

Arclin EWS Adhesive Systems, general descriptions and certifications.

4001 / H-7

Certifications and Applications

This system is fully approved for glulam in the U.S. and Canada.

It also performs well in cold set and radio frequency glulam operations on DF, Hemlock, Larch, Lodgepole pine, Alaskan yellow cedar, Western red cedar. The product has longer assembly times for cold set than the MF systems and allows for slightly cooler press room temperatures to cure the product to completion.

The PRF systems have been time proven in the laminated beam business since the late 1940's with use in a wide variety of outdoor and indoor applications.

Certifications

- ASTM D2559 DF and SYP JAS (Japan)
- CSA O112.7

4001 / H1003

Certifications and Applications

This PRF liquid/liquid system is fully approved for glulam and I-joists around the world. It performs well in cold set operations on DF, Hemlock, Larch, SYP, Lodgepole pine, Alaskan yellow cedar, Western red cedar. It can be used effectively on some hardwoods (case-by-case basis)

The liquid non aqueous hardener system is unique in the structural beam industry. Without water in the system the product can be used for extremely long assembly times which make it well suited for difficult architectural beams and long, time consuming arch production in manufacturing plants.

Certifications

- ASTM D2559 DF, SYP, hard maple (U.S.) JAS (Japan)
- CSA O112.7 (Canada) EN 301/302

M66 / H2004 Applications

The Arclin Melamine Adhesive system is one of the most versatile in the industry. This product can be used in RF structural finger joint lines, cold set finger joint lines, RF press face bonding and Cold set face bond beam applications. In RF applications it is extremely arc resistant and appears to run 25-50% faster in plant operations than PRF systems under the same conditions. The adhesive system also produces a "clear glue line" which in some architectural situations is an important asset in the finished product.

The product is also one of the most certified melamine adhesive in our industry. Its certified for wet use in both the United States and Canada and has passed all the available heat resistance tests for fire code requirements.

**Certification Data for Arclin Melamine system
Glulam (U.S.)**

- AITC 405-2005
 - ASTM D3434
 - ASTM D2559 DF & SYP
 - ASTM D1151 Exposures 3 (-30°F) and 20 (400°F) DF
 - ASTM D1183 (simulated salt water exposure) DF
 - CSA O112.9 B2 Creep (2 hrs at 180°C) DF
- Technically it is grandfathered under ANSI/AITC A190.1-2002 so only D2559 is required, but the full complement of tests were completed for sales purposes

Glulam (Canada)

- CSA O112.9
- Additional heat durability tests required by CSA O177-06
 - APA/WIJMA AC1000-04 (1 hr at 450°F)
 - Modified APA PS-1 Bunsen burner flame spread
- Approved for exterior use with the exception of marine use, below ground, or direct ground contact
 - CSA O112.9 does not apply to these applications

I-Joist (U.S.)

- ASTM D2559 DF and SYP
- ASTM D7247 heat durability test using requirements described in ASTM D5055 (DF)

I-Joist (Canada)

- CSA O112.9
- ASTM D7247 heat durability test using requirements described in ASTM D5055 (DF)

Finger Joint (U.S.)

- Glulam FJ lam stock requirements same as face bond
- I-Joist FJ flange requirements same as assembly adhesive
- ASTM D7374 (vertical use FJ stud)
 - Approved as Heat Resistant Adhesive (HRA) by ALSC Board of Review

Finger Joint (Canada)

- Glulam FJ lam stock requirements same as face bond
- I-Joist FJ flange stock requirements same as assembly adhesive
- CSA O112.9 permits use in SPS-1, SPS-3, SPS-4, SPS-5, and SPS-6
- ASTM D7374 (vertical use FJ stud)
 - Approved as Heat Resistant Adhesive (HRA) by CLSAB

Small Scale Heat Durability Tests

ASTM D7247 – 60 minutes at 400°F

- | | | |
|----------------|----------------|----------|
| • Solid wood: | Ambient | 2474 psi |
| | 60min at 400F | 697 psi |
| | % Retention | 28% |
| • M66 / H2004: | Ambient | 2268 psi |
| | 60 min at 400F | 733 psi |
| | % Retention | 32% |

Small Scale Heat Durability Tests

ASTM D7247 – 10 minutes at 450°F

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|----------------|----------------|----------|
| • Solid wood: | Ambient | 1265 psi |
| | 10min at 450F | 754 psi |
| | % Retention | 60% |
| • M66 / H2004: | Ambient | 1353 psi |
| | 10 min at 450F | 946 psi |
| | % Retention | 70% |

Small Scale Heat Durability Tests

ASTM D7247 – 60 minutes at 450°F

- Solid wood: Ambient 1387 psi
 60min at 450F 726 psi
 % Retention 52%

- M66 / H2004: Ambient 1356 psi
 60 min at 450F 776 psi
 % Retention 57%

Small Scale Heat Durability Tests

ASTM D7247/D5055 – 110 minutes at 428°F

- Solid wood: Ambient 1903 psi
 110min at 428F 592 psi
 % Retention 31%

- M66 / H2004: Ambient 1319 psi
 110 min at 428F 515 psi
 % Retention 39%