

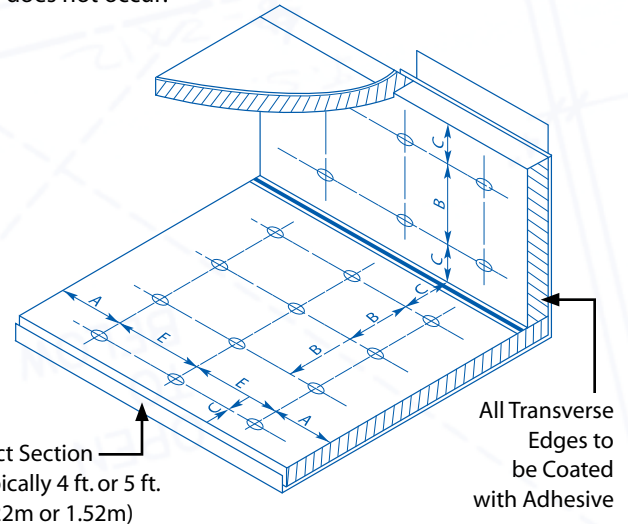
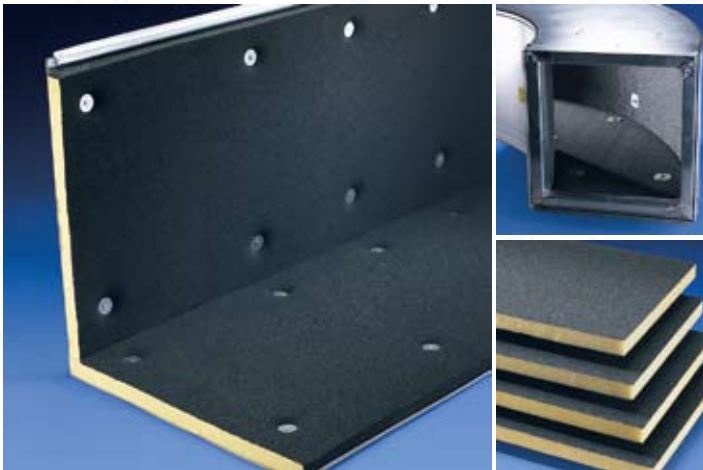
# SOLCOUSTIC® Duct Liner Installation Instructions

## INTRODUCTION

SOLCOUSTIC® duct liner is a non-fibrous, flexible, polyimide foam insulation developed specifically for use as a thermal/acoustic liner in HVAC plenums and rectangular metal duct systems. SOLCOUSTIC provides the acoustical performance of fibrous liners for applications where fibrous liners are not allowed.

## • Installed Pin Height

The pin height (length) is critical. See note two in the Specification Requirements section for finished height specification. If the installed pin height noticeably compresses the SOLCOUSTIC liner airstream surface, the liner “displaces” and full adhesion of the liner to the metal does not occur.



## INSTALLATION

Techniques and materials used for SOLCOUSTIC liner installation are similar to standard fiberglass rigid plenum liner board. SMACNA guidelines should be followed. Below are items that should be taken into consideration when estimating and fabricating ducts lined with SOLCOUSTIC liner:

### • Material Handling

To minimize damage to SOLCOUSTIC liner:

1. Do not drag duct sections across lined surfaces.
2. Assemble fittings and duct in the shop.
3. Do not handle assembled ductwork by the interior (lined) surfaces.

Velocity	Pin Spacing Dimensions			
	A	B	C	E
0-2500 fpm (0-12.7 m/sec)	3" (76.2mm)	12" (305mm)	4" (102mm)	18" (457mm)
2501-6000 (12.7-30.5 m/sec)	3" (76.2mm)	6" (152mm)	4" (102mm)	16" (406mm)

### • Adhesives

Most water-based duct liner adhesives (ASTM C 916) will work with SOLCOUSTIC liner. Apply a light adhesive coat to the metal duct surface to avoid excess adhesive being absorbed by the liner. Use of excessive adhesive increases the drying time needed. SOLCOUSTIC liner is also compatible with solvent-based adhesives.

### • Cutting to Size

Cutting can be easily accomplished with a sharp knife, but care must be taken to avoid tearing the liner. The airstream surface can normally be scored quite easily, but tearing may occur near the bottom of the cut (uncoated side) if steady pressure is not maintained. For best results, consider these cutting options:

1. Disposable, break-off-blade, hobby knives are an inexpensive alternative to repeated knife sharpening.
2. Serrated knives.
3. Kitchen-style, electric carving knives work well.
4. A heated knife blade produces very clean, easy cuts. Where open flames can safely be used, blades can be heated quickly. Propane torches supported in a stand and old soldering pots have been resurrected for this purpose.

### • Fabrication Cuts and Surface Repair

Tough Coat should be used to provide edge coating of all fabrication cuts exposed to airflow, per *SMACNA Duct Liner Installation Guide*. Minor tears or surface abrasions may be repaired by coating the area with Tough Coat coating or duct butter. Repair large tears or damaged areas by removing the affected area and installing a replacement liner section. Apply adhesive to the metal and coat all edges of the repair section with Tough Coat prior to installation. Pins should be used to secure both the repair panel and the adjacent liner.

### STORAGE

SOLCOUSTIC liner should be stored away from direct sunlight. The black acrylic surfaces of the liner are resistant to UV rays, but the exposed foam (yellow) insulation areas may degrade over time.

### WATER EXPOSURE

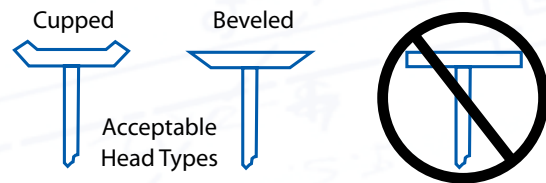
Like any insulation product, protect SOLCOUSTIC liner from water and other contamination sources prior to installation. There is no evidence that water degrades SOLCOUSTIC liner. However, wet insulations do not provide the advertised thermal or acoustical performance and may be subject to contamination from bacteria or dirt from the water source.

**Note:** If the SOLCOUSTIC liner is exposed to water, stand the duct section on end and allow the water to escape. The insulation must dry completely before a damage determination can be made. Where saturation has occurred, or where contamination is suspected, the material should be replaced.

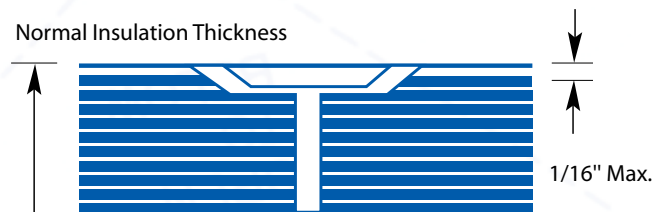
### SPECIFICATION REQUIREMENTS

The Contractor will supply Evonik Foams' SOLCOUSTIC polyimide foam air duct liner with an acrylic coating. The coating is formulated with an EPA-registered anti-microbial agent and factory-applied to the airstream surface. Application of SOLCOUSTIC liner to the metal air duct must be in accordance with the SMACNA Duct Liner Application Standards, with the following specific requirements:

1. Pins must have beveled or cupped contact washer edges. Flat washers must not be used.



2. The installed pin length, measured from the metal duct surface to the underside of the pin contact washer must equal the thickness of the SOLCOUSTIC liner, within a tolerance of  $\pm 1/16"$ .



3. Tough Coat (or equivalent) must be used to butter all fabrication cuts, including insulation panel seams.
4. Tough Coat coating products (or equivalent) must be used to repair any tears or damage to the airstream surface that occur prior to final installation.

**Note:** Tough Coat is an air-dry version of SOLCOUSTIC liner's factory-applied coating. Using this product maintains the performance and code compliance of the liner.



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