER OF SAFETY.



INSPECT PPC FREQUENTLY AND FOR SEVERAL TYPES OF DAMAGE AND/OR CONTAMINATION.



Inspection findings
determine cleaning
method used



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NFPA® 1851 DEFINES FOUR TYPES OF PPE CLEANING.



WARNING

**Do not wash
contaminated
protective clothing in
washing machines
used for other
garments or items.**

**Do not take
contaminated
protective clothing
into the living or
sleeping quarters of
the fire station or
your residence.**

**PPE should not be
stored where it can
come in contact with
vehicle exhausts.**

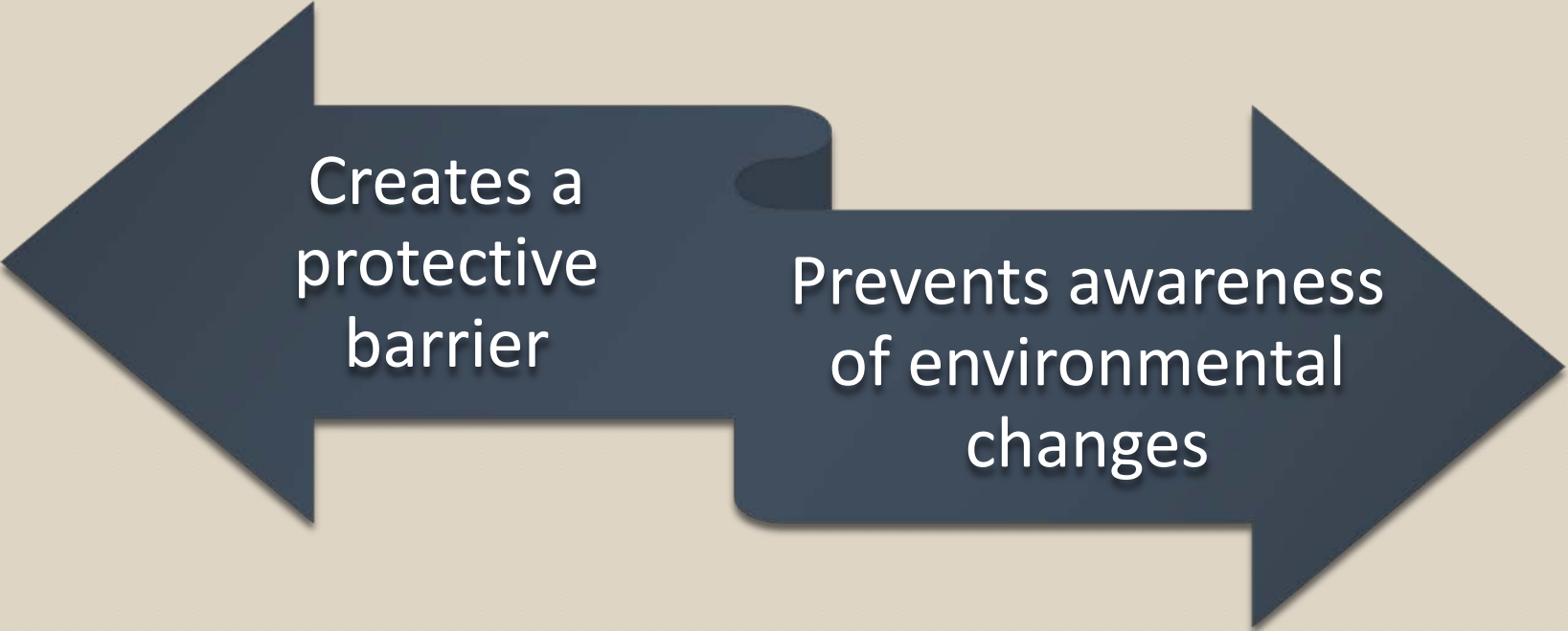
**PPE that is carried in
personal vehicles
should be placed in
closable garment bags
intended for that
purpose.**



PPC MUST BE REPAIRED IMMEDIATELY BY QUALIFIED PERSONNEL.



PPE BOTH PROTECTS AND ISOLATES FIREFIGHTERS FROM HAZARDS.

A diagram consisting of two dark blue arrows that interlock. The left arrow points to the left and contains the text 'Creates a protective barrier'. The right arrow points to the right and contains the text 'Prevents awareness of environmental changes'.

Creates a
protective
barrier

Prevents awareness
of environmental
changes



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REMEMBER SEVERAL SPECIFIC SAFETY CONSIDERATIONS REGARDING PPE.

Consider design
and purpose

Steam burns
from shell and
liner

Delays
awareness of
heat

PPE must fit in
order to work

2 inches (50mm)
minimum
overlap



REMEMBER SEVERAL SPECIFIC SAFETY CONSIDERATIONS REGARDING PPE.

Thermal burns
at compression
points

Radiant heat
can penetrate

Excessive
sweat

Extreme fire
conditions



SUMMARY

Your PPE will protect you from hazards and minimize the risk of injury or fatality if properly worn, cleaned, and maintained.

