

# DEMAND

PRODUCTS INC  
PRODUCT INFORMATION SHEET

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## PB WASHER

### Product Information

Report of Structural Performance Testing  
of Wall Panels with PB Washer.

For: Demand Products, Inc.  
1055 Nine North Drive  
Alpharetta, GA 30004  
800-325-7540

By: Underwriters Laboratories Inc.

Test Date: September 3, 1998

Report Date: September 3, 1998

Project #: 97NK20746

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Project #97NK20746  
ASTM E 330  
Specimens: PB Washer  
Client: Demand Products, Inc.  
Test Date: September 3, 1998

## INTRODUCTION

This report gives the results of the evaluation of the provided samples (File #R18601). The test results described in this report are limited to the submitted items.

On September 3, 1998 Underwriters Laboratories Inc. Northbrook, IL conducted tests on 24 wall panels in accordance with ASTM E 330, "Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference" for Demand Products, Inc. of 1055 Nine North Drive, Alpharetta, GA. Full report available upon written request.

## SPECIMEN DESCRIPTION

### Structural Performance

Each test panel had overall dimensions of 48" wide by 96" high with various thicknesses. The panels consisted of 20-gauge steel studs 16" o.c., and wood studs 16" o.c. either exterior grade drywall board, plywood or OSB. 15 lb. felt, 1lb. EPS foam, and a synthetic stucco consisting of: mesh, basecoat and finish over the foam. The foam was attached to the studs with 2" diameter Demand Products PB Washer and the appropriate self-tapping screw. Various fastening patterns were used and are available upon request

**Pattern A:** PB washers were placed 6" from ends of each foam board and 12" o.c. PB washers did not bridge the joints in foam (32 fasteners/washers per 4' by 8' panel). Structural Sheathing Attachment.

**Pattern B:** PB washers were placed near ends of each stud and 12" o.c. PB washers bridged the joints in foam (45 fasteners/washers per 4' by 8' panel). Non-Structural Sheathing Attachment.

## PROCEDURE

### Structural Performance Tests

Structural Performance Tests

Conducted in accordance with ASTM E 330. Loads were applied in 25 PSF increments until failure. Deflection measurements noted.

## TEST RESULTS

### Structural Performance

Sample Number	Test Pressure for Positive Pressure Test (lb/ft <sup>2</sup> )	Average Failure Pressure for Negative Pressure Test (lb/ft <sup>2</sup> )
1-3	99	76.3
4-6	100	96.5
7-9	100	90.1
10-12	100	116.7
13-15	100	83.3
16-18	100	89.8
31-33	100	77.9
34-34	100	104.8

## CONCLUSIONS

The mode of failure for all three wall panels with Demand Products PB Washer was studs buckling at the punch out location in the studs. The average ultimate negative load for all 24 walls tested per ASTM E-330 was -91.93 PSF. The average ultimate positive load for all 24 walls tested per ASTM E-330 was 99.88 PSF.

Report by: Frederick E. Hervey  
Report Reviewed by: Daniel J. Kaiser