

Thermal Defence System

A complete system of fire rating large wall penetrations as well as penetrating services for up to -/120/120

Approved to AS1530.4(2005)



Technical Data Sheet

ADDRESS

Unit 8 / 15-23 Kumulla Road
Caringbah NSW 2229, AUSTRALIA

MAILING ADDRESS

PO Box 707, Caringbah NSW 1495, AUSTRALIA

INTERNATIONAL CALLERS

+612 9531 8591

PHONE

1300 50 BOSS

FAX

1300 60 BOSS

EMAIL

info@bossfire.com.au

WEB

www.bossfire.com.au

KEY BENEFITS

- Provides excellent insulation to services off the penetration seal
- Remains flexible between -10°C to +160°C
- Continued flexibility without ageing
- Speed and ease of installation
- Easy to wrap, shape and cut
- High level of insulation, high temperature stability

INTRODUCTION



The BOSS Thermal Defence System has been developed to prevent the passage of fire and smoke between fire rated compartments where service penetrations exist, such as cables, cable trays and pipe work.

The BOSS Thermal Defence System consists of 2 elements:

1. Thermal Defence Wrap (TDW) installed around the penetrating services,



2. And an aperture seal of either BOSS FireMortar & Bulkhead Batts or BOSS S-line FirePillows for the wall apertures.

The TDW is designed to allow movement within the services, maintain necessary insulation on services and prevent temperature rise of services throughout a fire. At normal temperatures, the TDW remains flexible to permit thermal and mechanical movement of the pipes and cables.

Thermal Defence Wrap is a sheathed woven intumescent technology of bio-soluble vitreous material, graphite and flexible organic binders. It will activate in a fire to expand and maintain compartmentalisation for 2 hours.

ADVANTAGES OF BOSS THERMAL DEFENCE WRAP

The advantages of the Thermal Defence Wrap are as follows:

- Provides excellent insulation to services off the penetration seal
- Remains flexible between -10°C to +160°C.
- Continued flexibility without ageing
- Speed and ease of installation.
- Easy to wrap, shape and cut.
- High level of insulation, high temperature stability



SYSTEM COMPONENTS

- ✓ 300mm x 1m of Thermal Defence Wrap lengths easily wrap around a service and can be cut to fit on site
- ✓ S-Line Pillows wrap around services, including cable trays, and hold with binding wire
- ✓ Fire Pillows seal aperture in walls
- ✓ FireMortar-360 seals apertures in walls
- ✓ BOSS Bulkhead Batts provide additional protection around wall penetrating services

APPLICATION

BOSS Thermal Defence System is designed for maintaining compartmentalisation where services, such as cables and pipes, penetrate fire rated walls and floors.

BOSS proven passive products provide excellent protection, both in maintaining the integrity of the fire rated seal and also in insulating the service.

Use BOSS Thermal Defence to insulate:

- Cables
- Cable trays
- Copper pipes
- Steel pipes
- Telecommunication cables

in any environment requirement up to -/120/120 on both aperture seals and penetrating services.

BOSS Thermal Defence System are fully approved to **AS1530.4(2005)** and **AS4072(2005)**.



TESTING & SPECIFICATION

The BOSS Thermal Defence System has the following Test & Assessment references:

Exova Warrington Report 26325-02

28th September 2011

Tested to -/120/120 to AS 1530.4(2005) and AS4072.1(2005)

Exova Warrington Report 304406/A

26th May 2011

Tested to -/120/120 to EN1366.3

INSTALLATION

The BOSS Thermal Defence System is straight forward to install.

S-Line Pillows fill the aperture up to 1.1m x 1.1m in masonry walls around the penetrating services. Once the pillows are installed, the Thermal Defence System is wrapped around the services (depending on cable/pipe configuration), and trimmed to suit the circumference.

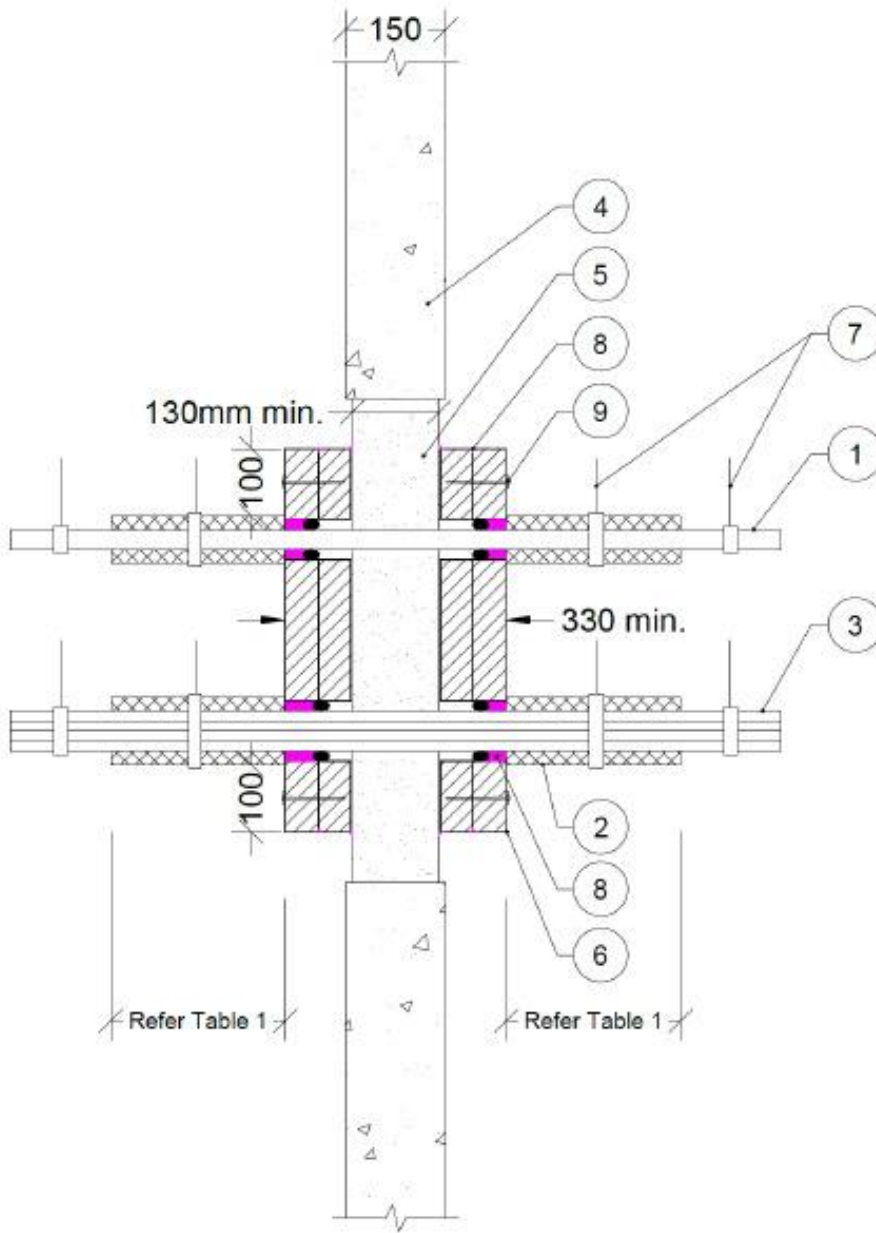
The TDW does not need to overlap itself on the penetrations, they can simply butt together and held in place with Al-Foil duct tape or binding wire.

The TDW is then simply pushed up firmly against the surface of the aperture to provide a close fit and any gaps can be sealed with FireMastic-300.

If a more solid and permanent structure is required, BOSS FireMortar-360 can be used to fill the wall aperture. In this case, the aperture needs to be prepared with formwork as per normal mortar installations then BOSS Bulkhead Batts are added to the immediate surround of the penetrating service. The TDWs are then fitted in the same way as the S-Line pillow system above.

For detailed information of the installation process for this system, contact the BOSS Technical Services team on 1300 502 677.

Typical cross section of Thermal Defence System



1. Steel or copper pipes
2. Insulation Lagging (Thermal Defence Wrap, S-Line Pillows or Armacell Nitrile Rubber)
3. Cables or cable tray
4. Masonry Wall
5. BOSS FireMortar-360
6. BOSS Bulkhead Batts
7. Cable/Pipe Support
8. FireMastic-300 sealant
9. Fixings

HEALTH AND SAFETY

To learn more about the safe handling of Thermal Defence System, see the Material Safety Data Sheet available at www.bossfire.com.au.

LIMITATION

BOSS Fire & Safety Pty Ltd has provided the above technical information in good faith and to the best of its knowledge. This information was deemed to be correct at the time of publication. Should any data come to BOSS Fire & Safety's attention relating to the fire resistance or performance of the product described, BOSS Fire & Safety reserve the right to amend this report.

BOSS Fire & Safety strive to constantly improve and develop products so this information may change without notice.

FURTHER TECHNICAL INFORMATION

For additional technical information on the performance of BOSS Thermal Defence System or other BOSS products please contact our Technical Services team on:

Phone 1300 502 677
Fax 1300 602 677
Direct +612 9531 8591
Email info@bossfire.com.au
Web www.bossfire.com.au