



Flamebar BW11 Fire Rated Ductwork

**FIRE RATED DUCT PROVIDING UP TO 4 HOURS FIRE RESISTANCE
WHEN TESTED TO BS 476 Part 24 AND ISO 6944**

Construction

FLAMEBAR BW11 Fire Duct is constructed from galvanized sheet steel manufactured to the HVCA or SMACNA standard, the degreased and factory fire sprayed with **FLAMEBAR BW11** which is a specially formulated water based compound. This contains selected mineral fillers in a low permeability elastomeric binder to a thickness of approximately 0.7mm to give a finished product which has been successfully tested for international use under Cellulosic Fire Conditions in excess of 4 hours duration. Ductwork is produced in sections and is assembled on site utilising tested fireproof gaskets/sealants.



The unique properties of **FLAMEBAR BW11** has enabled us to design a low density, highly durable material which accommodates induced stress arising from extreme and varying conditions eg Climatic Moisture and Structural Loading Variations and the effect of thermal shock during a fire.

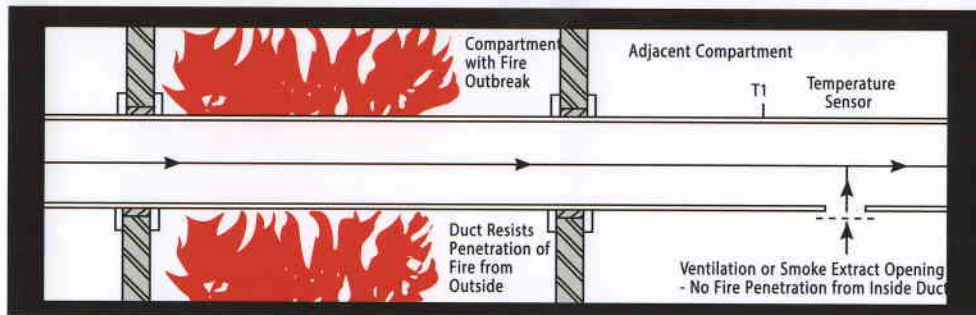
The completed system has been tested accredited by BRE to BS 476 Part 24 (1987) and also classified by UL to ISO 6944 (1985) (2008) up to a temperature of 1133°C

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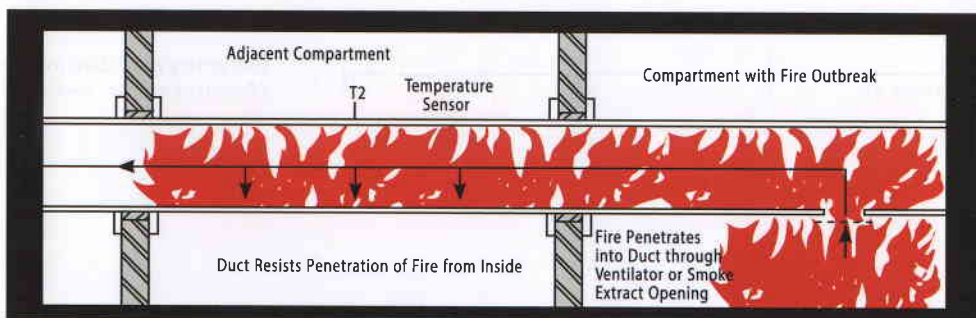
System Advantages

The **FLAMEBAR** BW11 system offers the following advantages:

The system is tested for up to 4 hours for Stability, Integrity and Insulation in accordance with BS 476 part 24 and ISO 6944 for both type A and B fires.



**Fire Outside
-Duct Type A**



**Fire Inside
-Duct Type B**

As well as being used for Fire Rated Smoke Extract, Kitchen Exhaust and Pressurisation Systems, the **FLAMEBAR** BW11 system can also be used instead of drywall fire rated shafts.

By eliminating drywall shafts, floor space is maximized and as **FLAMEBAR** BW11 is both water and mould resistant, the Fire Rate Shaft can be constructed before the building is completely watertight, thereby reducing construction time and greatly reducing the need for additional site inspections.

The **FLAMEBAR** BW11 ducts arrive on site as finished sections ready for installation.

As the **FLAMEBAR** BW11 system can be based upon DW144 or SMACNA ductwork construction standards the fire duct sections can be constructed using the TDF or slide-on flange system, jointed together incorporating the **FLAMEBAR** Intumescent Gasket, the installation can be carried out by competent duct erectors.

Plant items such as in-line fans and silencers, subject to casing thickness and suitable construction, can be sprayed with **FLAMEBAR** BW11 and thereby rated as part of the certified system eliminating the need for special enclosures.

The **FLAMEBAR** BW11 system is the lightest weight certified system on the market. Therefore as well as the load on the structure being eased, handling and site erection are made easier.

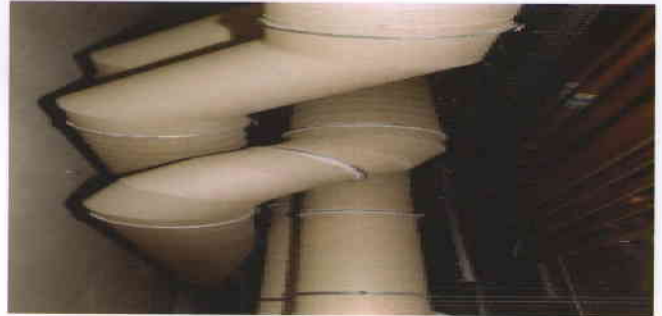
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Advantages

Flamebar BW11 is a water-based, fire-resistant compound that is sprayed directly on the sheet metal, ductwork components. Once the spray is applied, the treated ductwork is cured and sealed so that the coating does not peel, flake or deteriorate. In the event the coated ductwork suffers damage prior to inspection, a factory supplied touch-up kit is readily available for jobsite repair.

- **Flexibility in design and easy to apply:**

Flamebar BW11 offers complete flexibility in design - rectangular, flat oval and circular ducts are available.



- **Easy to install:** Can be easy to apply Flamebar on ductwork both on ground or on installed ductwork. Can be done both in site and factory. Can be installed both vertically or horizontally for a complete versatile application.



- **Space Saving and light weight:** only additional 1.5kg/m² average base on 0.7 mm thick coating and only 1mm thickness (particularly for smoke extract ducts) .

- **Cost-efficient :** almost no material waste. And saving labor cost much more than any materials.

- **A complete and internationally tested/certificated fire rated ductwork system, Certified upon final inspection.** Flamebar BW11 has been tested and approved accordance with: ISO 6944, BS476 Part24, AS 1530.4, UL Accreditation (online), LPCB 3rd party Accreditation (online) and local fire department also.





LOCAL FIRE DEPARTMENT



COATED DUCTS FOR USE IN FIRE RESISTIVE DUCT ASSEMBLIES SEE UL BUILDING MATERIALS DIRECTORY NSL IR62

Flamebar BW11 Fire Rated Ductwork is protected by design right

Standards

The range of **FLAMEBAR** BW11 Fire Duct has been tested by the Loss Prevention Council in accordance with BS 476 Part 24 (1987) and ISO Standard 6944 (1985) (2008), for vertical and horizontal ductwork, with fire inside and outside the duct, in excess of 4 hours Stability, Integrity and Insulation for ventilation ductwork, smoke extract ductwork or kitchen extract ductwork.

FLAMEBAR BW11 has been test by UL in the USA to determine compliance with NFPA 90A (Installation of Air Conditioning and Ventilation Systems) for flame spread and smoke development with the following results:

NFPA Stipulation	Flame Spread not to exceed 25	Smoke Development no higher than 50
FLAMEBAR BW11 Results	9.4	0.2

Test conducted in accordance with UL Standard 723 "Test for Surface Burning Characteristics of Building Materials" (ASTM E84)

FLAMEBAR BW11 Fire Duct has also passed the hose stream test to ASTM - E119 with water pressure of 207 KPa (30 psi) for 2½ minutes.

Firespray provide full system for fire rated ductwork. Flamebar BW11 system can be based upon DW144 or SMACNA. Beside coating, ductwork must be used fire rated sealant and Intumescent Gasket.

Properties

Exterior Weathering of **FLAMEBAR** BW11 Fire Duct

Duplicate samples were placed on the exterior weathering frame and left totally exposed from January 1993. The results so far show:

- 1 Some dirt pick-up which can be cleaned off.
- 2 No mould growth.
- 3 No chalking.
- 4 Materials has remained totally intact.

Considering the length of time the samples have been exposed, the material is in good condition.

Artificial Weathering of **FLAMEBAR** BW11 - OUV Weatherometer

The samples undergoing artificial weathering have undergone over 22,000 hours of alternate UV and condensation cycling which is extremely excessive in duration terms. 22,000 hours is equivalent to 60 years external exposure.

Expansion of **FLAMEBAR** BW11 Fire Duct

As all steel expands with temperature, there will naturally be an expansion of fire duct under fire conditions as follows:

- At 1100 C and expansion of 0.01562mm per mm (0.016 in per in)
- At 600 C and expansion of 0.00852mm per mm (0.008 in per in)
- At 430 C and expansion of 0.006106mm per mm (0.006 in per in)



LICENSEE

FOR FURTHER INFORMATION PLEASE REFER TO OUR TECHNICAL AND APPLICATIONS MANUALS



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