



Tumble Dryer Fires in Care Homes - Advice to Care Home Managers and Owners

Essex County Fire and Rescue Service wishes to raise awareness to a recent trend associated with fires in tumble dryers. Whilst there may be a number of potential causes of these fires, the following specific items have been identified as significant contributory factors in the cause;

1. Clothing or other items being dried may have been contaminated with paraffin wax (emollients) or other treatments
2. Other clothing items such as catering attire may have been contaminated with cooking oils
3. Garments or items being washed may not have been subjected to a high enough washing temperature to assist with the removal of any contamination
4. The detergent levels used to support the cleansing process may not be of a high enough concentration to be effective to remove the contamination

The combination of the above factors leads us to believe that a high temperature drying process may provide an environment where fire could develop.

A key feature of the drying process is the high degree of heat imparted into the items during the drying cycle. If the dryer is well ventilated the temperature should be managed by the thermostatic control of the dryer machine. However, if the dryer cannot lose heat, for instance because the lint trap is full and preventing hot air from being vented properly, the items will remain at a very high temperature.

If these very hot items are then removed, folded and placed in piles, heat may continue to build inside the pile (possibly up to 600°C). This can create an intense, internal smouldering fire which spreads out until it reaches the outer surface, causing the pile to auto-ignite and radiate heat and flame directly on to surrounding combustible items.

It is important to note that these fires may take a long time before they become evident. This could be anywhere between one to five hours. As cleaning and drying operations of this nature are often conducted during the hours of darkness, there remains the potential for a fire to go unnoticed.

It is accepted that in many cases fire detection in tumble drying areas is provided by heat detectors, however our experience shows that external heat output from these types of fire may initially be low and only smoke detection in adjacent areas has enabled the fire to be detected. This has the potential to cause a serious delay in raising the fire alarm.

Essex County Fire and Rescue Service would like to bring this situation to the attention of Care Home staff to ensure that all cleaning processes are carefully monitored to remove contamination and that electrical/gas operated tumble dryers are regularly cleaned and maintained. These practices should significantly reduce the potential for a fire to start.



Fire Safety Recommendations

Do ✓
Ensure wash temperatures and detergents are suitable for the optimum removal of oil based contaminants.
Allow the dryer to finish the cycle and run through the 'cool-down' mode.
Open materials and larger garments out fully, shake them to expose them to cooler surrounding air.
Ensure hot, slightly damp materials are hung up and allowed to cool for a minimum of five minutes before folding.
Ensure the lint trap is emptied and cleaned frequently.
Test your fire alarms regularly

Don't ✗
Place warm, damp laundry in polythene bags or plastic containers/baskets or in poorly ventilated areas.
Leave freshly laundered fabrics stacked overnight.
Remove laundry from the tumble dryer before completing the cooling cycle.

Should you require any further information please contact a local Fire Safety Officer at the following area commands:

East Command

Rayleigh Weir Fire Station

500 Rayleigh Road

Benfleet

Essex

SS7 3TR

Email: eastareacommand@essex-fire.gov.uk Tel: 01376 576500

West Command

r/o Harlow Fire Station

Fourth Avenue

Harlow

Essex

CM20 1DU

Email: westareacommand@essex-fire.gov.uk Tel: 01376 576800