



Approval #

980020-I  
(Replaces 920083-I)

Safety & Buildings Division  
201 West Washington Avenue  
P.O. Box 2689  
Madison, WI 53701-2689

## Wisconsin Material Approval

Material

CONFORM EXPANDED POLYSTYRENE BLOCKS

Manufacturer

American Conform Industries, Inc.  
1820 S. Santa Fe Street  
Santa Ana, CA 92705

### SCOPE OF EVALUATION

The Conform® Expanded Polystyrene Blocks manufactured by American Conform Industries, Inc. were evaluated in accordance with sections **ILHR 21.11, 21.11(1)(a), ILHR 51.06(2), ILHR 51.06(3)(a), ILHR 51.06(3)(b), and ILHR 51.06(5)(f)** of the Wisconsin Building and Heating, Ventilating and Air Conditioning Code.

### DESCRIPTION AND USE

The Conform® concrete form system consists of expanded polystyrene (EPS) units of two basic types Standard Forms(SF Series) and Variable Width Forms (VWF Series) which serve as insulation and forms for load-bearing walls, shear walls and foundation walls. The two component units are described below:

1. The SF Series has a face shell thickness of 1 ¼ inches average. They are 10 inches high/10 inches wide by 40 inches long with tongue-and-groove attachments at the top and bottom. When laid up, the units form 7 ½ inch by 6 ½ inch rectangular vertical cores at 10 inches on center and 6 ½ inches by 6 ¼ inch rectangular horizontal cores at 10 inches on center. The form units remain after placing of reinforcing steel and concrete and must be protected by approved interior and exterior finish materials.

2. The VWF Series has a face shell thickness of 2 inches average. The unites are 12 inches high by 40 inches long and have variable widths depending on the thickness of the finished concrete wall, which are 3 ¼ inches; 5 ¾ inches; 7 ¾ inches. The tongue-and-grove units are interconnected with seven polypropylene bridge inserts.

Conform® Blocks are made of molded expanded polystyrene (EPS). The EPS is BF322 or BF422, in densities of 1.5 – 2.0 pcf Styropor manufactured by BASF, or Types 254, 454, 554, 754, 900 and 4786, in densities of 1.5 – 2.0 pcf manufactured by Huntsman Chemical Corporation.

### TEST RESULTS

A sample wall section of insulated reinforced concrete made with Conform® Blocks and Boards was tested in accordance with ASTM C236 standard by Geoscience LTD and found to have an R-value of:

$$R_{total} = R_{air\ to\ air} = 17.55\ hr^2\ ^\circ F / Btu\ and$$

$$U = 1/R_{total} = 1/17.55 = 0.057\ Btu / hr\ ft^2\ ^\circ F\ with\ foam\ density\ of\ 1.9\ lbs / ft^3\ or\ higher.$$

Conform® Blocks were tested by Underwriters Laboratories, Inc. and the classification for BASF Type 322 or Type 422 beads and Huntsman Chemical Corporation Type 4786 polystyrene beads at a nominal 1.8 pcf density and 5-inch thick maximum as follows: smoke developed 250; flame spread 10.

Wall sections constructed with Conform® Expanded Polystyrene Blocks made with Huntsman foam only, covered by ½-inch gypsum board passed a room fire test conducted by the University of California, Berkeley.

Southwest Research Institute of San Antonio, Texas has authorized BASF's use of the SWRI Crawl Space Test Report #01-7788-205, and Huntsman Chemical Corporation's use of the SWRI Crawl Space Test Report #01-1374-206(1).

### LIMITATIONS OF APPROVAL

The foam plastic substrate shall be listed as having a flame spread rating of 25 or less and a smoke developed rating of 450 or less when tested in accordance with ASTM E-84.

The exterior face of all walls must be finished with an approved weather covering.

Thermal barriers shall be provided to separate the forms from the occupied spaces in accordance with sections ILHR 21.11 and 51.06(3).

Conform® Expanded Polystyrene Blocks may remain uncovered on the interior of crawl space walls provided the floor between the crawl space and the occupied space consists of at least ¾-inch tongue and groove plywood sheathing or equivalent, and the crawl space is not used for storage or air handling purposes.

Conform® Expanded Polystyrene Blocks are nonstructural building elements, their use is limited to that of an insulated concrete formwork only.

These forms are approved for use as concrete forms for basement walls and exterior walls when the resulting concrete walls satisfy **Table ILHR 21.18-A** or when structural calculations are submitted to the Department. The VWF6 Series and VWF8 Series blocks are considered as providing solid walls of polystyrene and concrete of 4 inch, 6-inch and 8-inch nominal thickness, respectively.

The Conform Expanded Polystyrene Blocks shall be installed in accordance with the manufacturer's recommendations.

This approval will be valid through December 31, 2002, unless manufacturing modifications are made to the product or a re-examination is deemed necessary by the department. The Wisconsin Material Approval Number must be provided when plans that include this product are submitted for review.

DISCLAIMER

The department is in no way endorsing or advertising this product. This approval addresses only the specified applications for the product and does not waive any code requirement not specified in this document.

Reviewed by: PM

Approval Date: 3-20-96

By: Lee E. Finley  
Lee E. Finley, C.S.I.  
Product/Material and Building Plan Review  
Program Development Bureau  
(414)548-8611