

**Brannan Thermometers & Gauges  
Leconfield Industrial Estate,  
Cleator Moor  
CA25 5QE**

**Date: 23<sup>rd</sup> July 2020**

**Quote Ref: CUK75067 (R5)  
FAO. Mr Paul Bowden**

Dear Paul,

Please find enclosed below proposal (R5) for the Custom Firevault Safety Store as discussed.

Chemstore has over 28 years' experience in the design and fabrication of custom hazardous materials and dangerous goods storage. We are recognised as the industry leader in providing engineered safe storage solutions and associated products in the UK and Ireland. Our hazardous material storage solutions and comprehensive product range are designed to comply with the most stringent legal, environmental, health & safety and corporate social responsibility concerns of our customers.

Chemstore products and services are designed to exceed all client expectations of performance and are delivered with a superior level of customer service.

If you have any queries regarding the enclosed quote, please do not hesitate to contact me.

**Yours faithfully**

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**Chris James**  
**Regional Sales Manager**  
[www.chemstore.co.uk](http://www.chemstore.co.uk)

## Compliance & Certification

For your reference, please see below an extract from **Health & Safety Guidance Notes HS(G)51 – Storage of Flammable Liquids in Containers** which defines the separation of non-fire rated storage units from occupied buildings, boundaries, process units, flammable liquid tanks of fixed ignition sources, as the following :-

<i>Quantity Stored (L)</i>	<i>Distance Required (m)</i>
Up to 1000	<b>2</b>
1,000 – 100,000	<b>4</b>
+100,000	<b>7.5</b>

If these distances are not feasible, then a fire-rated system (normally 1-hour Firevault) is required.

Our **Firevault** safety stores are based on over 28 years of direct experience in this field and also on the following standards, guidelines and Best Practices: -

(The most commonly applied standards shown here)

- **FM APPROVALS – Manufactured in accordance with FM Guidelines ‘Approval Standard for Flammable Liquid Storage Buildings’**
- **DSEAR - The Dangerous Substances and Explosive Atmospheres Regulations, 2002**
- **PPG – Pollution Prevention Guidelines**, produced by the Environment Agency for England & Wales, the Scottish Environment Protection Agency and the Environment and Heritage Service in Northern Ireland.
  - PPG1**            **General guide to the prevention of pollution.**
  - PPG8**            **Safe storage & disposal of used oils.**
  - PPG11**          **Preventing pollution on industrial sites.**
  - PPG26**          **Storage and handling of drums & IBC’s.**
- **HSE – Health & Safety Executive Guidance Notes**
  - HS(G)51**        **The storage of flammable liquids in containers.**
  - HS(G)71**        **Chemical warehousing.**
  - HS(G)158**      **Safe use and handling of flammable liquids.**
- **ATEX 95 & 137 Directives**, covering explosive atmospheres in the workplace and the equipment operating within.
- **COSHH - Control of Substances Hazardous to Health Regulations, 2002.**
- **Corporate Manslaughter and Corporate Homicide Act, 2007**
- **DEFRA – Guidance note for the Control of Pollution (Oil Storage) (England) Regulations, 2001.**

## FLAMEPROOF CONSTRUCTION



Store must be positioned within a 'safe location', away from sources of ignition, work areas, public boundaries and occupied buildings as per HS(G)51.



Single skin, welded steel construction is fully vandal proof and non-combustible.



No resistance to temperature increase as there is no thermal barrier created.

## FIREVAULT CONSTRUCTION



Store can be positioned (within reason) next to hazards, occupied building and boundaries.



Fully fire rated and certified components used throughout, includes 100mm thick cladding, intumescent seals and air vents.



90 Minute thermal barrier should allow sufficient time for evacuation or for fire crew to safely deal with a situation in the event of a fire.

## Custom Walk-In Firevault Options



**90-Minute fire rated construction**



**Fully bunded, tested and certified**



**Vandal proof**



**Maintenance free**



**Fork-liftable**



**Optional extras available**



<b>Overall Dimensions:</b>	Option 1 – *5,120L x 2,800W x 2,600H mm. *Includes extraction ducting
<b>Storage:</b>	Consumable chemical storage & decanting section – Option 1 – 7x200L Drums with product decanting section. 2 x 600mm deep Rear Shelves  Waste chemical storage & decanting section – 4x200L Drums with shelving for 10x60L drums
<b>Access:</b>	1 No. Single, hinged T60 fire-resistant door fitted with key locking mechanism. Overhead door closer Dorma TS 71 with a clear entrance passage of 930x2,086mm. Door leaf thickness 62mm. Fire-resistant in accordance to EN 1634-1.  1 No. Double, hinged T60 fire-resistant door fitted with key locking mechanism. Overhead door closer Dorma TS 71 with a clear entrance passage of 1,416x2,083mm. Door leaf thickness 62mm. Fire-resistant in accordance to EN 1634-1.
<b>Sumps:</b>	Total Capacity: 1,500L  Corrosion resistant epoxy coating over steel sump tray, fitted under lower shelf level.  Bund Test Certificates are issued with each unit. (Capacity exceeds current Environmental guidelines, 25% of the total volume and 110% of the single largest container).
<b>Construction:</b>	Robust all welded 100x50mm steel box section frame. 3mm Welded steel sump.
<b>Shelving:</b>	Walk-in areas are fitted with galvanised grid decking on floors and shelving.
<b>Sealing:</b>	Full door, intumescent, elastomeric, neoprene based seals are installed to protect the Firevault and its contents from the spread of flame and heat. All seals have self-extinguishing

dust, or	properties in fire and are not affected by toxic fumes, weather conditions.
<b>Wall/Door Cladding:</b>	<p>100mm thick Fire-rated panels fabricated from high quality resin bonded Conrock slab are securely fixed using the tongue and groove method, to the robust welded steel box framework.</p> <p>When tested in accordance with <b>BS 476 part 22 1987</b> the panels exhibit the following results:</p> <p>Resistance to the passage of flames 98 mins. Insulation on temperature 98 mins. Stability &gt;98 mins</p> <p><b>There is, therefore fire resistance to the wall construction of 98 mins.</b></p>
<b>Roof Cladding:</b>	<p>In accordance with Health &amp; Safety Guidance Notes HS(G)51, which states that: - <b><i>“External storage buildings, whether or not they are fire-resisting structures, should have a light-weight roof to act as explosion relief”</i></b></p> <p>External colour: Choice, standard Goosewing Grey. Internal colour: Choice, standard White.</p>
<b>Finish:</b>	<p>Framework: All steel coated with 2 pack anti corrosive Polyurethane paint system. Choice of colours. <b><u>Standard colour: Blue RAL 5017.</u></b></p> <p>External: Longlife, maintenance free plastisol (PVC) finish on wall panels. 20-year Corrosion proof guarantee in normal operating conditions. Choice of colours. <b><u>Standard colour: Goosewing Grey.</u></b></p> <p>Internal: White chemical resistant stelvete (PVC) finish on internal walls. Anti-static and food safe finish</p>
<b>Ventilation:</b>	10 No. intumescent ventilation Pyrogrilles fitted as standard at high and low level to ensure good natural ventilation throughout the store. Pyrogrilles are tested and certified to BS 476 part 22
<b>Signage:</b>	Clear and bold “Firevault”, “Flammable, No Smoking, No Naked Light” and “Keep Door Closed When Not In Use” signs fitted as standard.
<b>Extractor:</b>	1 No. ATEX rated, wall mounted extractor suitable for use within a Zone 1 flammable atmosphere. Complete with externally mounted starter switch giving minimum of 10 air changes/hour. <b>Includes High Velocity Cowl which</b> allows the discharged vapours to exit the stack at high level. <b>Extraction unit will serve both Consumable and Waste Compartments.</b>

<b>Light Fittings:</b>	2 No. 1,500mm (5") twin fluorescent light fitting suitable for use in Zone 1 flammable areas. Complete with on/off switch.
<b>Heater:</b>	1 No. 3kW ATEX rated suitable for use in a Zone 1 flammable atmosphere group IIB, temperature classification T3. Complete with settable thermostat
<b>Grounding Cable:</b>	2 No. Sets. Must be used when transferring highly flammable liquids to safeguard against ignition of vapours by static discharge. Includes section of heavy duty copper bar with 2 earthing clamps, connected via coiled grounding cables. This avoids static sparking.
<b>Tare Weight:</b>	3,950 kg