



Sureguard & Surefire



Thurston
building systems



Introduction



Throughout the UK, Thurston Sureguard and Surefire units provide safe and secure flexible accommodation and storage units wherever additional space is required.

For more than 25 years Sureguard, fully galvanised steel buildings have been chosen by discerning clients to overcome the threat of vandalism, unauthorised entry and even combat attack in most hostile environments. The increasing occurrence of this type of incident with the resultant increases in insurance premiums, not to mention the inconvenience and time loss, make Sureguard and Surefire units a flexible and cost effective solution where security is paramount.

Available in various types for use as office accommodation, kitchens, canteens, drying rooms, toilets, showers, secure storage and mobile units they are designed and built to the highest specifications, meeting more than 16 National quality standards.

The Surefire range has been designed and independently tested to meet Clause 12.4 of The Joint Code of Practice on the Protection from Fire of Construction Sites and Buildings Undergoing Renovation. In tests carried out by Warrington Fire Research Centre, Surefire, all steel, fire rated anti vandal site accommodation units maintained their structural integrity despite internal temperatures of 1100c.

A comprehensive selection of design options are available to help meet individual requirements

This brochure contains general details and outline specifications for Sureguard and Surefire units. For full specifications and technical details please visit www.thurstongroup.co.uk where you can download the information you require or telephone our Sales Office on 01924 265461 for the Technical pack.

Foundations

Standard foundation designs are available for non-mobile units. These assume that a ground bearing pressure of 100kN/m² is available. Although simple pad foundations are usually all that is required, professional advice must always be sought prior to delivery.



Sureguard Range



Sureguard Anti-vandal Security Units

- Designed and value engineered for long life and durability
- Ideal for offices, stores, canteens, toilets, showers, first aid rooms, health and welfare units or wherever additional long or short term accommodation is required
- High level security features
- Provide comfort and safety
- Meet over 16 national building and design standards

Mobile Units

Our mobile units are manufactured to the same exacting specification as the jack leg units except that internal walls are faced with 3.2mm plywood.



Trailer Fittings

Malleable cast iron 40mm diameter, hydraulically damped eye coupling, telescopic jockey wheel, four locking corner stands, lighting board brackets and parking brake are fitted as standard. Options include rear lighting board, number plate blank, front marker light and reflectors, outline markers, amber side reflectors and alternative coupling heads.

Chassis and Undergear

Heavy duty all welded hot rolled steel channel section underframe and 'A' frame drawbar mounted with semi-elliptical leaf springs and solid square axle assemblies. Automatic reversing brakes, low profiled wheels and tyres are positioned beneath the floor to eliminate extra width wheel arches.

Twin axles with appropriate springs, wheels, tyres, brakes and drawbars can

be supplied on units upto 3.5 tonnes gross weight.

Mess Units

Can be supplied with gas or electric lights and fire, an inset sink, grill and twin gas rings together with work surface, coat hooks, table with bench seating.

Gas Installation

Gas is supplied to each appliance by means of a dedicated and continuous pipe form a manifold located in the gas locker. There is no exposed underfloor pipework and the gas locker design ensures that gas cannot seep into the accommodation area. The gas fire is also fitted with an oxygen sensor and automatic flame failure device for added protection.

Anti vandal jack leg units

External Walls

Wall sections are welded to the perimeter of both base frame and roof panels.

Floors

Agrement certified moisture resistant heavy duty tongue and groove flooring grade strand board. The whole floor is under-drawn with arson resistant steel sheet.

Roof

Mechanically interlocking structural steel panels, riveted, bonded and sealed with polyurethane adhesive. Integrated steel guttering for rainwater discharge.

Door

Fully insulated and fitted with two five lever mortice deadlocks manufactured to BS3621, lever furniture and a number of anti-jemmy security features. The door has a clear opening of 840mm x 1930mm.

Windows

Maintenance free aluminium framed polyester coated with top opening casements, glazed with 4mm float glass. Heavy duty sliding steel security shutters are fitted as standard. Additional ventilation is achieved with permavents located in external walls.

Jack Legs

Individually adjustable and removable telescopic jack legs are fitted to facilitate ease of levelling and double stacking. A certified triangular steel lifting ring is welded to the top of each jack leg for crane handling using four-leg slings and bow shackles to BS 6994. Units over 7m in length are fitted with eyebolts in lieu.

Thermal Insulation

Roof and wall cavities are insulated with fibrous insulation. Insulated floors are available as an optional extra.

"U" Values

Walls	0.450 W/m ² K
Roofs	0.427 W/m ² K

External Finish

A discreet, neutral mid grey with dark grey detailing.

Internal Finish

The ceiling and walls are covered in embossed vinyl, laminated to 12.5mm plasterboard. The floor is covered in heavy duty vinyl sheet.

Electrical Fittings

Fluorescent lights, twin 13 amp switched sockets and earth leakage circuit breaker are fitted as standard.



Anti Vandal Security Stores

These tough security units are built to the same high specification as all Sureguard units with the following differences;

Ventilation

As there are no windows, ventilation is provided by high and low permavents located in the walls.

Floor

Butt and plug welded to heavy duty galvanised steel joists supported on a welded steel angle perimeter baseframe which in turn is supported on rolled steel channel skids extending the full building length.

Doors

These units are fitted with double doors opening to 1930mm x 2130mm through 180 degrees

Internal finish

Although these units are supplied unlined we do offer a range of finish options if required.





Surefire Units



Thurston
Surefire

Surefire fire rated site accommodation units

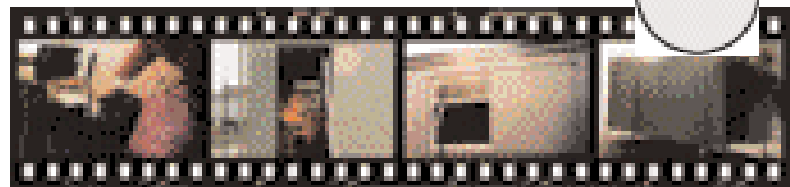
- Designed and manufactured to meet clause 12.4 of the Joint Code of Practice on the protection from Fire of Construction Sites and Buildings Undergoing Renovation
- Built to the highest manufacturing quality and standards
- Independently tested by Warrington Fire Safety Research Centre

Full Scale Fire Test Results

Under an independently conducted, full-scale, real fire test carried out by Warrington Fire Research Centre, the Surefire unit was more than able to demonstrate its design and construction fire characteristics confirming:

- That despite internal maximum temperatures of 1100°C, after only 10 minutes, structural integrity of the Surefire unit remained intact and in fact contained the fire for the full 60 minute test.
- When compared with the fire performance of traditionally constructed modular buildings containing polymeric cores and with plywood linings, the fire performance of the Surefire building was an immense improvement. Experience during actual fires had demonstrated that normally, fires in other types of module would have spread to the outside of the module within 10-15 minutes.

Fire Test Timeline



0mins

Ignition

4mins 10secs

Window shutter closes

The specification of these specialist units varies from the standard Sureguard units in the following areas:

Thermal Insulation

Roof and wall cavities are insulated with non-combustible glasswool fibre providing the following:

"U" Values

Walls 0.433 W/m²K
Roofs 0.465 W/m²K

Internal Finishings

The following specification applies to a typical Surefire office unit.

Walls

Embossed vinyl wall covering laminated to 12.5mm plasterboard lining and offering Class 0 Fire Rating.

Floors

Extra duty seam welded anti-static marbled vinyl sheeting manufactured to Class 1 Fire Rating.

Ceilings

Painted finish to blend with the wall colour and offering Class 0 Fire Rating.

Electrical Installation

Fluorescent lights, twin 13 amp switched socket outlets, a light switch, consumer unit and earth leakage circuit breakers are fitted as standard to Surefire office units.

Jack Legs

Individually adjustable telescopic jack legs are fitted to facilitate ease of levelling and double/triple stacking without modification. A steel lifting ring is welded to the top of each jack leg for crane handling using four-leg slings and bow shackles to BS 6994.

Certain heavier Surefire units are supplied with roof mounted eye bolts in lieu of jack leg rings.



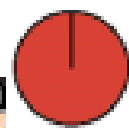
Surefire Benefits

- ▶ **Category A Fire Rated for 'High Risk Areas'**
- ▶ **Independently Fire Tested by Warrington Fire Research Centre**
- ▶ **Anti-vandal security features**
- ▶ **"All-steel" construction**
- ▶ **Cost effective**
- ▶ **Insurer Friendly!**
- ▶ **Compliance Codes: Joint code - 'Fire Prevention on Construction Sites' published by:**
BUILDING EMPLOYERS CONFEDERATION LOSS PREVENTION COUNCIL NATIONAL CONTRACTORS GROUP

And supported by:
ASSOCIATION OF BRITISH INSURERS
CHIEF FIRE OFFICERS ASSOCIATION
LONDON FIRE BRIGADE
'Fire Rated Temporary Accommodation on Construction Sites'
THE MODULAR PREFABRICATED BUILDING ASSOCIATION

- ▶ The Surefire unit contained the fire for the full 60 minute test duration and there was no evidence of any flaming from joints in the external wall panels.
- ▶ Surefire performance exceeded the requirements of BS476 Part 20.

Source: Warrington Fire Research Report.



7mins 11secs

20mins

60mins

Flashover

Door sealed into frame

Building & Design Standards

Structural Reliability

The extensive use of inherently non-combustible Galvalite steel demonstrates our commitment to quality and long life durability. This advanced, zinc rich, 'self healing' material acts as a structural cladding in wall and roof construction. In pressed or folded sections it provides the floor and ceiling joists. Its most important characteristic is its ability to resist corrosion, even if the galvanised surface is chipped or scratched. It has the strength and engineering precision of steel whilst eliminating oxidation.



Sureguard anti-vandal security buildings and Surefire fire rated accommodation units are designed and manufactured to meet the following standards:



ISO 9001	Quality Management System for manufacture and installation. Lloyds Register Certificate of Approval.	BS 6375: pt 1	Performance of Windows. (<i>Weather-tightness Classification</i>)
BS 6492: pt 2	Transportable Accommodation Units. (<i>Transportation and Siting</i>)	BS 5368: pts 1&2	Methods of testing windows.
BS 6767: pt 1	Transportable Accommodation Units. (<i>Design and Construction</i>)	BS 6399: pts 1&3	Code of Practice for dead and imposed loads and imposed roof loads.
BS 449: pt 2	Structural Steel in Building.	BS CP3: Ch V: pt 2	Wind loads.
BS 476: pt 7	Surface Spread of Flame.	BS 3261: pt 1:A	Specification for unbacked flexible homogeneous PVC flooring.
BS 952: pt 1	Glass for Glazing.	BS 4278	Specification for Eye Bolts for lifting purposes.
BS 4800	External Paint Colours.	BS 476: pts 3,20,21,22&32	Specification for continuously hot-dip zinc coated low carbon steel sheet and strip.
BS 5493	Code of Practice for protective coating of iron and steel structures.	BS 5950: pt1	Structural use of Steelwork in Building (<i>Design in simpler Hot Rolled Sections</i>).
BS 10142	Specification for continuously hot-dip zinc coated low carbon steel sheet and strip.	BS EN 10147	Specification for continuously hot-dip zinc coated structural steel sheet and strip.
BS 6262	Code of Practice for glazing for buildings.		



Joint Code Of Practice Fire Performance Requirements

Surface Spread Of Flame

Class 1 surface spread of flame performance to BS476 Part 7 for all internal wall and ceiling surfaces and external surfaces of walls. External surface of roof meeting Class AA in BS476 Part 3.

Stacking

Where units are vertically stacked, the roof/floor assembly, and members supporting it achieve at least 30 minutes Fire Resistance (integrity, insulation and load bearing capacity) to BS476 Parts 20 and 21 and comply with the Building regulation requirements.

Fire Resistance

Walls and roof achieve 30 minutes Fire Resistance (integrity and insulation) to BS476 Parts 20 and 22. In the case of the windows this is achieved by means of fire activated external shutters with intumescent seals and toughened glass. High and low level permavents seal effectively stopping the passage of flame.



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