

The NFPA 1851-2014 Standard applies to structural firefighter boots, which requires that the end user takes care to inspect and maintain his boots on a regular basis. This will reduce the risk of injury and potential health risks from contaminated, damaged or poorly maintained boots.

1 Pre-use information

A - Safety considerations

The firefighting should keep his own temperature within limits, allowing a normal course of his tasks even in heat conditions, which will cause troubles in the normal function of the circulatory system causing serious injuries, fatal illness or death.

In order to minimize the risk of heat stress, it is important to know and be conscious of your physical limitations and identify the signs of body shows when it is in tolerance limit. When we talk about heat, we must remember that we talk about an enough energy capable to change the matter in molecular and atomic way. You should to understand that there are three different ways in which heat could pass from a source to a recipient.

- **Conductive Heat:** Conductive heat is transferred by direct contact. For example: conductive heat could be transfer from a hot wall. How quickly you can burn, depends on several factors such as the protective equipment material, the time of exposure, etc.
- **Convective Heat:** Convective heat is transferred by a contact between a hot fluid and a cold fluid. Suppose that on the floor is spilled a non volatile liquid, and in the other side of the kitchen there is a microwave on, the liquid can transferred hot either if you are far of the heat source.

In this case, the heat transferred experimented from one liquid to another is convective, but the heat transferred caused from the liquid to the person is a conductive heat transferred. It is important to recognize that the hot air and gas usually can generate convective heat transferred, then if you are expose to a hot draught you can be burned.
- **Radiant Heat:** Radiant heat involve radiant energy transferred from asource to a receptor. Depending on the type of radiant heat, you can be injured, burned or dead with no alteration of your protective equipment. You should remember that the radiant heat is a physical property defined by the source body.
- **Electricity:** Be alert if you are in situations where liquid spilling come into electric conductive energy, it can caused dead.

B - Limitation of use

Protective footwear must not be kept in direct contact with flame or molten metal. STC® Firefighter boots are not designed to provide protection for proximity or fire entry applications, or from radiological, biological or chemical hazards.

C - Marking recommendations and restrictions

STC® Firefighter boots should not be cleaned, painted, or be in contact with petroleum derived products during a long period, because the footwear structure can be suffer alterations, rising the risk to be injured, burned or dead.

D - Performance properties

Most performance properties cannot be tested by the user in the field.

2 Preparation for use

A - Sizing/Adjustment

It is important that your footwear fits and sized properly in order to reduce the risk of injuries or burns.

B - Storage

When not in use boots should be stored out of sunlight or indirect light. Prolonged exposure to light will have a long-term detrimental effect to the overall life span of your boots. This form of damage will not be covered by the warranty.

ALWAYS CLEAN AND DRY YOUR FOOTWEAR IN ACCORDANCE WITH ABOVE INSTRUCTIONS IN SECTION 6.

3 Inspection

Boots should be inspected after each use by the individual firefighter. They should be inspected for (but not solely for):

- The soles should be examined for the presence of: worn out tread, detachment, tears, cuts, punctures or advanced wear of the lugs.
- The uppers must be inspected to confirm that there are no: tears, cuts, perforations or burns of the leather.
- Liners should be checked to ensure that specifications (name and size) are intact and legible.
- Check stitching, eyelets, laces, zippers & straps for tearing, ripping, burns or fraying.
- Check for loss of moisture resistance.
- Check zippers (where applicable) for malfunction.
- Check that steel caps or shank are not deformed or exposed.

At least every 12 months (or more frequently when dictated) a full inspection should be conducted by trained personnel. All findings should be documented on an inspection report. Precautions should be taken when inspecting footwear. This should be done in a well-lit area with a clean surface.

INSPECTORS SHOULD BE LOOKING FOR:

- Soiling or contamination
- Cuts, tears, punctures, splitting, cracking, burns, thin areas, hardened leather toe cap or soles
- Loss of seam integrity, delamination, broken or missing stitching
- Exposed or deformed steel toe or shank
- Thermal damage (charring, burn holes, melting or discolouration of any layer)
- Loss of moisture resistance
- Zipper system (where applicable) for loss of functionality
- Excessive tread wear
- Heel counter failure
- Inspect lining for excessive wear, tears or separation from boot

4 Donning and doffing

A - Donning and doffing procedure

- Be sure that your footwear fits properly, and is sized.
- Don the boots and interface them with protective trousers in order to protect completely your legs.
- Caution is advised in the moment of doffing your STC boots.
- If the boots seems contaminated, you should doff them wearing gloves, clean it, and start an inspection process. Decontaminate if necessary.

B - Management of interface

Your protective boot must fit properly and be worn in such a way that the interface area between the garment and boots always protects your legs.

This interface area must remain protected during all of your anticipated movement. If your interface area does not remain protected during movements, alert your supervisor to determine if you have been provided with the correct garment and boots.

5 Proper use

Proper use consistent with NFPA 1500, Standard on Fire Department Occupational Safety and Health Program, and 29 CFR 1910.132, General Requirements of Subpart I, Personal Protective Equipment.

6 Maintenance and cleaning

A - Cleaning

Cleaning is the responsibility of the end user. When cleaning, precautions should be taken where applicable such as wearing protective gloves and eye protection. Hand wash boots in a utility sink with warm water (not to exceed 105°F or 41°C) and a wet soft brush. Fill utility sink with 6" of warm water and add cleaning agent. Mild dish soap in small quantities is recommended. Gently scrub the boot with a soft brush. Drain the water from the sink and rinse the boots under running water. The removable insole can be taken out and washed on gentle cycle and air dried.

DO NOT USE THE FOLLOWING :

- Stiff brush or abrasive material as it will damage the leather.
- Soaps with a pH greater than 9.5 or less than 6.0 as this will reduce the lifespan of the boots.
- Chlorinated detergents as this will damage the materials of construction.
- High velocity washers or hose streams as these may damage the leather, seams and reflective trim.
- Flammable liquids as cleaning agents.

Advanced cleaning shall only be performed by a verified ISP or the organizations trained and certified personal. STC® Footwear should receive advanced cleaning when going through annual inspection. Advanced cleaning should be conducted in conjunction with the annual inspection. Footwear should be cleaned at least every 6 months and as soon as possible after exposure to smoke, blood, bodily fluids, fuel, hazardous substances or hazardous liquid chemicals.

B - Drying

Remove the insoles from the boots and dry all at open air. Drying rack works well to provide maximum air circulation and reduce drying time. Loosely crumpled newspaper stuffed in boots also helps to dry the inside of boots. **DO NOT DRY FOOTWEAR IN DIRECT SUNLIGHT OR UNDER WARM LIGHTS. DO NOT MACHINE DRY. DO NOT DRY IN FRONT OF OPEN WINDOWS, HOT OVENS, RADIATORS, HAIR-DRYER OR ANY OTHER ARTIFICIAL SOURCE OF HEAT. DRY SLOWLY.** Use fans to indirectly dry your footwear that may have absorbed moisture. Moisture in your boots reduces insulation, comfort and overall protection to end users. Failure to properly dry your boots may result in mildew and bacteria growth which could lead to skin irritation, rashes or affect the overall protective qualities of the boot. The boots should be thoroughly dry before next use.

C - Maintenance and repair

The leather can't be maintained in best condition by routine cleaning and when dry, by the application of STC® Boot Paste (available from STC® boot dealers). This paste was developed in conjunction with the leather tanner

that makes the leather on these boots. It will not adversely affect the FR, waterproof/breathable nature of the leather on these boots. Most other shoe care products will adversely affect the leather.

Any repair made on STC® Boots should be done by an STC® approved authorized repair centre. Unauthorized repairs invalidate all warranties and may expose end users to hazardous or life-threatening conditions. Prior to footwear being repaired, it should be cleaned and or decontaminated.

D - Decontamination procedures for both chemical and biological contamination

- Avoid direct contact with contaminated equipment and wash immediately the skin areas exposed.
- Once the contamination of your equipment has been determined by a specialized team, it should be isolated and bagged.
- The contaminants should be identified.
- Consider the local regulations that you must apply for a decontamination element.

See *NAFER PPE care & use guidelines* for further discussion of decontamination procedures.

7 Retirement, disposal criteria and considerations

- Retirement criteria are based on some factors as the age and condition of the item, exposures to products of combustion, hazardous materials, and other contaminant, physical damage from use and improper cleaning are other factors that may affect when an item should be retired.
- Retirement program has to be evaluated by trained persons whose define if the equipment should be repaired or retired.
- The use life of protective boots will vary depending on the care and the amount of its use.
- If the equipment non compliance with accepted standards when evaluating, it should be replaced.
- Protective equipment showing excessive exposure to UV radiation (sunlight) resulting in significant loss of tensile strength should be retired

See *NAFER PPE care & use guidelines* for more information.

THIS INFORMATION SHALL BE REMOVED BY END USER ONLY.

8 Warning

The moisture barrier in the footwear has not been evaluated for protection against all chemicals that can be encountered during firefighting operations. Footwear that has been exposed to chemicals should be inspected in accordance with chapter 3 of this guide and NFPA 1851, to evaluate for any adverse effects.



Warranty Policy

STC® products are designed to meet the highest industry standards and have a three (3) years warranty against manufacturing defects following the date of purchase. Note that normal wear and tear is not covered by the warranty and an abusive use of the products may void the warranty.