

# FIRE SAFETY GUIDE TO LAUNDRY ROOMS



This document is designed to assist NFU Mutual customers in managing fire risks associated with laundry environments



**NFU Mutual**  
RISK MANAGEMENT SERVICES

# INTRODUCTION

Each year there are many fires in commercial laundry environments, attributable to varying causes and with regular news stories of laundry equipment being recalled due to design faults and the potential for fire damage, there's never been a better time to ensure your laundry equipment operates safely and efficiently.

The following guide is aimed at providing information on fire safety in small laundry operations such as those often found in hotels, public houses, workshops and restaurants rather than large commercial laundries where further guidance is available.

## WHAT ARE THE FIRE RISKS ASSOCIATED WITH LAUNDRY ROOMS?

The main considerations are discussed below however a common feature of most small laundry operations is the tendency to run equipment whilst the laundry room is unattended. This means any faults or issues that could give rise to fire may not be detected prior to ignition. A fire originating in a laundry environment also has the potential to grow rapidly, given the presence of

combustible items including bedding, towels, overalls along with card and plastic detergent packaging. The most serious risk however is the potential for loss of life or serious injury with both fire temperature and toxic smoke posing significant threats to occupants. The following guidance provides useful advice on reducing risk in your laundry environment.

## FIRE RISK ASSESSMENT

A fire risk assessment must be undertaken to identify and evaluate the potential for a serious fire at your premises. Responsibility for the fire risk assessment rests with occupiers and owners of business premises and should include the construction of the premises, working practices within, fire inception hazards, likely fire spread

potential and the suitability and standard of fire protections including your fire alarm, fire doors, emergency lighting, escape signage and fire extinguishing appliances. The risk assessment must be carried out by a suitably competent person and any necessary control measures carried out to reduce the risk and effects of fire.

# SPONTANEOUS COMBUSTION

Many laundry fires result from “spontaneous combustion” and occur overnight when there is nobody manning the laundry room.

Many Laundries are well aware of the risks of spontaneous combustion from work that has been over-dried and tightly packed into a trolley or stored in a cupboard whilst still hot. In this case, there is no real opportunity for the linen to cool and residual chemicals and oils in the linen can react with the heat. This reaction generates further heat until a temperature is reached on the surface of the linen which causes it to self-ignite.

However, not all laundry fires start solely because of this alone.

Often, work that has only been pre-conditioned for a few minutes in the tumble dryer and is only just warm can be a source of spontaneous combustion particularly if it has not been washed correctly and is still loaded with residues of fats, greases, and oils. Washing at lower operating temperatures runs the risk of not fully removing the oils and fats contained within the material which increases the ignition risk after being dried.

Many items received in a laundry are covered with varying levels of oils, grease, and fat. These fatty or oily residues may be from a working environment in which the textile is used. For example, a kitchen, bakery or

engineering works but are also common in the leisure industry where treatment products, such as essential oils, are present. However, any item that is worn regularly can collect this type of soiling from the perspiration and fatty acids excreted by skin and hair. These can also be a potential fire hazard in the laundry.

It is absolutely essential that operators are aware of the possible risks when they unload washed textiles from the washer or dryer.

If the textiles still have only a slight smell of oil or fat they have not been washed properly. This will not only affect the finished quality of the items but will also significantly increase the risk of a fire through spontaneous combustion.

If the washed items that are loaded with residual fat and oil are crammed into a trolley or tightly packed and stored without being sufficiently cooled, the risks of fire significantly increase. This can even happen with relatively cool items if they are left long enough in packed form.

## FINISHING

The risks increase even further after finishing. The heat applied during the finishing process will often only be sufficient to drive off the moisture and a portion of the lighter fats and oils.

This can often be readily identified by the clouds of bluish/grey smoke that appear over the top of a steam/air tunnel finisher. Another warning sign is a plume of smoke from the garments when the head is released on a hot-

head press. If the garments are then folded whilst still hot, then there is the potential for fire.

Some launderers will increase this risk even further by storing the now dry folded items on the top canopy of equipment such as rotary presses. They do not realise that this practice poses a significant fire risk.

## AUTOMATIC FIRE SUPPRESSION SYSTEMS

Consider leasing only equipment with automatic suppression installed. This will help reduce the potential for fire growth and should suppress, if not extinguish a small fire before it becomes significant. The main suppliers of laundry equipment in the UK provide this protection to their equipment as an optional extra service or can advise on alternative products that are fitted with automatic suppression equipment as standard.

Alternatively discuss the potential for fitting automatic fixed suppression systems, preferably approved to LPS 1666, with a suitable class of extinguishing agent with your Fire Alarm installer/maintenance company.

Ensure fire suppression systems automatically isolate the equipment, including any extraction equipment within the laundry environment, and be linked to a fire alarm system and remote signaling devices to designated staff.

Any suppression system should be subject to a programme of testing, servicing, checking and maintenance in accordance with the installer's recommendations and be formally documented.

# LAUNDRY CHUTES

Where laundry chutes are in use, or planned, they should be constructed of non-combustible materials and provide at least 30 minutes' fire resistance. Bends should be avoided and the chute should be fitted with a self-closing shutter or flap to maintain the fire resistance of the chute. Similarly, the entry flaps or doors on upper floors should be fitted with 'self closing' hinges and both

openings fitted with intumescent strips and cold smoke seals. Electrical wiring and other services should not be run within the laundry chute and any doors to areas housing the chute should be secured and access limited to authorized persons only.

Ensure the fire alarm system extends to this area.

# WASHING

Ensure all textiles are washed correctly with the right detergent dosage levels and at temperatures that are sufficient to remove all fats, grease and oils. Ensure all relevant staff

are trained to be aware of any residual smells, especially oily, fatty smells on processed items and to return them for re-wash if still odorous.

# DRYING

Devise a formal cleaning regime for all tumble drying equipment, making sure all lint filters, both inlet and exhaust, are fully and regularly cleaned and the lint disposed of correctly.

Always use the cool-down function on the tumble drier and check the timers routinely to ensure they all work correctly and repair/replace any that are faulty.

Routinely check the tumble drier evaporation rates and ensure that the drier is operating as effectively and efficiently as possible and that the timer settings are correct for each classification in each tumbler.

Ensure the cooling cycle duration is appropriate and correct for the material being dried

## STORAGE

Never cram hot tumbled work into a trolley and never leave hot dried work in the tumbler or in a trolley or tightly packed on racking or in storage cupboards. All dried laundry must be vented to ensure it is cool before it is then stored or packed as required and staff should regularly check the temperature of the laundry after it has been dried.

Ensure all staff are adequately trained in this regard and routinely reminded of the importance of storing only fully cooled stock.

Keep a check on any finishing lines. If a plume of blue/grey smoke ever appears over the top of the steam/air tunnel finisher or ironer or when the head of the press is

released, make sure that this work is not folded while it is hot and immediately check your wash processes.

Never store pressed, dried work on a hot surface, especially on the canopy of a rotary press.

Ensure that all cupboards used to house laundry are fitted with low voltage light fittings or bulkhead lighting units. A significant number of fires are attributed to hot glass fragments from damaged light fittings settling on linen, bedding, towels etc. This can eventually lead to smouldering and subsequent ignition.

## HOUSEKEEPING

Ensure formal housekeeping procedures are in place. Equipment must be kept clean and all lint and dust must be regularly removed.

The area around washing machines and tumble driers must be kept clear of any combustible or flammable materials.

Where possible replace any flammable and/or highly flammable cleaning agents with non-flammable materials. Where this cannot be achieved only keep sufficient flammable and/or highly flammable liquids in the laundry for the day's usage. Ensure all flammable and/or highly flammable liquids are stored in proprietary storage cabinets or rooms with

explosion proof lighting, ventilation and wiring systems.

Ensure staff are not smoking in and around the laundry buildings and yard stores. This is a common issues on night shifts and CCTV systems may be useful to monitor any illicit smoking activity. Ensure cameras are located in known smoking hot spots, ensuring appropriate warning signage is displayed.

Ensure any laundry deliveries or collections are stored within your yard with secured yard gates to prevent illicit access and malicious damage/arson attacks.

## ELECTRICAL RISKS

Your electrical wiring must be subject to inspection and certification by a qualified electrician. Ensure water safe hardware is in use for washing equipment and appropriate RCD protection has been installed to individual washing machines and driers to help prevent shocks or fires attributable to current faults.

Do not use extension leads or block connectors and ensure a policy of 'one plug to one socket' applies. If you do need to use extension leads, only use as an emergency option and ensure all wiring is located off of the ground to prevent electrical fires or shocks due to water ingress.

## AUTOMATIC FIRE ALARMS

Consider installation of, or upgrading existing system to, an automatic fire alarm system conforming to BS5839; Fire Detection and Alarm Systems for Buildings: Part 1: Code of Practice for Design. The installation to be designed and installed in accordance with category P1 as defined within BS5839

with remote signalling to an approved alarm receiving centre in accordance with BS5979 Code of Practice for Remote Centres Receiving Signal. Fire detection should be provided within the laundry processing areas but also in any laundry storage areas in addition.

## PORTABLE FIRE EXTINGUISHER PROVISION

Appropriate portable fire extinguishers to be located in the laundry room with regular inspection and maintenance undertaken by an approved supplier and recorded.

Ensure staff are adequately trained and know not only where the fire extinguishers are but

which type they should use for the varying types of fire.

Ensure staff are aware that fire extinguishers are to be used sensibly and to aid escape primarily.

## IMPORTANT NOTE:

The information contained herein is designed for guidance only and NFU Mutual cannot accept responsibility for any errors or omissions arising from its use.

Should further guidance be required please contact our local NFU Mutual Regional or Branch office, or telephone Risk Management Services on 01789 202425.



**NFU Mutual**

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