User Information Guide

NFPA 1971-2018 Compliant Protective CRL Hoods
Part Numbers: CRL-S and CRL-M

TOXIC SUPPRESSION

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DANGER

READ AND UNDERSTAND THIS USER INFORMATION GUIDE BEFORE USE.
See Page 1 Following Table of Contents for Full Warning.

User Information Guide for Toxic Suppression CRL Hood

Table of Contents

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DANGER

READ AND UNDERSTAND THIS USER INFORMATION GUIDE BEFORE USE. For structural firefighting and other emergency operations, this protective hood provides limited protection to the protective coat, helmet, and SCBA facepiece interface area. Certain components of the protective coat and helmet, including but not limited to the coat collar, collar closures, and helmet ear covers must be positioned according to this Guide for proper use of this product. The face opening must fit securely onto the edge of the SCBA facepiece immediately behind the clear visor. If a tight seal cannot be maintained, discard the hood. This protective hood may not provide protection from various hazards including chemical, biological, and radiological agents. Do not wear this hood when wet, soiled, or contaminated.

Introduction

Certification: Your CRL Hood is certified to the 2018 edition of NFPA 1971, *Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting*. This hood specifically meets or exceeds the design, performance, information, labeling, and certification requirements of NFPA 1971-2018 for structural firefighting protective hoods, which are also is referred to as a “hood interface component” in the standard.

This hood is uniquely differently from other certified NFPA 1971-2018 hoods in that it is made of a layered composite material system more akin to protective clothing in contrast to typical knit-based hood products that have stretch-like fitting characteristics. The lack of stretch means that the CRL Hood must is adjusted to the wearer’s head and neck. As such, this hood is certified for use with specific SCBA facepieces that currently include the 3M/Scott AV-3000, AV-3000 HT, and C5 facepieces. **DO NOT USE THIS HOOD WITH SCBA FACEPIECES NOT LISTED ON THE PRODUCT LABEL.**

Guide Content: This Guide contains specific information that are intended to make you knowledgeable about the hazards you face and limitations of protection provided by this hood even when worn correctly. This Guide also provides instructions for the proper selection, use, care, and maintenance of the CRL Hood to permit the best possible protection and service lite. Throughout this Guide, specific signal words are used for bring your attention to potential hazards. However, no one area of the user instructions are considered more important than any other area.

DANGER	WARNING	CAUTION
This signal word indicates a situation in which a hazard is imminent and will result in a high probability of serious injury or death.	This signal word indicates a potentially hazardous situation, which could result in some probability of serious injury.	This signal word indicates a potentially hazardous situation which could result in a minor or moderate injury.

Terminology and Additional Information: Various terms are used throughout this Guide for which you may not be familiar. A glossary is provided at the end of this Guide that provides definitions for key terms. If there is any content that requires clarification or that you do not understand, contact Toxic Suppression at *info@toxicsuppression.com* or call +1 409-724-1704.

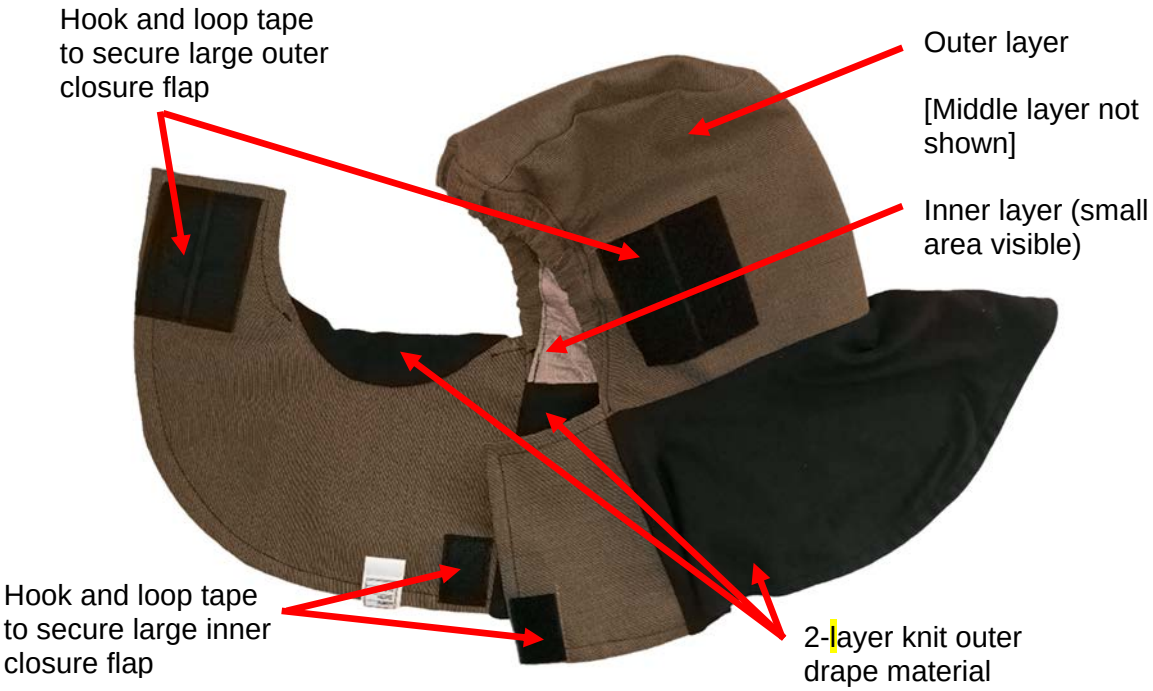
Understanding Your CRL Hood

As explained above, your CRL Hood is made of multiple layers of materials that form a composite. Specific material layers include:

- Outer Layer – Pioneer with FreeFAS finish (73% para-Aramid / 27% N303 Nomex (92% meta-Aramid / 5% para-Aramid / 3% anti-stat with non-PFAS durable water repellent [DWR] finish)
- Middle Layer – Non-woven 67% metal-Aramid / 33% para-Aramid spunlace fabric laminated to an ePTFE membrane with non-PFAS DWR
- Inner Layer – 100% meta-Aramid Ripstop Weave face cloth quilted to a 40% meta-Aramid / 50% para-Aramid needlepunch batting
- Outer Drape – 2 layers of 49% Modacrylic / 29% Lyocell / 20% Twaron / 2% Spandex knit

The first three layers form the composite that covers the sides, back, and top of the head as well as the bottom closure flaps, while the outer drape material is used in the CRL Hood at the back and sides of the hood below the neck area and on the top of the main bottom closure flap. Hook and loop tape (Velcro®) is used to secure the bottom closure flaps in place on wearer's head and allow adjustability. The face opening of the hood is elasticized to fit around the wearer's facepiece. Other than the knit material in the outer drape and the face opening, the hood is not elastic and wears more like regular clothing than a conventional knit firefighter hood.

The hood is shown flat and worn on an individuals in photos below.



Front of CRL Hood showing closure flap secured and elasticized area positioned behind rim of SCBA facepiece

Right side of CRL Hood (left side is same except, end of closure flap is shown secured to the side of the hood

Back of CRL Hood showing knit drape extend across shoulders and down back of the wearer

Instructions for donning the CRL Hood are provided on pages 7 and 8 of this Guide

Safety Considerations and Limitations of Use

⚠ DANGER

Your CRL Hood will not protect you against all hazards in all emergency operations under all conditions. While designed to protect you from various fireground and other hazards, your CRL Hood can also create hazards by creating physiological stress, affecting your senses, and inhibiting your movement. You must have the correct training, be in good physical shape, follow your organization's standard operating procedures, and remain vigilant to encountering specific hazards at all times while wearing this hood.

General Hazards of Firefighting: Structural firefighting is an ultra-hazardous and ultra-dangerous occupation that can occur anywhere under rapidly changing conditions presenting a large variety of hazards ranging in their severity. Even the simplest fires can cause injuries and result in potential fatalities. As a consequence, your protective ensemble of which your CRL Hood is only a part, is not a fail-safe form of protection. Your ability to remain safe and avoid injury, including burns, physical trauma, chemical exposures, infection with diseases, and other consequences of exposure to different fireground hazards is not only dependent on the correct wearing of your personnel protective equipment (PPE), but also having the correct training, being in the best physical shape, following department operating procedures, and remaining keenly vigilant and aware of potential hazardous situations that you can encounter during any emergency operations. **Not all hazards are obvious and in many cases, you can still be exposed, injured, or succumb to fatal consequences with little or no warning.**

Your CRL Hoods is designed for structural firefighter. **DO NOT WEAR YOUR CRL HOOD FOR PROXIMITY FIREFIGHTING OR FIRE ENTRY.**

Heat and Physiological Stress: Firefighting is physiologically stressful and the wearing of PPE that encapsulates your body while working under difficult and hot conditions will increase your skin temperature, core temperature, and heart rate. These body responses if unchecked can result in heat stroke and related heat illnesses. Further, prolonged and repetitive activity under these conditions can potentially affect your long-term overall health. As a consequence, you must:

- Be in good health and periodically have medical check-ups
- Know your personal physical limitations
- Avoid undue exertion and prolonged exposure to heat environments
- Be aware of the signs of heat stress and immediately seek medical help.
- Following any strenuous event, hydrate, rest, and go through rehabilitation to recuperate, especially if reentering the fireground for further firefighting activity

While your CRL Hood is made of a "breathable" composite and knit drape materials, your ability to lose heat by sweating that will further diminish especially when operating in humid environments with moderate to heavy activity for extended periods of time.

Potential for Burn Injuries: Prolonged exposure to any form of heat can result in the transfer of thermal energy through the hood that has the potential to elevate your skin temperature to dangerous levels and result in burn injury. The risk from burn injury is based on the amount of thermal energy or heat dose that any portion of your body receives. While very hot temperatures can cause burn injuries in a short period of time, exposure to lower temperatures over an extended period time can equally cause burn injuries. Burn injuries can occur with little or no warning. These injuries can further occur without any observable damage to your clothing. **When you feel pain, a burn injury may be imminent, and it is essential that you change your position on the fireground and move away from the source of heat to avoid burn injury.**

Moisture in your CRL Hood and/or on your skin can also affect the likelihood of a burn injury. While some moisture in the clothing will allow the hood to absorb more heat, it also increases heat conduction as water displaces the air in the hood materials (water is a more efficient conductor of heat compared to air). Therefore, while your hood may become wet from either internal sweating or from hose spray or other sources at the emergency scene, be aware that this moisture can affect the rate of heat transfer, and the potential for burn injury. **It is best practice to wear your hood dry for engaging in any fireground activity, whenever possible.**

The most common forms of heat exposure to your CRL Hood will be up from both radiant and convective heat when in proximity to a working fire. It is also possible that you can have conductive heat transfer occur if your CRL Hood contacts a hot surface. Increased pressure or prolonged contact will increase the rate of heat transfer and potentially lead to burn injuries. **Always be aware of how you are being exposed to heat and minimize your time in hot environments.**

Exposure to Chemical, Biological, and Radiological Hazards: Numerous hazardous substances can be encountered in emergency operations. These substances can be gases, liquids, or solid particles. The forms of various hazardous substances and the degree of danger or risk they present is highly varied. Products of combustion that include fire gases and soot constitute one of the more pervasive hazards on the fireground. Many emergency environments also can involve various chemicals, microorganisms, or ionizing radiation. **Your protective ensemble must be worn correctly, including proper integration with the CRL Hood, to minimize your exposure to these substances, but will not protect against several types of substances.** For example, while your CRL Hood has a moisture barrier, it has not been evaluated for all chemicals that can be encountered during firefighting operations and thus will not protect you against all chemicals, biological agents, or radiological materials.

- Some chemicals can still penetrate or permeate your CRL Hood as gases or vapors.
- Some liquids will penetrate or permeate your CRL Hood where degradation of material layers, including the moisture barrier can take place to cause exposure.
- Hazardous particles such as suit, asbestos, lead dust, infectious aerosols, and radiological contaminated particles can also make their way through small openings around the interface areas of your CRL Hood to make contact with your skin under certain conditions.

- Blood and other potentially infectious materials may pass through your clothing and create the potential for disease transmission.
- Your CRL Hood will not protect you against any form of high energy ionizing radiation.

Following any incident in which exposure to hazardous substances occur warrants preliminary exposure reduction, cleaning or decontamination, personal hygiene practices, and potential quarantine and disposal to minimize contamination transfer according to the procedures specified on pages 11 through 13 of this Guide.

Other Hazards: Any emergency operations can involve a myriad of dangerous conditions that can result in injury or fatalities. It is impossible for this Guide to identify and list all possible hazards that you may encounter were wearing your CRL Hood. However, a partial list is provided below that should be considered in any hazard/risk assessment that your fire department or organization performs:

- Exposure to other types of heat as may occur from superheated liquids or vapors, molten solids or liquids can cause damage to clothing and burn injury.
- Flash fires may occur when chemicals or dusts combust that create an instantaneous, extreme energy heat exposure that are capable of damaging clothing and causing burn injury.
- Different electrical-based hazards can be encountered such as contact with live electrical wiring or arc flash that can result in electrocution or burn injury.
- Various physical hazards can occur from sharp, pointed, ragged or rough objects that are capable of cutting, puncturing, tearing, and abrading your CRL Hood and lead to physical injuries. Further included are explosions that create ballistic flying objects or severe physical forces as well as lower energy debris and projectiles from cutting tools and other implements used on the fireground.
- Operating in confined spaces, on elevated platforms, near vehicular traffic or other moving machinery, or when you are near open bodies of water can result in dangerous entrapment, falls, being struck, or drowning for which your CRL Hood offers no protection.
- The continued wearing of soiled and contaminated clothing will result in a reduction of certain performance properties and contribute to longer term exposure to hazardous substances if your CRL Hood is not properly cleaned and decontaminated according to this Guide.
- Your CRL Hood may also be damaged or offer less protection if left in a wet condition and subjected to cleaning and decontamination procedures that are not described in this Guide. For example, leaving you hood in a wet condition can result in mold or mildew, which may render your CRL hood unusable.

Your organization as part of its responsibilities under the Occupational Safety and Health Administration (OSHA) Title 29 1910.132 Code of Federal Regulations Subpart I on “Personal Protective Equipment,” or the equivalent state or local area regulations as well as provisions in NFPA 1500 should conduct a thorough hazard and risk assessment. You should also properly use your CRL Hood and other protective clothing and equipment consistent with these OSHA regulations and NFPA 1500.

Preparations for Using Your Hood

Initial Inspection: Upon receiving your CRL Hood, inspect your hood to determine that there is no damage or issues as listed below:

- There are no tears, cuts, punctures, abrasion, or other physical damage to any layer of the hood materials.
- There is no missing or broken stitching in seams or finished material layer edges.
- The elasticized face opening is functional.
- The hook and loop closure tape pieces are both properly secured (by stitching) on the main part of the hood and the bottom closure flaps.
- The product label is on the inside back of the hood.
- There is no soiling, discoloration, or unusual stains that are present.

If any issue is discovered, contact your supervisor and have an appropriate person of your department or organization contact Toxic Suppression.

Available Sizing: CRL hoods are available in a Regular and Extra Large sizes. Generally, individuals with a hat size that is 7¾ or greater are considered as having a larger sized head, but the size you select must be such that it can be properly adjusted and donned on your head. Choose the size of hood that fits best and creates the best interface with your protective coat and SCBA facepiece as described below.

Donning, Adjustment, Achieving and Effective Interface, and Doffing: To properly put on and adjust your CR hood for maximum protective coverage, refer to figure below to be familiar with parts of the hoods that will enable optimum fit and protection.

Specific steps for donning, adjustment, and creating an effective interface

1. Properly put on SCBA facepiece and conduct a qualitative fit test per department standard operating procedures.

⚠ WARNING

Your CRL Hood must only be used with a 3M/Scott AV-3000, AV-3000 HT, or C5 SCBA facepiece (Size S, M, and L). Using another unauthorized manufacturer or SCBA or other respirator facepiece voids the certification of the CRL Hood.

2. With the flaps detached from hood body, place hood over top of your head so that hood opening faces forward to allow facepiece visor to be inside opening.

3. Bring end of large hood flap across and align Flap Hood Tape A to Hood Body Loop Tape A so opening fully overlaps your SCBA facepiece behind the facepiece plastic visor frame. The two tapes do not have to fully align but should have enough overlap to be properly secured.

4. Press down on the outside of your hood to have Flap Hook Tape B secured to Hood Body Loop Tape B.

5. Ensure that the elasticized edge of hood opening is behind hard plastic frame of your SCBA visor as shown below.

6. After your CRL HOOD is properly donned, put on your protective coat in accordance with the coat manufacturer's instructions and ensure that the drape is positioned completely under your coat and the coat closure is secured over top the lower exposed area of your hood.

7. Properly position your protective helmet on your head in accordance with the helmet manufacturer's instructions but accounting for the extra thickness of the CRL HOOD materials.

8. Have a fellow firefighter check that your CRL HOOD is properly interfaced with your other clothing and equipment.

⚠ DANGER

Your CRL Hood will require that you adjust your protective helmet suspension differently than when wearing the helmet alone. Ensure that your protective helmet is secure on your head by adjusting the suspension so that it remains firmly in place and will not be dislodged by head movement and being bumped. Ensure that you use chin strap provided with your protective helmet and ensure when all PPE is in place such that you have adequate freedom of head and neck motion and that the hood, helmet, SCBA, and protective coat interface is maintained over all anticipated movements.

Specific steps for doffing your hood

1. Reverse the order of steps to remove your hood by first removing your helmet, opening your coat by detaching the coat collar closure.

2. Remove you hood by detaching larger closure flap followed by detaching the smaller closure flame on the inside of the hood body.

3. Using one gloved hand, pull your hood by the top center of the face open back over your head.

4. Once removed, inspect your hood and store it as instructed on pages 10 and 13 of this Guide. **Do not reuse your hood unless it clean and dry.**

5. If you hood has been worn on the fireground or in any way soiled or contaminated, do you directly touch your hood with bare hands or allow the exterior of the hood to touch your face or neck.

6. Isolate your soiled and contaminated hood by placing in plastic bag and subject to cleaning and decontamination as described on pages 10 to 13 of this Guide.

Marking and Prohibition of Any Alterations: Your CRL Hood has a product label on the inside back of the hood interior. Do not write on this label as this may obscure the printed information. If you need to mark the hood, use an indelible ink marker to minimally write any identifying information on the interior of the hood in a manner that does not damage the hood.

⚠ WARNING

Do not modify or alter your hood in any way as unauthorized changes or addition of items or accessories may diminish its protective qualities. If your hood does not fit properly, inform your supervisor or other responsible person to help resolve the issue.

Taking Care of and Maintaining Your Hood

DANGER

You must properly inspect, clean, decontaminate, repair, and store your CRL Hood to ensure that it provides its optimum protective performance and does not contribute to any hazards for its continued use. Failure to properly care for and maintain your hood can result in increased exposure to hazards that can cause injuries, disease, or death.

Follow the requirements of most current edition of NFPA 1851, *Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting*, for the care and maintenance of your CRL Hood in addition to the instructions provided below. If there are any conflicts, the instructions in this Guide take precedence. If you have any questinos about these instructions, contact Toxic Suppression.

Inspection: Routinely inspect your CRL Hood as you did upon receiving it, and at the beginning of any duty period, after each use, and following the application of cleaning, decontamination, and any authorized repairs.

During routine inspections, examine your CRL Hood for the evidence of the following:

- Tears, cuts, punctures, abrasion, or other physical damage to any layer of the hood materials
- Thermal damage in the form of fabric charring, burn holes, and embrittlement, or melting of hook and loop closure tape
- Missing or broken stitching in seams or finished material layer edges.
- A loss of the elastic quality of the hood face opening
- An inability for the hook and loop closure tape pieces to properly secure the hood closure flaps
- Legibility of the product label on the inside back of the hood
- Soiling, contamination, unexplained discoloration, or unusual stains including the effects of chemical exposure.

If any of these conditions exist, discontinue use of your hood and contact your supervisor or other responsible individual within your department or organization to make a decision on the continued serviceability for your CRL Hood. Your department or organization hood should make a decision if the findings of your routine inspection warrant an Advanced Inspection by a trained individual or Independent Service Provider (ISP).

Your department or organization must subject your hood to an Advanced Inspection at least annually unless your hood was not used and properly stored as specified on page 14 of this Guide. All dates and findings advanced inspections must be recorded by your department or organization as part of the recordkeeping requirements of NFPA 1851.

<u>Cleaning and Decontamination Instructions</u>: Following each use where soiling and contamination has occurred, subject your CRL Hood for advanced cleaning or other cleaning and decontamination procedures per the requirements of NFPA 1851.

- For ordinary soiling, it is up to your department to determine if advanced cleaning is necessary.
- If your hood has been contaminated, it must be subjected to either advanced cleaning, sanitization, or specialized cleaning depending on the type of exposure it received. **NOTE: If you wore your CRL Hood on the fireground in an IDLH atmosphere, your hood is considered contaminated per NFPA 1851.**
- To determine the appropriate procedures, use the information provided in the Chapter 7 flowcharts within NFPA 1851.

All contaminated protective clothing and equipment worn by you, including the CRL Hood, during emergency operations is supposed to first go through preliminary exposure reduction (which is also sometimes referred to as on-scene or gross decontamination). These procedures have the purpose of removing some exterior contaminants but are not considered full cleaning for contaminated protective clothing.

Cleaning and Sanitization Precautions

All cleaning and sanitization procedures are subject to the following precautions:

- Soiled and/or contaminated hoods must be isolated or segregated from clean hoods or other clothing and kept out of personal living quarters or in private vehicles
- Individuals handling soiled hoods must wear as a minimum examination gloves, an impermeable apron with sleeves or disposable coverall, and may have to also wear a filtering facepiece respirator and face shield.
- Wash hoods separately from garment outer shells; hoods may be washed with garment liners or by themselves.
- Do not use chlorinated bleach, detergents/cleaning agents that contain chlorine, or other harsh chemical solvents
- Do not use any detergent that in its raw, undiluted form has a pH that is less than 6.0 or greater than 10.5 as indicated on its Material Safety Data Sheet or Safety Data Sheet (usually found in Section 9 of that document)
- Do not use a washer/extractor if it has an acceleration of 100 Gs or is not programmable, specifically allowing for adjustments of detergent application, water temperature, water level, cycle type/function, and cycle time.
- Do not exceed a wash or drying temperature of 105^{o}F (40^{o}F) for advanced cleaning and 140^{o}F (60^{o}C) for specialized cleaning
- Do not use conventional dry cleaning
- Do not use hard bristle brushes to scrub hood surfaces; avoid brushing the hood knit drape material
- Record when, how, and who performs any cleaning, sanitization, or decontamination of your hood (may be done by your department or organization)

Advanced Cleaning Procedures

While NFPA 1851 permits hand washing of hoods using a utility sink, subject the CRL Hood to the advanced cleaning procedures recommended in the Annex to Chapter 7 of NFPA 1851 for protective garment liners using the following steps:

1. If hood is extremely soiled, soak hood in a water bath with a mild detergent or other suitable cleaning agent for approximately 1 hour. This step can also be accomplished with programming of the washer/extractor

2. If hood has specific areas of staining, pretreat those areas with a suitable cleaning agent

3. Load machine to the manufacturers recommended capacity

4. Apply the wash formulation as recommended by NFPA 1851 having a pre-wash cycle, followed by the addition of detergent with agitation, and at least three rinse cycles

5. Dry hoods in ambient air by hanging the hood on a clothes line or hanger, placing the hood in a suitable drying cabinet, or using a tumble dryer in a low heat setting (ambient or drying cabinet drying will extend hood service life)

6. Inspect hood as indicated in Inspection instructions on page 10 of this Guide.

Sanitization Procedures

When hoods have been exposed to blood, other potentially infectious liquid, or biological agents, refer to NFPA 1851 for recommended sanitization procedures (biological decontamination), to include the following steps:

1. Select a disinfectant or sanitizer that is registered with the EPA for use with textile materials or porous surfaces

2. Place hood(s) in washer/extractor

3. Inject disinfectant at a ratio recommended for the use of the product

4. Soak hood(s) for a minimum of 10 minutes or following instructions provided with disinfectant or sanitizer

5. Subject hood to advance cleaning procedures above.

Alternatively use an independent service provider that has been verified to NFPA 1851 for advanced cleaning and sanitization.

Specialized Cleaning Procedures

Apply specialized cleaning whenever hoods are extremely soiled or contaminated with fireground soils or if exposure to unusual contamination has taken place. Examples of contamination requiring specialized cleaning (chemical or biological decontamination) include, but are not limited to:

- Heavy, persistent petrochemical oils and lubricants
- Cooled molten substances
- Dried on paints
- Asbestos
- Different hazardous chemicals
- Opioid drugs

Use the following considerations to determine the approach for specialized cleaning and whether specialized cleaning should be used:

1. With expertise from a knowledgeable person, resource within your department or organization, or from a subject matter expert, make a determination if the hood can be decontaminated

2. Using the same expertise, decide whether advanced cleaning can remove the contaminant, enhanced advanced cleaning using a temperature up to 140^{o}F (60^{o}C) with additional presoaking, or some other procedures should be used

3. Consider evaluating contaminant levels in sample hoods following the specialized cleaning to determine if the cleaning process was effective in removing the contaminants

4. If contaminant cannot be properly cleaned or if there is still obvious contamination present on your hood following specialized cleaning, dispose of your hood as specified on page 15 of this Guide.

DANGER

Do not reuse your CRL Hood if you have any uncertainty or concerns about its state of cleanliness or if the contamination has been effectively removed from the hood as the result of any applied cleaning, anitization or chemical/biological decontamination or specialized cleaning procedures.

Always ensure that your hood has been inspected and is dry before returning to service following cleaning, sanitization, or decontamination.

Dispose of any hood that cannot be adequate cleaned, santized, or decontaminated.

Repairs: All repairs to the CRL Hood must be referred to Toxic Suppression for approval. Repairs to the CRL Hood may only be performed by Toxic Suppression or a verified independent service provider (ISP). If hoods are repaired, keep records of when and how the repairs were conducted and who performed the repairs (this may be done your department or organization).

Storage: If your CRL hood is in a clean, dry condition, store it in a clean and dry clean location away from station living quarters, personal spaces, or personal vehicles. If you hood must be stored in a personal vehicle, use a plastic bin with a sealable top but ensure that it is dry before placing it in the bin.

Do not store your hood:

- Where it will be in direct sunlight (e.g., next to an open window)
- Where it will be continuously exposed to fluorescent light
- Where it will be exposed to extreme temperature or humidity conditions
- Where it could be exposed to chemicals or solvent
- If it is wet
- In an area where it is next to sharp objects or abrasive surfaces

If your hood has become contaminated, and even if it has been subjected to preliminary exposure reduction, isolate your hood by placing it in a thick (3 mil or greater) plastic bag **temporarily** until it can be subjected to advanced cleaning. Do not leave your hood in the bag for an extended time (more than 6 hours).

When to Retire Your Hood

General Retirement Criteria: You must stop using (retire) your CRL Hood under any of the following conditions:

- It is older than 10 years from the date of manufacture as it appears on the bottom left hand corner of the product label that is on the back inside of the hood.
- It is contaminated and cannot be effectively decontaminated.
- It shows physical damage that cannot be properly repaired (in manner authorized by Toxic Suppression.
- It no longer properly fits on your head and the elastic area does not stay secure around your SCBA facepiece.
- It has been subject to adverse storage or use conditions where it have become weakened or compromised.

⚠ WARNING

It is impossible to determine compliance or for you or your organization to test most performance properties of the CRL hood in the field. Any uncertainty in continued functional and protection offered by your CRL Hood warrants its retirement.

Retired Hood Disposition: Undertake one of the following actions depending on the reason your hood has been retired.

- If your CRL Hood has expired based on its date of manufacture, you may use it in non-fire training applications where it will not be subject to any emergency fireground conditions.

- If your CRL Hood has been retired because it is contaminated and cannot be effectively decontaminated, quarantine your hood and treat it as hazardous waste prior to its disposal.

- If your CRL Hood has been retired for any other reason and is not contaminated, your hood must be rendered unusable and disposed of in accordance with the procedures below.

Disposal Procedures: Other than hoods retired for purposed of contamination, cut your CRL Hood into multiple pieces or alter it in a way that is cannot be functionally used, and then throw it away as ordinary refuse.

If your hood is contaminated, follow your local or state regulations for disposing of it hazardous waste based on the type of contamination believed to be present.

Warranty Information

Your CRL hood is warranted by Toxic Suppression to be free from defects in material or workmanship. This warranty does not cover normal wear or unusual exposures. This warranty is in lieu of all other warranties, expressed or implied, including but not limited to, warranties of marketability and/or fitness for a particular use. Repair or replacement for breach of this warranty shall be the exclusive remedy available. Toxic suppression shall not be liable for incidental, consequential damages.

DANGER

You, your department, or your organization must conduct a hazard and risk assessment to determine the suitability of the CRL Hood for its intended use in structural firefighting, emergency operations, or any other use.

If you have a question about any of the instructions provided in this User Information Guide, including clarification of details for its selection, use, care, and maintenance, contact your sales representative or Toxic Suppression for additional information.

Glossary

Terms used throughout this Guide are defined below. The majority of these terms are taken from NFPA 1851 (2020 edition); some have been modified to be specific to protective hoods:

Advanced Cleaning. The act of removing soiling and contamination generally associated with products of combustion.

Advanced Inspection. A more detailed inspection than routine inspection to examine the condition of protective hoods that is conducted by an individual trained for this responsibility.

Care. Cleaning and storage of protective clothing and equipment.

Charring. The formation of a brittle residue when material is exposed to thermal energy.

Cleaning. The act of removing soiling and contamination from ensembles and ensemble elements by mechanical, chemical, thermal, or combined processes. *Also see Advanced Cleaning and Specialized Cleaning.*

Contamination. The accumulation of products of combustion and other hazardous materials on or in an ensemble element that includes carcinogenic, toxic, corrosive, or allergy-causing chemicals, body fluids, infectious microorganisms, or chemical/ biological/radiological terrorism agents.

Decontamination. The act of removing contamination from or neutralizing contamination in protective clothing and equipment.

Disinfectant. A type of antimicrobial agent that destroys or irreversibly inactivates fungi and bacteria, but not necessarily their spores, on inanimate surfaces and objects.

Elasticity. The ability of a material to return to its original form after being stretched.

Embrittlement. The hardening of a material that makes it susceptible to easy fracture.

Fire Entry. Highly specialized firefighting responses that involve directly entering into live fire. Not structural firefighting.

Functional. The ability of the protective hood or a component of the protective hood to continue to be utilized for its intended purpose.

Hazardous Materials. Substances (solid, liquid, or gas) that when released are capable of creating harm to people, the environment, and property.

Independent Service Provider. *See verified independent service provider; also referred to as an ISP.*

Interface Area. An area of the body where the protective garments, helmet, gloves, footwear, or SCBA facepiece meet.

Maintenance. The inspection, service, and repair of protective clothing and equipment, including the determination for removal from service.

Melting. A response to heat by a material resulting in evidence of flowing or dripping.

Moisture Barrier. The component of a protective hood that principally prevents the transfer of liquids.

Preliminary Exposure Reduction. Techniques for reducing soiling and contamination levels on the exterior of the ensemble and constituent parts, including the protective hood following incident operations. *Also called on-scene or gross decontamination*.

Pretreatment. A technique to apply a cleaning agent to the protective hood that is for the purpose of aiding in the removal of soiling, a stain, or contamination.

Products of Combustion. The end product when fuels, such as hydrocarbons and materials, remain after the process of combustion in a fire.

Proximity Firefighting. Specialized firefighting operations that include the activities of rescue, fire suppression, and property construction at incidents involving fire producing high levels of radiant heat as well as conductive and convective heat..

Retirement. The process of permanently removing an ensemble element from emergency operations service in the organization.

Sanitizer. A type of antimicrobial agent that is used to reduce, but not necessarily eliminate, microorganisms from the inanimate environment to levels considered safe as determined by public health codes or regulations.

Service Life. The period for which a protective hood product can be useful before retirement.

Soiling. The accumulation of sweat, dust, dirt, debris, and other nonhazardous materials on or in an ensemble or ensemble element that could degrade its performance or cause hygiene issues.

Specialized Cleaning. The act of removing hazardous materials, soiling associated with body fluids, or other forms of contamination.

Subject Matter Expert. For the purposes of this Guide, an individual with specific knowledge on care and maintenance of firefighter protective clothing, including protective hoods.

Utility Sink. A separate sink used for cleaning protective hoods and other protective clothing and equipment.

Verified Independent Service Provider (ISP). An independent service provider verified by a third-party certification organization to conduct advanced inspection, advanced cleaning and sanitization, basic repair, and advanced repair service

See NFPA 1851 and its annex for a more complete description of these terms and their application for the selection, care, and maintenance of structural firefighting protective clothing.