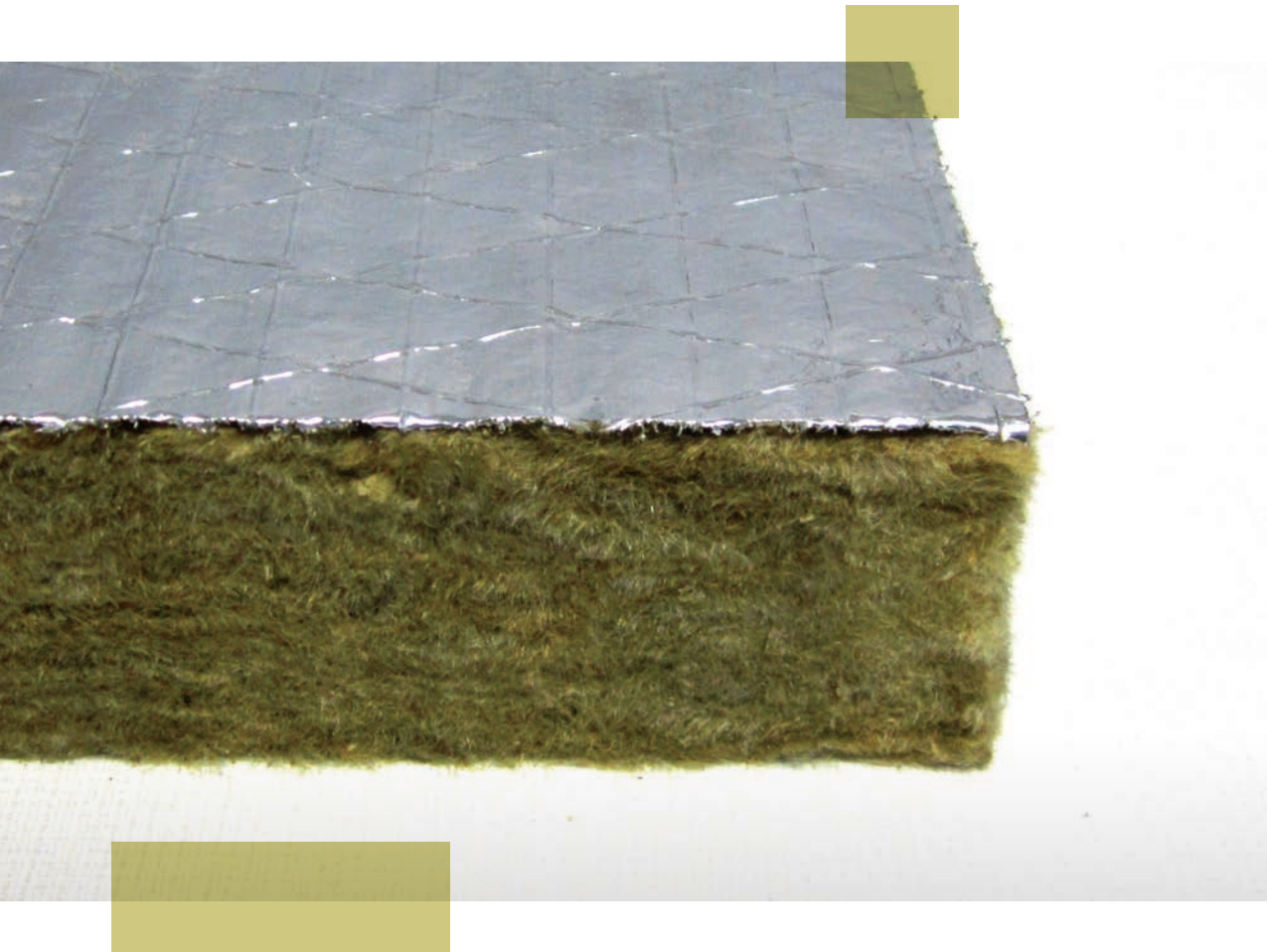


# Rockfon® Plenum Barrier Board

## Installation Guide



## Acoustical Ceiling Supplement

- Improves sound isolation and privacy between rooms
- Installs quickly above interior partitions
- Lightweight and easy to cut
- Conforms around pipes and ducts
- Expands and contracts with deflection

## System Overview

### Description

Rockfon Plenum Barrier Board is a semi-rigid, stone wool, board with a fiber-reinforced, aluminium foil, facing adhered to one side. It is only available in a 24" x 48" x 1.5" thick size. When Plenum Barrier Board is installed above Rockfon, suspended, stone wool, acoustic ceilings and over interior partitions, it increases the sound isolation rating and speech privacy between rooms. The ideal applications are when the suspended ceiling grid runs continuously over the tops of interior partitions or when pre-manufactured, demountable wall systems that only extend to the underside of the ceiling are used. Plenum Barrier Board can also be used above site-built, gypsum board walls whether they stop at the underside of the ceiling or extend just above the ceiling.

### Storage and handling

Plenum Barrier Board should be stored flat in a dry, interior, location. Protect the corners, edges and foil facing of the boards from damage as this can negatively affect acoustic performance after installation.

### Site conditions

Rockfon Plenum Barrier Board does not require acclimatization. Stone wool is dimensionally stable and can be installed in hot or cold temperatures and humid conditions. Boards should not be unwrapped, depalletized or installed in areas where wet-work is still being performed.

### Tools

- Sharp knife with minimum 2" long blade
- Metal ruler (48" inch or longer preferred)
- Tape measure
- Marker
- Drill driver with Philips tip bit
- Work lights
- Table saw (faster installation with better fit)
- Personal protective equipment

### Pre-installation inspection

Inspect each board for damage before use. If any of the following conditions exist, either discard the board or set aside to cut smaller pieces from the undamaged portion.

- Foil facing has delaminated fully or partially
- Foil facing is punctured or torn
- Edges or corners are crushed, torn or otherwise damaged
- Stone wool surface is torn, gouged, crushed or otherwise damaged

Inspect the partitions over which the Plenum Barrier Board shall be located. With the associated contractor, ensure that the partitions and suspended acoustic ceiling grid are sufficiently complete and correct and no future work will damage or otherwise compromise the position and performance of the plenum barrier. Coordinate with the associated contractor that any wall bracing has been installed so that it does not interfere with the installation of the plenum barriers. Do not install plenum barriers until all conditions are met.

## Support

Plenum Barrier Board is held in place with a combination of mechanical fastening to minimal, metal framing, friction fitting against surfaces and taping to adjacent boards. Installation without some type of mechanical fastening is not recommended. Refer to the architectural drawings and specifications, if available, for the desired support method.

If the support method is not indicated in the architectural documents, consider any of the options below. [How the Plenum Barrier Board is supported in place does not affect the acoustic performance.](#) Options beyond those listed below may also be used.

### Top Support

In most cases, the top edge of the Plenum Barrier Board is screwed into either a standard 1-5/8" wide metal wall track (double-layer plenum barrier or single-layer plenum barrier) or a 2" wide metal angle (single-layer plenum barrier only) that has been mechanically fastened to the underside of the floor or roof deck above the wall.

### Full height studs

If the metal studs of the partition extend full height, even though the gypsum board and cavity insulation do not, the Plenum Barrier Board can be screwed into the top track of the metal framing, regardless of the stud spacing. Screwing into the metal studs is optional as long as the boards are mechanically fastened along the top edge.

### Bottom support

When the ceiling grid extends over the top of the interior partition, the bottom edge of the Plenum Barrier Board is only held in place with a friction fit along the top of the wall and around the bulb of the grid members. No metal framing or mechanical fastening is required.

When the interior partition interrupts the ceiling grid and extends slightly above the height of the ceiling, a standard 1-5/8" wide metal wall track (double-layer plenum barrier or single-layer plenum barrier) or a 2" wide metal angle (single-layer plenum barrier only) can be screwed to the top track of the interior partition. The Plenum Barrier Boards can be mechanically fastened along the bottom edge similar to the top edge.

## Board preparation

### Layout & measuring

Determine the orientation of each Plenum Barrier Board based on the plenum height and any structural or mechanical elements in the plenum so as to minimize waste and seams. Measure the height and width of the space to be fitted with a board. When marking the board to cut, oversize the board slightly in height and width (if applicable) by approximately 1/8". During installation, the board will be compressed slightly to prevent gaps. Mark each board where it needs to be cut.

### Cutting

Use a sharp knife with a 2" long (minimum) blade to cut the boards. Several passes with a gentle sawing motion and followed by a final, straight pass of the knife will result in the best edge. Ensure that the knife is held perpendicular to the board surface so that the edge is not angled in one direction or the other. **Use of a table saw whenever possible is strongly recommended to speed up board preparation and to ensure ninety-degree cuts.** Avoid any cutting technique that tears the foil along the cut line or tears the stone wool core of the boards.

If a fluted, metal deck occurs along the top edge of the plenum barrier, make a template of the deck flutes out of 1/4" thick Masonite or similar material. Ensure that the template fits the deck flute profile well. Use the template as a guide to castle cut the Plenum Barrier Board so that it conforms to the flutes in the deck after installation.

## Board installation

### Placement

Typically, while holding the Plenum Barrier Board at an angle, place the bottom edge in place along the top of the wall first. Then using pressure to compress the board both vertically and laterally, press the top of the board into place against the metal support. It should require effort to press the board into place. If the board simply tilts in with no effort and feels loose, then the board was cut too short. If the board folds or crushes or will not tilt into place, the board was cut too long. Adjust the measurement and recut another piece.

### Fastening

Use a drill driver with a Phillips tip bit to drive self-taping metal screws through the top edge of the Plenum Barrier Board and into the metal support (top track or angle) behind it. Depending on the board orientation, use two screws along the 24" edge if it is the top edge or four screws along the 48" edge if it is the top edge. Use wide insulation washers so that screws do not pull through the Plenum Barrier Board. Exact size is not important.

### Taping

Once the boards are installed, use 2" wide, metal tape along all seams on the foil side of the Plenum Barrier Board only. Taping the perimeter of the plenum barrier along the deck above and wall below is not required, but can be done if desired.

### Stagger seams

When installing a double-layer plenum barrier, with one layer of Plenum Barrier Board on each side of the 1-5/8" metal track, stagger the vertical seams by 12". This will require that a 1-1/2" cut be made in the bottom edge in the center of the board so that it slides down over the bulb of the grid and rests on the top track of the partition.

## Post-installation inspection

After installation of the Plenum Barrier Board, use bright work lights on one side of the plenum barrier and darken the room on the other side of the plenum barrier. On the dark side, inspect all seams and any penetrations through the plenum barrier for light transmitting through the plenum barrier. If light is seen, either replace the board or use acoustical caulk to seal the gap or crack only where the light is shining through. Inspect again. Installation is not correct or complete if light can be seen through the plenum barrier.

For more information on the Plenum Barrier Board, contact your local Rockfon representative or visit [rockfon.com](http://rockfon.com)

## Have Questions?

Contact the Rockfon Technical Services Team by calling **800-323-7164** and we can provide assistance on your project.



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**Rockfon**

4849 S. Austin Ave.  
Chicago, IL 60638 USA

Tel. +1-800-323-7164

Fax. +1-800-222-3744

[rockfon.com](http://rockfon.com)

