

Humidity Control & Fire Door Care Guide

For Ofsted-registered children's homes

Why fire doors swell, your legal duties, and how to use dehumidifiers safely to keep every fire door closing and latching.

Guidance for registered managers, providers and Responsible Persons · October 2026

At a glance

- **The cause:** timber fire doors take up moisture from damp air and expand. Newly converted homes are especially damp while new plaster and screed dry out.
- **The risk:** a swollen fire door that won't self-close and latch is a failed fire door.
- **The fix:** keep indoor relative humidity at 40–60%, ideally around 50%, let the doors settle, then have a competent fire door installer reassess them.
- **Don't:** plane, trim or wedge open a fire door to stop it sticking.

Contents

1	Why fire doors swell after a conversion	2
2	Why a swollen fire door is a serious problem	2
3	Your legal duties in 2026	3
4	Don't plane or trim a swollen fire door	3
5	Target humidity and choosing a dehumidifier	4
6	Daily routine and how long it takes	5
7	Safe placement and safeguarding in a children's home	6
8	Fire door checks for staff and when to call us	7

Use this guide alongside the free Humidity & Fire Door Data Sheet: a shift checklist and weekly humidity log you can print and keep as evidence for Ofsted and your fire risk assessor.

1. Why fire doors swell after a children's home conversion

Timber fire doors are made to close tolerances for a dry, heated interior. When the surrounding air is damp, the timber absorbs moisture and expands, mostly across the width and at the edges. In a converted children's home the moisture usually comes from:

- **The building drying out.** New plaster, screed and paint release large amounts of water, often for 6–12 months after the work finishes. Doors fitted during or soon after the wet trades soak it up.
- **Higher occupancy than a family home.** Several young people and a staff team mean more showers, cooking and laundry, so more water vapour.
- **Clothes drying on radiators,** one of the biggest moisture sources in care settings.
- **Restricted ventilation.** Window restrictors are used for safeguarding, trickle vents get closed and extractor fans get switched off.
- **Heating that's on and off,** or cold, unused rooms where moisture condenses.
- **Unsealed door edges,** where a door has been trimmed and the bare timber left unsealed.
- **Building defects** such as leaks, blocked gutters, or penetrating or rising damp. A dehumidifier won't fix these, so report them for repair.

2. Why a swollen fire door is a serious problem

A fire door only works if it closes fully and latches on its own. A swollen door can:

- stop the self-closer from shutting and latching the door, so it stays ajar in a fire;
- crush, tear or dislodge the intumescent strips and smoke seals;
- put strain on the hinges and closer, so the door drops out of line;
- lead staff and young people to wedge or prop doors open "to stop them sticking".

A fire door that won't self-close and latch is a failed fire door. Treat it as a defect, record it and report it the same day.

3. Your legal duties in 2026

Requirement	What it means for your home
Regulatory Reform (Fire Safety) Order 2005	The Responsible Person must keep fire safety measures, including fire doors, in efficient working order and good repair. Since the Building Safety Act 2022 changes came into force in October 2023, the full fire risk assessment must be recorded in writing and the person carrying it out must be competent.
Children's Homes (England) Regulations 2015	Regulation 25 (fire precautions) requires adequate precautions against the risk of fire, with fire equipment kept in working order. Regulations 10 and 12 (health and well-being, and protection of children) are affected by damp and mould. Regulation 46 requires regular review of the premises.
Ofsted (SCCIF)	Children's homes are inspected under the Social Care Common Inspection Framework. In July 2026 Ofsted consulted on changes, including a 5-point grading scale and report cards (the consultation closed on 28 September 2026). Whatever the outcome, inspectors want evidence that the home is safe.
BS 8214:2026	Published in March 2026, this code of practice replaces the 2016 edition. It treats the door, frame, seals and hardware as one certified fire door assembly. Altering parts without evidence that they work together can undermine the door's certification.

4. Don't plane or trim a swollen fire door

Planing a sticking door feels like the quick fix, but on a fire door it often makes things worse. Removing material can:

- push the gaps outside the door's certified tolerances;
- cut into or damage the intumescent seals;
- expose bare timber that then takes on even more moisture;
- leave gaps that are too big once the building dries out and the door shrinks back.

The right order: control the humidity, let the door settle, then have a competent fire door installer reassess it.

5. Target humidity and choosing a dehumidifier

Target humidity

Keep indoor relative humidity (RH) at 40–60%, ideally around 50%, steadily and in every room. Use inexpensive digital hygrometers to check readings independently of the dehumidifier's own display, and record them on the data sheet every shift.

Reading (RH)	Status	What to do
40–60%	OK	Keep the routine going and log it.
60–70%	Too damp	Check the unit is running and not full, doors and windows are closed and the fans are on. Recheck in 2 hours.
Over 70%	Act now	Tell the manager. Look for a leak or water source, and add or move a unit.
Under 40%	Too dry	Raise the humidistat setting. Prolonged very dry air can shrink and crack timber.

Choosing the right unit

Type	Best for	Notes
Compressor	Heated rooms above about 15°C: most living areas, bedrooms and hallways	Most energy-efficient in warm rooms. Can struggle in cold, unheated spaces.
Desiccant	Cooler rooms below about 15°C, such as unheated stores or rooms not in use	Quieter and works in the cold, but uses more power and blows warm air.

- For drying out a whole house, use units rated at 20 litres/day or more, or several smaller units spread across the floors.
- Look for a built-in humidistat, auto-restart after a power cut, a full-tank cut-off, a continuous drain option and a child lock.
- Buy from a reputable supplier and check the unit carries a UKCA or CE mark.

6. Daily routine and how long it takes

Daily routine

- Run units continuously, set to 50% on the humidistat, throughout the drying-out period.
- Keep the heating at a steady 18–21°C and avoid big temperature swings.
- Keep trickle vents open, and run kitchen and bathroom extractor fans during and after use.
- Dry laundry in a tumble dryer, or in a closed room with a dehumidifier running, not on radiators.
- Empty the tanks daily, clean the filters every two weeks, and log readings every shift.
- Check fire doors close and latch on every shift, using the checks in section 8.

How long it takes

Stage	What to expect
Weeks 1–2	Humidity readings come down and level out. Doors may still stick. Keep logging and keep doors closed, not wedged.
Weeks 2–6	Most swollen doors start to ease with steady humidity control. Note any door that still fails the checks.
First heating season	A newly converted building may need humidity control right through its first winter while the structure dries.
When readings are steady	Ask a competent fire door installer to reassess any door that still sticks or doesn't latch, and adjust or remedy it within its certification.

Keep the completed data sheets. A steady humidity log alongside fire door checks shows Ofsted and your fire risk assessor that the problem is understood and being managed.

7. Safe placement and safeguarding in a children's home

Dehumidifiers are electrical equipment with cables, hoses and water tanks. Place them as carefully as any other equipment in the home:

- **Never wedge or prop a fire door open** to spread the drying. Move the unit instead.
- **Keep units out of escape routes**, stairs and doorways.
- **Plug directly into a wall socket**. Don't use extension reels or run cables across doorways.
- **Treat cables and drain hoses as potential ligature points**. Assess every placement against each young person's individual risk assessment, and use staff-controlled or lockable rooms where there's a known risk.
- **Use the child lock**, and keep desiccant units' warm exhaust away from bedding and curtains.
- **Record the units** in your electrical safety records and environmental risk assessment.

Placement checklist

Check	Yes	No
Unit is clear of escape routes, stairs and doorways		
Plugged straight into a wall socket, no extension lead		
Cable and hose checked against individual risk assessments		
Child lock on and humidistat set to 50%		
No fire door wedged or propped open		
Unit added to electrical safety records		

8. Fire door checks for staff and when to call us

Quick checks on every shift

- Open the door fully and let go. It should close and latch on its own.
- Open it slightly and let go. It should still close and latch.
- It shouldn't stick, rub or scrape anywhere.
- The intumescent strips and smoke seals should be in place and undamaged.
- A £1 coin (about 3 mm) should fit the gap along the top and both sides.
- Hinges should be tight and the closer working, and no fire door should be wedged or propped open.

Gap requirements always follow the door's own certification and the manufacturer's instructions. If any check fails, report it the same day and don't force, plane or trim the door.

When to call a fire door specialist

- A door still sticks or won't latch once humidity has been steady at 40–60% for a few weeks.
- Seals are crushed, torn or missing, or the closer or hinges are damaged.
- Gaps are uneven, too large or too small, or the door has already been planed or trimmed.
- You need fire door inspection records for your fire risk assessment or Ofsted.

Liverpool Joinery Services Ltd

UK Fire Door trained and FireQual certified · over 20 years' experience. Fire door inspections with photo reports, moisture readings, closer, hinge and seal adjustment, and certified remedial work across Liverpool and Merseyside.

Call 0151 721 0790 · liverpooljoineryservices.co.uk · We reply to all enquiries within 1 working day.

Sources

- [legislation.gov.uk](https://www.legislation.gov.uk): The Children's Homes (England) Regulations 2015
- [legislation.gov.uk](https://www.legislation.gov.uk): Regulatory Reform (Fire Safety) Order 2005
- GOV.UK: Ofsted consults on strengthening children's social care inspections (7 July 2026)
- BSI: BS 8214:2026 Fire-resisting and smoke control doors, code of practice

This guide is general guidance and not a substitute for a fire risk assessment of your building. Always follow the fire door manufacturer's certification and installation instructions. © 2026 Liverpool Joinery Services Ltd. Free to print and share with your staff team.