



# Product Evaluation Report

**PER-05006**

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*Progressive Engineering Inc.*

Initial Listing  
September, 2000

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### Listed Product

**AlphaSeal 5200** Two-Part Polyurethane  
Structural Adhesive

### Listed For

**Alpha Systems Inc.**

5120 Beck Drive  
Elkhart, IN 46516

### Approved Manufacturer

**Alpha Systems Inc.**

5120 Beck Drive  
Elkhart, IN 46516

*Progressive Engineering Inc.* is an accredited Testing Laboratory and Third Party Quality Control Agency. This **Product Evaluation Report** represents a product that Pei has a follow-up service agreement with. This **Product Evaluation Report** in no way implies warranty for this product or relieves **Alpha Systems Inc** of their liabilities for this product. Pei is accredited to ISO Standard 17020 and 17025. This **PER** is an official document if it is within one year of the initial or renewal date.

### Listing Details

AlphaSeal 5200 adhesive is used to attach gypsum board to wood lumber framing in walls and ceilings without the use of mechanical fasteners.

### Product Description

AlphaSeal 5200 is a two-part polyurethane structural adhesive system. It is applied by pumping two components at a 1 to 1 volumetric ratio under pressure through heating equipment to produce one continuous bead. The two components are an "A ISO" and a "B Resin". The A ISO is a purchased material and the B Resin is manufactured by Alpha Systems Inc. This adhesive does not off-gas Formaldehyde into the air.

### Containers and Storage

The A & B components are shipped in 330 gallon caged totes or in 55 gallon steel drums. Storage of these containers should be in an indoor dry place between 40°F. and 110°F. Unopened containers will have a storage life of up to six months in these conditions.

### General Product Use

The gypsum board being used shall meet ASTM C 1396. The lumber is to be kiln dried and graded. Both substrate surfaces shall be clean, dry and free of dust, ice and loose particles and shall have a surface temperature between 50°F. and 105°F. AlphaSeal 5200 adhesive should be applied in an ambient temperature range of 50°F. to 105°F. The adhesive is applied along the intersection of the gypsum and the lumber according to Alpha System's application instructions. The adhesive temperature at the heater block should be between 100°F. and 110°F. After the last bead is applied, the structure shall not be moved for a minimum of two minutes. The structure should stay in the same ambient conditions for the first 24 hours.

AlphaSeal 5200 adhesive can be used on 24" and 16"o.c. framing in the walls and ceiling. The fillet beads produced should measure a **minimum** of 7/8" average on the gypsum and 3/8" average on the framing. A bead should never be greater than 3" in size. The adhesive beads are applied along one side of field framing and along both sides at gypsum seams.

### Listing Criteria

1. The AlphaSeal 5200 adhesive shall be applied according to Alpha System's application instructions. A copy of these instructions must be made easily available at the assembly areas.

2. This Listing is for AlphaSeal 5200 to be applied in an indoor manufacturing facility and is not meant to be applied in an outdoor uncontrolled environment.
3. AlphaSeal 5200 adhesive is to be manufactured at the Alpha Systems plant in Elkhart, Indiana following their approved Q.C. program with unannounced inspections by Progressive Engineering Inc.
4. The use of AlphaSeal 5200 adhesive in a fire rated assembly is not addressed in this Listing.
5. A vapor barrier cannot be used between the adhesive and the substrates.
6. AlphaSeal 5200 is to be applied to the back side of standard raw gypsum and is not intended for other gypsums such as foil backed, moisture resistant or water resistant gypsums.
7. Construction of assemblies using AlphaSeal 5200 and their design values should be as described in the following test reports.

**Building Code Compliance**

|                 |                 |                                  |
|-----------------|-----------------|----------------------------------|
| 2003 <b>IBC</b> | 2003 <b>IRC</b> | 1999 BOCA National Building Code |
| 2006 <b>IBC</b> | 2006 <b>IRC</b> | 1997 Uniform Building Code       |
| 2009 <b>IBC</b> | 2009 <b>IRC</b> | 1999 Standard Building Code      |

**Tested to**

|                              |                              |           |
|------------------------------|------------------------------|-----------|
| <i>Pei</i> Standard No. 89-1 | <i>Pei</i> Standard No. 94-9 | ASTM E 84 |
| <i>Pei</i> Standard No. 93-7 | ASTM E 72                    | UL 1715   |
| <i>Pei</i> Standard No. 93-8 | ASTM C 557                   |           |

**Product Documentation**

A MSDS sheet dated 12/4/2006

AlphaSeal 5200 Product usage instructions, not dated

A signed Quality Control Manual dated 1/27/2000

A follow-up Listing & Inspection agreement between *Progressive Engineering Inc.* and **Alpha Systems Inc.**

Opinion Letters dated: 8/17/2000 11/15/2001  
10/17/2001

The following is a list of *Pei* test reports for AlphaSeal 5200 Adhesive.

|           |           |           |           |
|-----------|-----------|-----------|-----------|
| 1998-0998 | 1998-1558 | 2000-0326 | 2004-1834 |
| 1998-1028 | 1998-2966 | 2001-1216 | 2008-1748 |
| 1998-1030 | 1998-3236 | 2002-0358 |           |
| 1998-1032 | 1999-1208 | 2004-0607 |           |

The following is a list of **NGC Testing Services** reports for AlphaSeal 5200.

UL-1715 - Report No. RCB 0307  
UL-1715 - Report No. RCB 0308

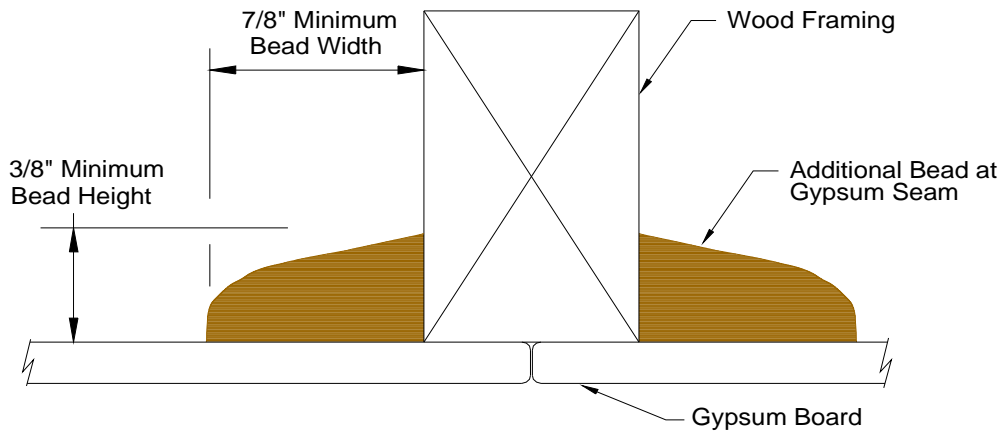
**Design Values**

Ceiling Diaphragm Design Load = **203 plf** (11'-9" minimum width x 48ft. Maximum diaphragm span)  
Ceiling Dead Load Resistance = **15.3 psf**

**Product Labeling**

Each container shipped of AlphaSeal 5200, that is covered by this PER, must have a label attached with at least the following information:

1. Alpha Systems name and address.
2. Date of manufacture
3. Shelf life information
4. This PER number & Pei's logo
5. Smoke and Flame Spread Ratings
6. Component name



Typical Application



AlphaSeal 5200 is shipped in 275 Gallon Caged Totes or 55 Gallon Steel Drums

