

How to: Line a masonry fireplace with PROMAFOUR®



PROMAFOUR® fire surround lining systems



PROMAFOUR® The fire surround lining system

If you are installing a new stove, stove surround or updating an existing one you must ensure that the wall lining in the fireplace is safe and doesn't pose a fire risk.

You must ensure that the board has the legal certification that it can both:

- Withstand temperatures of up to 1000°C; and
- Is classified A1 non-combustible and will not catch fire or contribute to a fire

Promat PROMAFOUR® meets these criteria. It has been fully tested and classified to international fire standard, BS EN 13501-1 and carries a CE Mark which is the manufacturers declaration that PROMAFOUR® meets EU safety requirements.

Whilst there are other boards on the market which are classified A1 non-combustible, they are not designed to withstand the intense heat of a fireplace or the continuous ongoing strain that is unique in this environment.

Gypsum plasterboards - including the fire-rated pink boards - are combustible and should not be used for fireplaces.

In contrast, Promat PROMAFOUR® has been specifically designed to be used for the installation of a false chimney breast for an inset type fireplace and for walls surrounding free standing stoves.

It will provide a clean, pre-decorative finish for your fireplace and as it requires no plaster it will not crack under pressure from the most intense heat.



Why PROMAFOUR®

Benefits for installer and homeowner

SAFE AND RELIABLE

PROMAFOUR® boards are classified A1 non-combustible in accordance with BS EN 13501-1 and resistant to very high temperatures up to 1000°C during prolonged exposure. The boards are composed of calcium silicate and don't contain any bonding agent which could emit an irritating odour.

AESTHETICS AND COMFORT

PROMAFOUR® has good heat permeability and very good thermal storage capacity. This ensures less heat loss and uniform heat emission into your home even after the fire has gone out.

PROMAFOUR® boards have a naturally smooth surface which is ideal for painting without additional plastering, leaving your stove to be the feature in the fireplace.

QUICK AND EASY TO INSTALL

PROMAFOUR® boards can easily be cut with traditional woodworking tools and installed using masonry screws, staples, nails and PROMAFOUR® Glue, a refractory silicate based glue which resists temperatures up to 1000°C.

FINISHING

The high quality smooth surface finish of PROMAFOUR® is ideal for painting without the need for plastering.

PROMAFOUR® can also be tiled, supporting a maximum weight of 30kg per m².

PEACE OF MIND

As PROMAFOUR® boards minimally expand and contract during and after heating, the risk of cracks, splitting or the board deforming is reduced to an absolute minimum - giving reassurance that your fireplace will require no future maintenance.

In order to build a secure and aesthetic PROMAFOUR® encasement, we advise you to follow the instructions described and utilise the PROMAFOUR® product range, which has been developed specifically for use with fires and stoves.



Getting started

Equipment required

- 1 PROMAFOUR® boards** are mechanically strong and easy to work with.

Board dimensions are 2500mm x 1250mm and 1250mm x 1250mm
Available in thicknesses of 12mm and 15mm.

- 2 PROMAFOUR® GLUE 1000** is a refractory silicate based glue which resists to temperatures up to 1000°C.

Available in 310ml cartridges.



PROMAFOUR® GLUE 1000

- 3 PROMAFOUR® Primer** is a non-combustible and vapour permeable primer, which has been designed for use at elevated temperatures.

Available in 3 Litre and 1 Litre tubs.



PROMAFOUR® Primer

- 4 PROMAFOUR® HT Joint Filler** for finishing.

Available in 1.5kg tub

- 5 Promat PROMASEAL® SILICONE SEALANT** is a silicone based fire protection sealant.

Available in white or grey colour.

OTHER ITEMS YOU MAY NEED

- Dust and Plastic Sheeting/Matting
- Appropriate PPE - Glasses, gloves, dust masks
- Countersunk wood screws and metal plugs
- Spatula
- Hand Saw
- Sponge
- Right angle / set square
- Nail Gun
- Spirit level
- Knee pads / air masks with filters
- A circular saw or jigsaw with dust extraction device or with separate dust extraction (The one seen in this guide is a Festool Plunge Saw with dust extractor) other plunge saws are available
- Cutting Table
- Hand saw (If required for shaving boards to fit)
- Buckets (for mixing compounds)
- Cleaning spatula to wipe the excess glue off before it sets
- If Painting - Paint and roller
- Countersunk concrete/ masonry screws

BEFORE YOU BEGIN

Before you begin to install your PROMAFOUR® lining it is important to carefully read the following safety measures and instructions;

- Always observe the safety instructions of the stove manufacturer
- Always ensure safe working conditions and a safe working environment
- Take the necessary precautionary measures to prevent possible injuries
- Always use the correct equipment as described in this installation manual and stove manufacturers guidelines.

This is not a guide on how to install a stove - please ensure you meet building regulations and follow all of the procedures for the stove installation in addition to this process.

THERE ARE 4 STAGES FOR THE LINING OF A FIREPLACE;

Stage 1: **Preparing the existing fireplace**

Stage 2: **Installing PROMAFOUR®**

Stage 3: **Fixing PROMAFOUR®**

Stage 4: **Finishing PROMAFOUR®**

Stage 1 Preparing the existing fireplace

- 1 Cover the surrounding area to the installation with dust sheets to ensure any dust is contained.

- 2 Review the opening of the fireplace and look to see how uneven the surfaces are. For new properties this should not be an issue but older properties can have uneven surfaces. You can check how straight by using a right angle set square. As shown opposite.



Using a right angle set square to check for uneven surfaces

- 3 Large protrusions on the surface should be removed to make the surface as level/even as possible.



Some older properties might have hooks inside the fireplace – these should be removed.

Stage 2 Installing PROMAFOUR®

- 1 Measure the three surfaces of the fireplace. With older properties take several measurements at different levels just to check how uneven the wall might be.



Measuring the surfaces of the fireplace.

- 2 You will need to cut the rear panel first as this is the first one to be installed.

TIP Always carry and stack PROMAFOUR® boards carefully. Two people should carry a full board. Each board should be carried on its edge, taking care not to bend it as this can cause internal cracks which may not show in normal conditions but when heated the crack can expand. PROMAFOUR® should be stored on flat surface in a well ventilated room. NEVER store the boards on their side.

Carefully place your measurements on the board prior to cutting.



Place your measurements on the board prior to cutting.

- 3 Cut the PROMAFOUR® to the measurements marked on the board for the three faces of fireplace.

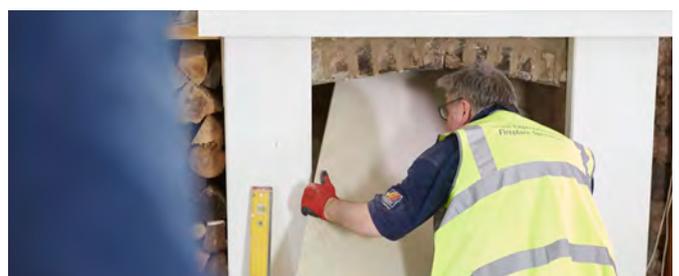
The installers in this guide have used a Festool Plunge Saw with dust extractor which we recommend for a straight cut but you can also use a Jigsaw with woodworking saw blade.

TIP We advise leaving a 2mm gap from the left and right rear panel boards to allow for expansion when heating. Please take this into consideration when cutting.

Also leave a gap of between 1-2mm for the left and right hand side panels from the back panel as this will be glued later.



Using a Festool Plunge saw to cut.



Fitting the board.

Stage 2

Installing PROMAFOUR® (continued)

- 4 The rear PROMAFOUR® board is held in place using Flamebond 9 as a bonding compound. Check to ensure it is level and the surface is even.

When screw fixing into the the masonry you would need to use a suitable metal wall plug and countersunk wood screw.

TIP As is common with older properties some of the walls might be uneven - if this is the case you could use a PROMAFOUR® wedge as shown opposite to pack out behind the board to overcome any unevenness on their side.



Checking the board is level.



Using a PROMAFOUR® wedge to correct uneven walls.

- 5 Now apply the PROMAFOUR® pieces you have measured for the left and right of the fire place in the same way as rear board but you do not need to use compound to hold into place.

TIP If you have uneven walls that the board needs to be corrected for, you can use a hand saw to 'shave' the board to ensure a good fit.



Fixing the left and right pieces.



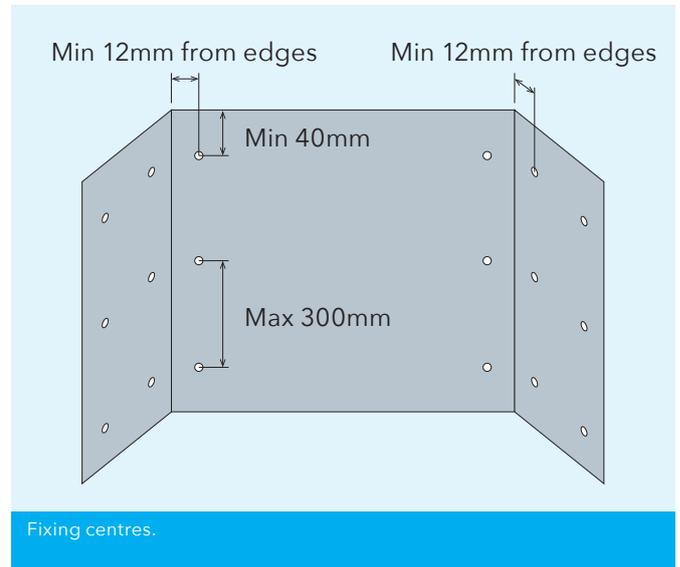
'Shaving' PROMAFOUR® with a hand saw to ensure a good fit.

Stage 3 Fixing PROMAFOUR®

- 1 Pre-drill and countersink oversize screw holes in the rear board and at the back of the left and right boards at a maximum of 300mm centres. This is to allow for heat expansion. See diagram opposite.



Pre-drilling screw holes in the rear board.



- 2 Screws should be loosely fitted to the boards and fixed into metal plugs. If they are too tight they can put additional tension on the board when the screw expands with the heat, which can lead the board to crack.

Alternatively, you can use countersunk concrete/masonry screws but do not over-tighten.



Screw being loosely fixed to the rear board.

- 3 PROMAFOUR® Glue is applied in the back left and right corner to help support the left and right boards. Excess should be cleaned with a spatula and a sponge.

TIP The glue dries very quickly to a hard finish so clean any excess before it dries as removing when dry can be difficult.

TIP Water can collect in the top of the glue. When opening glue for the first time snip of the top and hold over a bucket for example to allow excess water to be released.



Applying PROMAFOUR® Glue to the back left and right corners.

Stage 3 Fixing PROMAFOUR® (continued)

- 4 PROMAFOUR® Glue is then applied between the joints of the left and right boards to the rear board.



PROMAFOUR® Glue being applied to between the joints.

- 5 In most installations the edge of the Promafour® boards will be hidden by a hearth. Here we show a way of finishing the boards into the surround if this is not possible. If there is no surround you may want to use the joint filler to blend into the wall. If this area gets too hot the non Promafour® components, such as beading and plaster, may expand or contract with heat and lead to cracking.

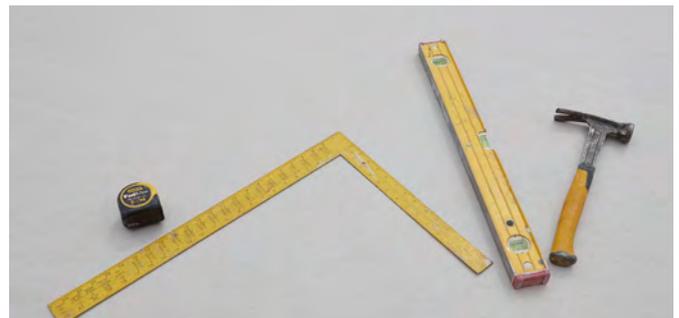


Fixing using a nail gun.

TOOLS NEED FOR INSTALLATION



Power equipment required for installation.



Other items required for installation.

Stage 4 Finishing PROMAFOUR®

- 1 Apply PROMAFOUR® Joint Filler to the screw heads to make an even surface. Once filler has dried you will need to sand it down for a smooth surface.

The filler may contract overnight and require re-applying and re-finishing the following day. This should be done before decorating.



PROMAFOUR® Joint Filler is applied to fill the screw heads.



Once dry PROMAFOUR® Joint Filler can be sanded down.

- 2 Apply PROMAFOUR® Primer and paint using a suitable paint if painting.



Applying PROMAFOUR® Primer.

- 3 Allow 24 hours for the fire place to dry before painting.

TIP Most other primers contain water, if you paint on to this primer, the water content can turn to steam and the paint can 'blister' - PROMAFOUR® Primer contains no water - it is silica based and is ideal for this application.

Stage 4 Finishing PROMAFOUR® (continued)

- 4 If required PROMAFOUR® can be painted with specialist high temperature paint, such as Keim Paint. Please refer to paint manufacturer guidelines.

TIP We have only discussed a paint finish but if you prefer a tiled finished, install with rough side facing the room and prime the rough surface and fix tiles to PROMAFOUR® using PROMAFOUR® glue.



Painting PROMAFOUR®

- 5 PROMAFOUR® can be tiled with a minimum board thickness of 12mm. The boards should be sealed on both faces with PVA or watered down tile adhesive and allowed to dry. The boards should be fixed with the textured face outwards, to the supports at 200mm centres. The screws should be countersunk and corrosion resistant. The tile should then be fixed using Promafour® Glue.

Maximum tile weight: 30kg/m²

- 6 Allow 24 hours for the fire place to dry before lighting the stove for the first time.



Allow 24 hours for the paint to dry.

TIP PROMAFOUR® needs to be gently warmed up. If the fire becomes over heated by turning too much wood in one go, this may damage not only your appliance but may also cause cracks to appear in the boards at first heating, as all refractory material will shrink and expand at high temperature and therefore need time to be settled. Therefore we recommend at the beginning to heat up slowly to the required maximum temperature, by burning at a low primary air level and not too much wood in one go. High moisture content can lead to cracking if heated up too quickly.



A completed clean and aesthetic fireplace.

Frequently asked questions

CAN I PLASTER PROMAFOUR®?

We do not recommend this. The board finish is smooth and ready to be painted once primed. Even high temperature plaster is not guaranteed against cracking and the plaster accessories, such as metal beading, expand with high temperatures which makes an unreliable finish for fireplaces.

CAN I JOIN PLASTERBOARD/ PLASTER SURFACE TO A PROMAFOUR® IN ONE CONTINUOUS LINE?

Whilst PROMAFOUR® offers a high quality finish, it looks slightly different to a plastered one, even with the same paint on both surfaces, therefore we wouldn't recommend this approach.

I HAVE A LARGE FIREPLACE, CAN PROMAFOUR® BE USED IN THIS INSTANCE?

Yes it can - The maximum height for use with inset fires is 3.5m. This is due to the fact that it will be a false wall and any higher you would need a solid structure to build off. In the case shown we are fixing PROMAFOUR® to a solid wall.

Please contact the Promat Technical Services technical.promat@etexbp.co.uk or 0800 145 6033 (Option 2) if you have any enquiries.

WHAT TYPE OF PAINT SHOULD I USE ON PROMAFOUR®?

A Silicate/non-organic content paint (such as Keim Paint) Always check with the manufacturer that it is suitable for the application and never use a paint with an alkyd content.

CAN I TILE PROMAFOUR®?

Yes - See section on how to tile PROMAFOUR®.

HOW DO I DISPOSE OF ANY PROMAFOUR® WASTE?

PROMAFOUR® may be disposed of with ordinary building material waste (always observing local and national legislation).

CAN I WALLPAPER ON TO PROMAFOUR®?

Yes - please ensure any wallpaper and adhesive is suitable for this application before installation.

WHERE CAN I BUY PROMAFOUR®?

Stockist information can be found on www.promat.co.uk on the PROMAFOUR® product page.



Promat

GB ORDER LINE

For placing orders, delivery enquiries,
local stockists etc.

T: 0800 373 636

F: 01275 379 037

E: orderline@etexgroup.com

RESOLUTIONS

For any problems with invoices or deliveries.

T: 01275 379 031 or 0800 373 636

F: 01275 379032

E: customer.support@etexgroup.com

TECHNICAL SERVICES

For technical support and advice.

T: 0800 145 6033

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KEIM PAINTS

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FORTAFIX

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