



Sentinel  
making hands safe

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**Leaderflush  
Shapland**

THE HAND AND FINGER PROTECTION SOLUTION FOR DOORSETS



Leaderflush Shapland and Sentinel

# making hands safe

Sentinel is an innovative hand and finger protection solution that allows specifiers and architects to achieve outstanding performance, without compromising design or architectural integrity

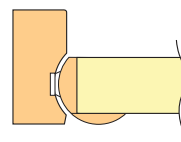
For some time, the hinge edge of a door has been seen as a possible area of harm for children, with a potential for shearing and crushing of small, inquisitive fingers, as door closers fitted as part of the fire-safety requirements shut the door automatically.

According to the Royal Society for the Prevention of Accidents (ROSPA), 30,000 children trap and seriously injure their fingers in doors every year and more than 1500 of these children will need surgery. The cost of litigation for such incidents can also be substantial.

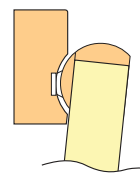
Traditionally, these vulnerable areas have been protected by bulky and unsightly retro-fit products which are expensive and prone to damage and vandalism. Now, Leaderflush Shapland has developed an innovative new finger and hand protection system, Sentinel (patent pending), which offers both a discreet and aesthetically pleasing solution. Sentinel uses a pivoted design with decorative timber elements as an integral part of the doorset and is ideal for educational environments, nurseries, health centres, hospitals and commercial applications.

## Plan view of Sentinel in action

Closed



Open



Sentinel profile - patent pending





keeping hands safe

# safe and sound

The Sentinel doorset is more than just an innovative way to guard against injuries to hands and fingers



Design - unique and modern



Fire - NR, FD30 and FD60



Acoustic - 30 R<sub>w</sub>dB performance



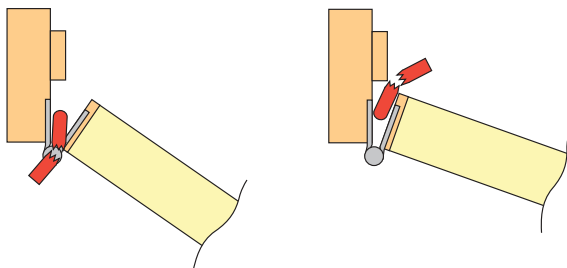
Opening force - Approved Document M and BS8300

Sentinel is also a high performance doorset offering up to 60 minute fire resistance, Approved Document M and BS8300 compliance, effective clear widths, visual contrast and 30 R<sub>w</sub>dB acoustic performance.

The following diagrams illustrate the differences between a traditional frame profile and the innovative Sentinel design from Leaderflush Shapland:

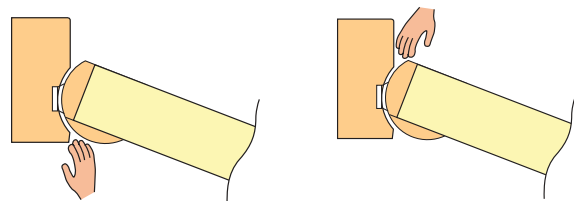
## Typical frame designs

Fingers and small hands can be trapped in the hinge edge of doors with relative ease, as shown, sometimes causing painful and damaging injuries.



## Sentinel frame in action

Sentinel prevents the trapping of fingers on both sides of the door leaf at the pivoted edge.





performance and protection

# expertise, innovation and collaboration

Sentinel has been developed through a combination of the experience and market knowledge of Leaderflush Shapland and our partners

## Expertise

Leaderflush Shapland has unmatched expertise in manufacturing doorsets for school buildings, having supplied approaching 30,000 doorsets to over 500 schools projects in the last 12 months. As an influential member of advisory committees and panels Leaderflush Shapland have influenced many of the recent initiatives for the education sector, including the recently released SSLD (Standardised Specifications, Layouts and Dimensions) from the Department for Children, Schools and Families.

## Forward thinking

By adopting a holistic approach to the design of a hand and finger protection system, Leaderflush Shapland has been able to develop a new integrated solution. Supplied as a complete doorset, Sentinel not only looks good, unlike the retro-fit applications currently available in the marketplace, it also achieves performance characteristics for fire, sound and opening forces that no other timber doorset system achieves.

## Collaboration

Sentinel is the result of three leading building product manufacturers working together and drawing on their extensive experience and product development expertise: Leaderflush Shapland, the UK's leading bespoke doorset manufacturer with an in-depth understanding of the education sector; GEZE, one of the world's leading developers and manufacturers of building technology products and safety systems for doors and windows; and Lorient, a world leader in sealing systems providing fire protection, smoke control and acoustic insulation for door assemblies.

Working together to develop innovative solutions



LORIENT



an integral part of the doorset

## why specify Sentinel

Sentinel (patent pending) provides effective and unobtrusive finger protection whilst guaranteeing the highest levels of performance

Seals and essential ironmongery are included, eliminating the risk of certification problems. This integral solution not only satisfies important performance requirements – compliant opening forces, fire resistance of up to 60 minutes and the acoustic requirements in schools of 30 R<sub>w</sub>dB but also adds an option for a unique, contemporary, modern design for timber doorsets. It also negates the need for on-site trades fitting retro-fit components.

With all materials used in the manufacture either FSC accredited or FSC neutral, Sentinel is environmentally friendly as well as being one of the most effective and unobtrusive finger protection solutions in the marketplace.

As an integral part of the Sentinel doorset, the scalloped profile brings the following key advantages:

- ✓ Prevents the crushing and shearing of fingers (adults and children)
- ✓ An integral robust solution to reduce the potential for misuse or vandalism and ensure long-term reliability
- ✓ Fully complies with Building Regulations and can be incorporated into all BSF design applications
- ✓ Achieves 30 R<sub>w</sub>dB making it ideal for classroom entrance doorsets
- ✓ Cannot be forcibly removed, negating the cost of ongoing replacement
- ✓ Offers wide choice of design aesthetics to the specifier/designer
- ✓ Modern design and smooth line profile is ideal for design-led environments
- ✓ Provides creative freedom and flexibility for specifiers and designers
- ✓ Extended product life and reduced maintenance costs
- ✓ Ergonomic, smooth design has no dirt traps enabling easy cleaning and the lacquer contains Hygienilac® anti-bacterial protection
- ✓ Traditional retro-fit finger guards often increase required opening force, whereas Sentinel complies with Approved Document M and BS8300.

## Sentinel doorset performance characteristics

# technical information

Sentinel doorsets have additional performance characteristics which makes this latest innovation from Leaderflush Shapland far more than a finger protection solution. The summary below outlines the technical characteristics that are achieved through specifying Sentinel doorsets.

### Performance:

- Fire resistance – NR, FD30 and FD60
- Smoke control
- Acoustics – 30 RwdB as a single acting single leaf
- Mechanical performance – Severe Duty
- Opening forces – Approved Document M and BS8300 compliant with GEZE TS300ECBC closer

### Configuration:

- Single action, single leaf and single action, double leaf

### Door construction:

The Sentinel doorset uses the new Leaderflush Shapland engineered performance core – EnduraCor

### Door finish:

Sentinel doorsets can be faced in veneer, laminate or can be supplied primed. In each instance the scalloped hanging edge is supplied factory finished in lacquered hardwood and should not be painted over.

### Architectural Hardware:

Sentinel doorsets are supplied complete with all essential ironmongery. This is absolutely essential in order to ensure that the performance characteristics – opening force, sound reduction, smoke control and fire resistance – are maintained. The ironmongery pack supplied will vary according to the performance and finish specified.

### Supply of Sentinel doorsets to site:

Sentinel doorsets are supplied with door leaf and frame separate. The door leaf which operates with use of a pivot system is quick and easy to fit on site, once the frame is installed, enabling the door leaf to be removed simply for inspection.



## Sentinel doorset

# specifications

The following is an example of a NBS-based specification clause. For assistance with specifications please contact our Technical Services team on 01773 530500.

### 410 INTERNAL SENTINEL HALF HOUR FIRE RESISTING 30 RwdB LAMINATE FACED DOORSETS:

Manufacturer and reference: Leaderflush Shapland, Milnhay Road, Langley Mill, Nottingham, NG16 4AZ. Tel: 01773 530500.

#### Door leaf

Core: Severe duty, high-density flaxboard  
Facings: Hard plastic laminate  
Lippings: Maple to all edges with matching Sentinel profile

#### Glazing details

Shape: VN4  
Bead type: Maple flushbead with radius corners. Pin fixed.  
Glass: Clear FD30  
Finish as delivered: Hyalux clear lacquer to beads, lippings and Sentinel profile

#### Frame and architraves

Reference and section: Barum 44 x 94mm (f) with 32 x 14mm (f) planted stop to head and lock jamb only  
Timber species: Maple  
Class: J30 (To EN 942)  
Finish as delivered: Hyalux clear lacquer

#### Ironmongery

Pivot set: Sentinel pivot set standard  
Locks: Sentinel pivot set standard mortice lock with extended strike plate to sashlock and latch from Leaderflush Shapland range, supplied and fixed  
Door closer: GEZE TS3000EC BC slide arm closer with backcheck, GEZE caps stainless steel finish

#### Perimeter seals

Acoustic seals: Lorient IS1206 to frame stops, Lorient LP2004DS to hanging jamb and Lorient IS3036si surface mounted dropseal supplied loose  
Intumescents: Fire seals to required detail



FM 01354

EMS 8007

OHS 517187

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# Leaderflush Shapland

The future of performance doorsets

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