DIVISION 06—WOOD AND PLASTICS  
Section 06093—Adhesives

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1.0 SUBJECT  
ISOSET® EPI Adhesive Systems

2.0 PROPERTY FOR WHICH EVALUATION IS SOUGHT  
Structural Adhesive

3.0 DESCRIPTION  
The ISOSET EPI (emulsion polymer isocyanate) adhesives are two-component systems consisting of a base emulsion polymer and a crosslinking agent containing a protected polymeric isocyanate. The crosslinking agent is mixed with the base emulsion to provide an adhesive with a working life of several hours.

Specific ISOSET EPI adhesive systems have been tested for compliance with ASTM D 2559-84 and are intended to be used as structural adhesives for laminated softwood products and fabrication of plywood components, such as stress skin panels, sandwich panels, curved panels, glulam beams, posts, I-Joists and LVL.

In addition, ISOSET EPI Adhesive Systems have been tested on the following substrates for use in bonding sandwich panel components. The adhesive formulations are suitable for bonding gypsum wallboard, hardboard, particleboard, waferboard, OSB, and plywood to core materials of styrene and urethane foam, paper and aluminum honeycomb. The adhesive formulations are also suitable for bonding facings of painted metal and fiberglass reinforced plastic to waferboard, OSB, or plywood.

The adhesives are intended for structural use where high resistance to moisture is required in roof, wall and floor components subjected to sustained loadings such as live or snow loads.

4.0 INSTALLATION

End use of the product shall be established and described in an ICC ES or ICC ES legacy evaluation report.

The surfaces to be bonded shall be clean and dry. Dust, oil, grease, water or any other contamination shall be removed. The adhesive is designed for application to one of the two mating surfaces. The amount of adhesive applied to each substrate shall be in accordance with the manufacturer’s recommendation. To ensure proper adhesion, the substrates shall be held under pressure corresponding to the manufacturer's recommendation.

5.0 IDENTIFICATION

Each container bears a label and inscriptions indicating the coded manufacturing date, the ICC-ES legacy report number, the product name and the manufacturer's name.

6.0 EVIDENCE SUBMITTED

6.1 Installation details, descriptive literature and product brochures.


6.3 Results of tests, Test Report Nos. 79-4 and 79-103, dated October 2, 1979, and January 10, 1980, respectively, conducted by the PFS Corporation, Madison, Wisconsin, in accordance with California Specification CA25-4 and ASTM Standard D 2559, Part 13.

6.4 Copy of a paper entitled "Correlation Between Exterior Exposure and Automatic Boil Test Results", prepared by Dick Caster, Senior Scientist, Weyerhaeuser Company, Tacoma, Washington.

6.6 Results of a Western Wood Products Association Glued Products Certification Test, Test No. 27016L, dated June 16, 1981, conducted by TECO.


6.10 Test Report Nos. 867042 and 868714, dated December 21, 1985, prepared by Pittsburgh Testing Laboratory in accordance with ASTM D 905 and ASTM C 297, respectively.

6.11 Confidential Q.C. manual for Isoset EPI adhesives dated June 1, 1990, prepared in agreement with the independent quality control agency, Timber Products Inspection, Inc. Addendum, Revised 8/95, signed by Carol S. Eicher, Ashland Chemical Company and Walter W. Boyles, Timber Products Inspection, Inc.


7.0 CONDITIONS OF USE

The National Evaluation Service Committee finds that ISOSET® EPI Adhesive Systems, as described in this report, is acceptable alternate materials, products, and methods of construction to that specified in the 2000 International Building Code®, the 2000 International Residential Code®, the 2001 Supplement to the International Codes®, the 1998 International One and Two Family Dwelling Code®, the BOCA® National Building Code/1999, the 1999 Standard Building Code© and the 1997 Uniform Building Code™, subject to the following conditions:

7.1 The adhesive system is used, applied, and cured in accordance with this report and the manufacturer's instructions.

7.2 The manufacture, quality assurance, and end use intended for the products noted in 7.3 are outside the scope of this report. Each product utilizing this adhesive shall be independently evaluated in an ICC ES or ICC ES legacy evaluation report for the proposed applications including the determination of suitable structural design values.

7.3 The adhesive application is limited to softwood and plywood products such as glue-laminated beams, plywood components, and sandwich panels constructed of the substrates indicated herein.

7.4 All Isoset EPI adhesive systems shall be identified by the following:

7.4.1 Emulsion polymers shall be identified by the tradename "ISOSET" followed by the letters WD and an alphanumeric code number.

7.4.2 Crosslinking agents shall be identified by the tradename "ISOSET" followed by the letters CX and an alphanumeric code number.

7.5 This report is subject to periodic re-examination. For information on the current status of this report, contact the ICC-ES.